

# Strategic Vision 2015-2020

## Mission and Values

North Dakota State University is a student-focused, land-grant, research university. The University provides students with affordable access to an excellent education at a highly ranked research institution; we connect teaching and research in a rich learning environment, educating future leaders who will create solutions to national and global challenges. As a land-grant institution, our research and creative activity focus on the most difficult and challenging issues faced by society. We serve the state and improve the lives of all through cutting-edge research, creative works and collaborative partnerships with the people we serve. This document defines the strategic priorities for NDSU for the next five years and ensures that our resources are used effectively and purposefully to educate students, perform world-class research, pursue creative and artistic excellence, and serve the citizens of North Dakota.

We reaffirm our underlying commitment to ethical behavior, we foster and celebrate diversity in all of its forms, and we safeguard and foster transparency, shared governance and academic freedom as fundamental values. We pledge to be good stewards of the resources entrusted to us by the State of North Dakota.

## 2015-2020: A Student-focused Research University serving North Dakota

Our strategic plan is built on three pillars: educational opportunities that support student access and success; research, creative works and discovery focused on grand challenges; and outreach and engagement that create better lives for North Dakotans. The three pillars mutually support the overarching mission of NDSU. NDSU is guided by core values of:

- **Educational Excellence:** We provide a rigorous and research-based learning environment that challenges students to excel both within and outside of the classroom;
- **Cutting-edge Scholarship:** We are an engaged university and acknowledge and pursue scholarship in all its forms, acknowledging the importance of both basic and applied research and the integral nature of teaching, research and outreach;
- **Accountability:** As a land-grant institution, we have a special relationship with, and are accountable to, the people of North Dakota. We strive to improve our region's quality of life and to contribute to its economic prosperity;
- **Diversity:** We maintain a campus climate that supports and respects faculty, staff and students who have diverse cultures, backgrounds, and points of view;
- **Collaboration:** We operate with transparency and a commitment to shared governance and responsibility.

## Planning Environment

North Dakota State University is ranked among the top 108 research Universities in the U.S., reflecting our success in securing external research funding and in graduating Ph.D. students. Enrollment grew quickly during the period 2000 – 2009, and has plateaued at approximately 14,500 students (12,000 undergraduates and 2,500 graduate and professional students). As with most public institutions, NDSU's budget will increasingly depend on student enrollment, retention and timely graduation.

Our location in North Dakota and Fargo, its largest city, affords us unique opportunities. In 2014, North Dakota ranked first in the nation in employment growth, with an estimated 25,000 jobs going unfilled. NDSU is poised to provide the

informed citizenry and skilled workforce that will continue to support the state's current economic drivers—agriculture and energy— and emerging sectors that will provide economic opportunities for North Dakota's diversified future. NDSU has a responsibility to address this challenge.

NDSU's reach is statewide. More North Dakota high school students choose to enroll at NDSU than in any other institution in the state. One obvious manifestation of our engagement with North Dakota is the Extension Service, which is a cooperative effort with federal, state and county partners. Our telepharmacy sites bring pharmacy services to rural areas throughout North Dakota. Our unique role in agricultural research firmly links our mission to North Dakota's traditional economy. This research is coordinated by the North Dakota Agricultural Experiment Station, a state agency affiliated with NDSU. The Research and Technology Park provides a connection to emerging business and industry.

NDSU has successfully sustained its mission through a period of change in the higher education landscape. However, we must acknowledge the challenges that influence our ability to move forward. Enrollment growth, a changing mission, and the financial exigencies of the mid 2000s have created a sense of fatigue among some faculty, staff and administrators who feel that human and physical infrastructure has not developed adequately to support campus change. A 21<sup>st</sup>-century university must be nimble and entrepreneurial. This strategic plan seeks to balance support for existing programs that fit within the mission of NDSU with the pursuit of new opportunities that will move NDSU forward.

