Provost’s Strategic Plan—IT Supplement
October 19, 2015

This document supplements the Provost’s strategic plan of spring 2015. Goals identified by each of the Provost’s task forces (green) are followed by IT goals (gold). The intent of the IT Supplement is to identify activities and services that will aid the university in achieving its research, academic, and outreach goals.

A. Research and Discovery

Goals
1. Propel the research and discovery enterprise forward, providing economic stimulus and creating employment opportunities across the state.
2. Attract and retain (a) High quality faculty and staff, and (b) Students who will fill the needs of employers today and in the future.
3. Establish and maintain (a) Sustainable funding, and (b) Long-term partnerships with private and government entities.
4. Achieve status as a top 50 public research university.

IT Goals
1. Automate and digitize common research-related business tasks so faculty can spend more time on research activities and less time on administrative tasks.
2. Provide guidance on software licensing terms and centrally license key pieces of software to give researchers tools they need to do their jobs as well as to help with recruitment of researchers.
3. Provide and support storage and communications services for researchers working under International Traffic in Arms Regulations and Export Administration Regulations.
4. Provide support for computers and servers connected to research equipment in faculty labs.
5. Provide support for faculty computers used for high-end computational research.
6. Ensure IT systems are as flexible as possible to effectively facilitate collaboration with external partners.
7. Participate in a leadership capacity in national professional organizations such as EDUCAUSE and Internet2.
B. **Learning and Student Success**

**Goals**
1. Recruit new students to NDSU.
2. Improve retention and graduation rates.

**IT Supports**
1. Provide consistent and well-integrated IT services to students.
2. Use information systems and analytics to effectively guide efforts to improve retention and graduation rates.
3. Engage with faculty in a purposeful way to better support effective pedagogy.
4. Increase collaboration with NDSU Libraries to make for more consistent information service offerings for faculty and students.

C. **Outreach and Engagement**

**Goals**
1. Communicate and connect with North Dakota.
2. Assess outreach activities.
3. Deliver educational opportunities to North Dakota.
4. Promote outreach as an important activity.

**IT Supports**
1. Offer and support varied communications services to allow faculty and staff to effectively reach out to diverse audiences using multiple channels.
2. Provide and support online assessment tools and data analysis tools.
3. Ensure tools used for delivery of traditional for-credit classes may be extended for use in other educational settings. Strengthen support for innovative technologies that allow for creative methods of delivering education.
Description of IT Supports

The following provides detail on the IT Supports identified as needed to support the Provost’s strategic plan.

A. Research and Discovery

1. Automate and digitize common research-related business tasks so faculty can spend more time on research activities and less time on administrative tasks.

   Implement an electronic research administration product to improve efficiency and effectiveness of business processes for grant related research activities. Identify other business processes that may be effectively digitized to reduce time spent by faculty and other researchers on non-research activities.

2. Provide guidance on software licensing terms and centrally license key pieces of software to give researchers tools they need to do their jobs as well as to help with recruitment of researchers.

   Reach out to faculty to identify software packages commonly used by researchers that can be licensed campuswide and funded centrally. Work with central administration and academic colleges to secure necessary funding.

3. Provide and support storage and communications services for researchers working under International Traffic in Arms Regulations and Export Administration Regulations.

   Work with the Vice President for Research and Creative Activity to identify research efforts that require ITAR/Export Control compliant IT services. Deploy new services or modify existing services to meet the needs of the NDSU research community. Train IT staff in proper procedures for operating these services.

4. Provide support for computers and servers connected to research equipment in faculty labs.

   Work with faculty and relevant vendors to support computers that connect to and control research equipment. Support needs include basic software and hardware troubleshooting, software upgrades on the computers and research equipment, appropriate security measures, and data storage, backup and protection.

5. Provide support for faculty computers used for high-end computational research.

   Work with faculty and relevant software vendors to support computers used for computational research. Support needs include basic software and hardware troubleshooting, software and hardware upgrades, appropriate security measures, data
storage, backup and protection, performance bottleneck identification and system optimization.

6. Ensure IT systems are as flexible as possible to effectively facilitate collaboration with external partners.

Participate in national identity federations (e.g., InCommon and eduroam). Ensure identity management system allows for easy onboarding of external partners who need access to NDSU IT resources. Provide support for tools that allow researchers to collaborate on content, especially Office 365 and Google Apps for Education.

7. Participate in a leadership capacity in national professional organizations such as EDUCAUSE and Internet2.

Leverage resources and relationships available through these organizations to improve services offered at NDSU. Facilitate progress within these higher education IT communities that benefits NDSU and other institutions in the region and across the U.S.

B. Learning and Student Success

1. Provide consistent and well-integrated IT services to students.

Design and deploy services that work together in a coherent fashion. Use central authentication services to allow students to access multiple systems using a consistent set of credentials. Integrate IT services in synergistic ways, including automatically moving data between systems as appropriate.

2. Use information systems and analytics to effectively guide efforts to improve retention and graduation rates.

Analyze data to identify when students are at risk and programmatic bottlenecks that make timely completion of degrees more difficult. Share data with faculty, professional advisors, department heads, deans, and other support staff in an easy-to-use fashion to ensure that data is used to effect positive change.

3. Engage with faculty in a purposeful way to better support effective pedagogy.

Work to build formal professional communities of instructors who have special interest in pedagogy and infusing learning with technology. Coordinate efforts with the Office of Teaching and Learning. Work with other existing groups on campus who also have interest in pedagogy, but may have additional areas of focus as well (e.g., Faculty Senate, Learning Spaces Executive Committee).
4. Increase collaboration with NDSU Libraries to make for more consistent information service offerings for faculty and students.

Identify ways to collaborate more effectively, such as combining the IT Help Desk in the Library with other existing Library service desks. Work with Library IT staff to coordinate delivery of IT services, leveraging multiple staff members’ skill sets.

C. Outreach and Engagement

1. Offer and support varied communications services to allow faculty and staff to effectively reach out to diverse audiences using multiple channels.

When deploying new IT services or upgrading/enhancing existing services, ensure those services are accessible to the broadest possible audience.

2. Provide and support online assessment tools and data analysis tools.

Provide and support survey tools (e.g., Qualtrics, Google Forms) that allow NDSU faculty, staff and students to engage North Dakota citizens in the processes of submitting, compiling and analyzing data for research that will ultimately create opportunities for advancement and success in the state.

3. Ensure tools used for delivery of traditional for-credit classes may be extended for use in other educational settings. Strengthen support for innovative technologies that allow for creative methods of delivering education.

Provide and support tools that facilitate learning in face-to-face, online and mixed environments. Collaborate with the NDSU School of Education and the Office of Teaching and Learning to ensure instructional technologies align with effective pedagogical strategies used by NDSU faculty and cultivated in the next generation of North Dakota teachers. Offer technology training to faculty that integrates effective pedagogy (theory) and innovative instructional technologies (application) to facilitate effective learning across many teaching environments.