NDSU's faculty and staff are hard-working, pragmatic, entrepreneurial and deeply committed to the mission of NDSU. Our students, likewise, are talented, diligent, and engaged. We enjoy the support of alumni and other friends of the University, providing the extra margin that allows us to excel. Our most important resources are the people of NDSU and the collaborative relationships formed among faculty, staff, students, administrators and external constituencies. Above all, this strategic plan must reflect a shared understanding of what kind of institution NDSU will be in the future.

## Planning Process

In Fall 2014, the Provost created three task forces, each co-chaired by a faculty member and a professional staff member or administrator. These task forces solicited input from the university community in the areas of learning and student success, research and discovery, and outreach. The work of each committee was informed by five years of prior strategic planning efforts that resulted in numerous reports and recommendations. In addition, each task force held two open forums and gathered input from a survey sent to all members of the University community. Final reports were submitted to the Provost in December 2014 and January 2015. The reports were combined and circulated to faculty, staff and students for comment. Subsequent input was gathered via a survey, an open forum, and meetings with campus groups. The process culminated with an open meeting with Faculty Senate in April 2015.

Four overall recommendations emerged that span the strategic vision. NDSU should:

1. Seek balanced growth, including infrastructure and staffing adequate to support the recommendations of the plan;
2. Create a communications approach that supports the strategic vision and promotes NDSU's successes both internally and externally;
3. Pursue policies and initiatives that foster inclusiveness, transparency, accountability and collaboration;
4. Better position the university as an asset for North Dakota.

## Learning and Student Success

The land-grant ideal is rooted in the idea that all qualified citizens should have access to a meaningful education. NDSU is committed to providing a rigorous, accessible and affordable education to undergraduate, professional and graduate students. As of Fall 2014, NDSU enrolled 14,747 students, including 12,124 undergraduates, 340 professional students and 2,283 graduate students. Approximately 78% of first-time, first-year students return for a second year; 26% graduate in four years and 53% graduate in six years from NDSU. These enrollment, retention and graduation rates are not keeping pace with the growing needs of the state, region, or nation. Enrollment growth is critical to support NDSU as a vibrant research university and to meet the demographic challenges facing North Dakota.

### Support Graduate Education

NDSU's graduate student population as a percentage of total enrollment is smaller than that of comparable research institutions. As such, NDSU will focus on increasing this ratio from 15.5% to 20%. To recruit graduate students and support the success of graduate students, we will:

1. Develop competitive recruitment packages, including stipends and health insurance coverage, to attract qualified graduate students;
2. Provide adequate access to the space, technology, library resources, and other infrastructure that supports graduate student work;
3. Expand the breadth of recruitment activities both nationally and internationally;
4. Expand doctoral education and add new professional and applied master's programs in areas that will support activities related to the Grand Challenges;
5. Expand professional development and career counseling services for doctoral students to prepare them for career pathways outside of academe;
6. Establish goals for persistence and graduation rates for graduate students.

### Increase Undergraduate Student Enrollment

We are committed to implementing a balanced enrollment strategy that clearly links resources with teaching.

1. Establish a Strategic Enrollment Management process that delineates clear goals for the number and types of undergraduate students NDSU should recruit. This plan will set targets for the following:
  - a. Enrollment of first-year, online, international, underrepresented and transfer students;
  - b. Retention and graduation rates aligned with those of comparable institutions;
2. Focus student recruitment in areas that align with the research priorities of NDSU, meet the needs of North Dakota, and have capacity to accept new students;
3. Establish a metric, such as student-faculty ratio or credit hours per FTE, that defines the faculty size necessary to support the established enrollment targets;
4. Create a formula that allocates a portion of resources based on student credit hours, paying attention to service courses that support high-demand majors and to the differential responsibilities involved in working with undergraduate, professional and graduate students;
5. Prioritize scholarship funds in development efforts to attract students who are academically-talented and from diverse backgrounds;
6. Develop an honors program that provides a signature experience for NDSU's top students;
7. Selectively expand recruitment activities beyond North Dakota and Minnesota to respond to demographic change and to enhance the diversity of the student body;

## Improve Retention and Graduation Rates for Undergraduates

NDSU's 4- and 6-year graduation rates are lower than other institutions that enroll approximately the same caliber of student. Sixteen percent of the students who entered NDSU in the fall of 2008 ultimately transferred to, and graduated from, another four-year institution. Institutional research points to the following underlying issues:

- Difficulty registering for classes in the sequence and semester needed;
- A lack of a clear path for students who do not meet the selectivity requirements of certain programs;
- A lack of advising about alternative majors and career paths;
- The high number and poor completion rates of students who do not consistently enroll as full-time students; and
- A perceived lack of student engagement and commitment to NDSU.

Student engagement is instrumental for retention and timely graduation. Certainly, the interaction between faculty and students is key. In addition, NDSU has strong out-of-class experiences, such as learning communities, tutoring services, and service learning, that have demonstrable positive effects on student engagement and learning.

To support student success, NDSU should focus on initiatives that will improve retention and graduation rates:

1. Create a bridge between the undergraduate experience and our research foci by
  - developing coursework accessible to undergraduates in the Grand Challenge areas;
  - creating research experiences for undergraduates in the Grand Challenge areas;
2. Support high impact practices such as study abroad, research with a faculty member, service learning and peer mentoring through allocation of resources and effort;
3. Designate an individual who is responsible for monitoring retention efforts;
4. Identify and reduce barriers that impede graduation within eight semesters;
5. Support the Office of Teaching and Learning as it champions 21<sup>st</sup>-century teaching methods, including active and engaged learning;
6. Increase incentives for faculty members to participate in pedagogical development opportunities and programs;
7. Emphasize face-to-face instruction over online delivery for foundational courses;
8. Develop a university-wide advising system that recognizes the strength and unique needs of each academic college. This initiative should mandate student participation, outline a coordinated academic advising effort, and provide resources for professional and faculty advisor development;
9. Cement partnerships between academic affairs and student affairs that support and enhance the connection between in-class and out-of-class experiences and develop protocols that assign responsibility for these partnerships to specific offices or people.

It is critical that the physical learning spaces on campus support 21<sup>st</sup>-century pedagogical approaches. The new STEM building will add a substantial number of modern labs and classrooms to the pool of learning spaces on campus. We must continue to invest in the physical infrastructure necessary to support a rising number of students. In particular, the physical library space, as well as its collections, must be adequately supported.

To improve NDSU's physical space,

1. Create a classroom design manual based on best practices in configuring modern learning environments;
2. Address deferred maintenance needs for learning spaces, including the library, through campus planning, giving campaigns, and annual budgeting;
3. Develop the library as a 21<sup>st</sup>-century learning space which fosters interdisciplinary scholarship.

## Outreach and Engagement

As a land-grant institution, service, engagement and outreach are integral elements of NDSU's mission. The strategies outlined here seek to refine the idea of outreach as a collaborative, scholarly effort aimed at the mutual exchange of

knowledge to enhance the lives of the citizens of North Dakota. Faculty and staff have an interest in serving North Dakota through outreach activities. To support that interest, NDSU's faculty will:

1. Establish processes that value outreach and that include outreach in mission statements;
2. Evaluate Promotion and Tenure Evaluation (PTE) standards to include the scholarship of outreach separately from service requirements.

### Improve Communication with External Stakeholders

In order for NDSU to be effectively engaged with North Dakota communities, we must accurately identify community needs and priorities through both active solicitation and passive mechanisms such as logging and sorting web queries.

NDSU should enhance:

1. Mechanisms for listening to the public. This could include listening tours, additional advisory boards, liaisons with state agencies, and surveys of each community's needs;
2. Access for individuals trying to obtain assistance from NDSU, including, for example, a database of outreach services and expertise, a webpage devoted to outreach efforts, and clear contact information for outreach activities;
3. Use of the Extension network for more general university outreach, including a charge to county staff to bring information back to campus;
4. Connections with underserved communities, such as
  - a. the growing number of urban communities in North Dakota;
  - b. Tribal communities;
  - c. People who have recently moved to North Dakota, often comprising a young and fluid population.

### Align Outreach Activities with NDSU's mission

Given limited resources, NDSU should be realistic about what it can do and do well with respect to outreach. Program rigor and quality, qualifications and interests of personnel, time availability, efficaciousness, innovation, and internal and external funding should be included in this assessment.

1. NDSU will develop criteria for the evaluation of outreach activities that include:
  - a. An alignment with NDSU's strategic vision and its existing strengths and expertise;
  - b. An evaluation of the value of the investment of time and resources in the activity;
  - c. Addressing the needs of state constituents based on an objective and collaborative assessment for the initiative;
  - d. Assessment of the initiative's quality, feasibility and sustainability;
2. New programs should be critically assessed until existing programs are supported at acceptable levels;
3. All outreach programs will include an assessment plan so that the program's impact on the target audience can be communicated to stakeholders and peers. This is essential for documenting the scholarship of outreach and provide accountability to funders;
4. Define the scholarship of outreach and establish criteria for its evaluation;
5. NDSU will communicate outreach interests and efforts both internally and externally;
6. NDSU serves North Dakota by bringing educational opportunities to place-bound citizens through distance and online education. The following principles should govern the delivery of online courses and programs:
  - a. Departments and Colleges are in the best position to make decisions about which online courses and programs are offered;
  - b. Emphasis should be given to programs that serve place-bound students, especially those who have not finished a four-year degree or may need specialized post-baccalaureate training;

- c. The quality and rigor of online courses should be equivalent to courses and programs delivered on campus.

## Research and Discovery

NDSU is ranked as a Carnegie Very High research university, one of the top 108 research institutions in the United States. To maintain this classification, we will support faculty in their research efforts by improving the infrastructure that supports research, streamlining processes and policies to enable faculty to conduct research, and providing centralized funding in support of research. A defining characteristic of very high research universities is the presence of strong doctoral education programs. NDSU will pursue policies that enhance our ability to attract high-quality doctoral students to support research and discovery.

The proposed vision for research and discovery centers on three Grand Challenges; these areas of focus leverage current and emerging strengths of NDSU researchers and align the university with the needs of the state, the nation, and the world. In parallel, this vision is broad enough to include the artistic, environmental, health, social, cultural and technological aspects of challenges that are global in nature and must be addressed in this century. The themes look inward to the strength of the campus community while simultaneously positioning the university to increase and accelerate outward economic development and outreach across the State.

NDSU will strategically invest in faculty and staff hires with the intent of achieving national and international recognition as a premier public Research University, committed to solving complex and evolving Grand Challenges in the interdisciplinary areas of:

- Food Systems and Security,
- Healthy Populations and Vital Communities, and
- Sustainable Energy, Environment, and Societal Infrastructure.

NDSU's Research and Discovery Vision will be achieved by meeting the following goals:

- Propel the **research and discovery** enterprise forward;
- Attract and retain high-quality and diverse faculty, staff, and doctoral students that energize and support scholarly activities;
- Establish and maintain
  - Sustainable research funding,
  - Facilities and infrastructure to support the research mission and
  - Long-term partnerships with private and government entities;
- Increase our research ranking.

The strategic vision will be realized through attention to five tactics. NDSU must develop a committed, focused, and coordinated effort toward research and creative excellence through faculty-inspired research activity accompanied by administrative support and resource allocation.

## Strategically allocate new resources to support research excellence

Invest in faculty and graduate students:

1. Develop the resources needed to address the Grand Challenges;
  - a. Target hiring of 100 new tenured and tenure-track faculty in the Grand Challenge areas;
  - b. Provide resources for technology, research space, support staff, and other components that support this growth;

- c. Develop a plan to increase and support research staff (research faculty, post-doctoral students, visiting scholars and scientists);
- 2. Review policies and criteria governing Research Faculty, Professors of Practice, Graduate Faculty status and Professor Emeriti for alignment with expectations of a growing research and discovery enterprise;
- 3. Ensure Developmental Leave policy is aligned with the Research and Discovery Vision;
- 4. Establish an Endowed Chair and Professorship program to reward excellence across research, education, and outreach areas relevant to the Grand Challenges;
- 5. Pursue support structures to increase participation of women and other underrepresented groups in STEM disciplines;
- 6. Develop university-wide programs for mentoring of faculty, for professional development for heads and chairs, and for high-potential leaders on campus;
- 7. Reduce administrative burden on faculty and staff;
- 8. Place a concerted effort on attracting superior and diverse Ph.D. students into graduate programs (disciplinary, multi-disciplinary and interdisciplinary) through competitive stipends and benefits;
- 9. Establish a Ph.D. Fellowship Program to attract the best students into areas relevant to the Grand Challenges;
- 10. Invest in and support interdisciplinary education programs that focus on areas relevant to the Grand Challenges, including the development of interdisciplinary research laboratories.

Invest in areas that support research priorities:

- 1. Create a coordinated, university-wide plan for physical infrastructure to support the research vision;
- 2. Ensure adequate resources to support a “library of the future” that can meet the needs of the researchers across the disciplines, including those involved in basic research, applied research, and the creative arts;
- 3. Review CORE Labs, with an analysis of current labs, the criteria for new CORE facilities, and compilation of a plan for sustainable operation and maintenance of such facilities;
- 4. Support High Performance and Advanced Computing, Informatics and data visualization as a fundamental requirement for excellence in numerous areas of research.

#### Align policies and processes with the research vision

- 1. Review current organizational structure of the Office of Research and Creative Activity and the Research and Technology Park to ensure alignment and efficiency of service for a growing research university;
- 2. Perform a systematic review of policies and procedures that impact research and discovery to ensure alignment with growth of research; in particular, review with an eye to streamlining
  - a. the hiring of soft-money personnel on grants;
  - b. the intellectual property and patent process;
  - c. the decision process for pooled funds related to research proposals (e.g., equipment match) and integrate these into RCA to provide a centralized point of contact.
- 3. Increase the efficiency of the pre-award and compliance processes through migration to electronic research administration and hiring additional support staff;
- 4. Streamline and incentivize faculty start-ups;
- 5. Align the PTE policy and process with the evolving research, creative works and discovery enterprise.

#### Create research development programs that support emerging areas

- 1. Support the Research Development Office in RCA;
- 2. Hire an NDSU Federal Relations staff person to build stronger relationships with federal agencies and to monitor congressional activities and funding directions;
- 3. Invest in multidisciplinary NDSU seed grant and center or large initiative development grant programs related to the grand challenges;

4. Provide institution-wide advertising of undergraduate research opportunities and funding, communicate the importance of undergraduate research to the public, and encourage the expansion of undergraduate research opportunities.

#### Ensure coordinated efforts to support and promote NDSU's research mission

1. Allocate central funds to be administered by the Vice President for Research in RCA to support research priorities;
2. Create a mechanism to coordinate graduate education with the research vision;
3. Coordinate activities between University Relations, the Graduate College and the VPRCA in order to articulate the impact of a leading, public research university on the state, region, nation, and world and NDSU's research mission;
4. Ensure that the Research Foundation works with the RCA office and in the support of high-potential research activities, including graduate student fellowships, scholarships, and other support for graduate education;
5. Ensure that the Development Foundation is engaged with the RCA office and actively involved in the support of high-potential industrial- and foundation-sponsored research activities;
6. Establish a President's or Provost's Lectureship Series to bring key national and international leaders, both public and private, to campus to interact with faculty, staff and students;
7. Expand support for promoting and nominating faculty, staff, and students for national awards and committee memberships.

#### Tie NDSU's research initiative to the needs of North Dakota

1. Expand the support for the Business Development unit in RCA to provide one-stop shopping for services for companies looking to partner with NDSU and for communicating the strengths and capabilities of the NDSU community to potential companies;
2. Expand support for entrepreneurship and innovation programming utilizing the College of Business and better integrate the Research and Technology Programs into campus.

This strategic vision is meant to be a dynamic document that is updated and edited as necessary to meet the needs of NDSU's faculty, staff, students, administrators and external constituents. To that end, NDSU will:

1. Improve communication pathways among faculty, staff, students, administrators and external constituents;
2. Provide timely information and training related to institutional budgets, planning, and institutional policies;
3. Report annually on progress towards strategic plan goals.