ND STATEWIDE TECHNOLOGY PLAN 2017 2019

ND State Government | North Dakota University System | North Dakota K-12

ND STATEWIDE TECHNOLOGY PLAN 2017 2019

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WHAT IS THE STATEWIDE IT PLAN?

Every biennium the technology professionals at North Dakota's state government, North Dakota's Education Technology Council (the state's K-12 system), and the North Dakota University System jointly produce this Statewide Information Technology (IT) Plan. It is intended to provide a broad understanding of technology goals, objectives and initiatives for the coming biennium as well as provide a snapshot of key projects that were completed in the biennium during which it was written.

Per North Dakota Century Code (NDCC) § 54-49-11, "Each executive branch state agency or institution, excluding the institutions under the control of the board of higher education, unless the chief information officer grants an exemption, shall participate in the information technology planning process based on guidelines developed by the department [ITD]. The plan must be submitted to the department by August fifteenth of each even-numbered year unless the chief information officer grants an extension. The department shall review each entity's plan for compliance with statewide information technology policies and may require an entity to change its plan to comply with statewide policies or standards or to resolve conflicting directions among plans. Agencies of the judicial and legislative branches shall file their information technology plans with the department by August fifteenth of each even-numbered year. Based on the plans, the department shall prepare a statewide information technology plan and distribute copies of that plan to members of the legislative assembly as requested by the legislative council. The statewide information technology plan must be developed with emphasis on long-term strategic goals, objectives, and accomplishments."

North Dakota

OVERVIEW

Mike Ressler, Chief Information Officer
North Dakota Information Technology Department

What a difference two short years can make on the financial outlook of a state. Whereas in the last biennium's Statewide Information Technology Plan I wrote of the oil boom, economic strength and growth opportunities, in 2017-19 the story is one of "do more with less," as the downturn in the oil economy has forced agencies to cut budgets. But just as the importance of technology rises when a state's economy, population and need for services grows, technology also remains important when that economy shrinks as well. Why? Because through the shrewd use of technology levels of service may be maintained while budgets shrink. And through the strategic replacement of aging IT systems with new systems, efficiencies may be gained.

This is why it remains crucial to invest in technology now.

Efforts to consolidate multiple technology systems into one, such as the North Dakota University System's (NDUS) "Functional Consolidation Project," and their implementation of a consistent, enterprise learning management system are two big examples of how investment may spawn efficiencies (see page 17). At the Education Technology Council (ETC) new efficiencies in enrollment and other processes have reduced processing time and errors, which frees up staff to work on improving other services (see page 35). In the NDUS and ETC sections of this plan you will see how their goals drive these and other important initiatives. At the state agency level, an example of efficiencies gained in the past biennium is where 19 agencies switched to having desktop support provided by ITD's newly standardized service offering.

In 2017-19 State Government will continue to focus on the same four goals as outlined in our previous Statewide Information Technology Plan:

1. Expanding North Dakota's services to reach citizens and businesses anytime, anywhere.

Improving access to services manifests itself in many ways. It may mean that they become available on mobile devices, or that more services are available, or that systems which were difficult to use or outdated have been updated. A prime example of work to improve access moving into the 2017-19 biennium is the Department of Human Services' (DHS) Self-Service and Consolidated Eligibility System (SPACES) project in which multiple legacy systems are being rewritten as one web-based system. Access also comes in the form of increasing bandwidth capacity throughout the state, which has become an effort that is almost always ongoing as demand for increased capacity continues to grow.

Mike Ressler - Chief Information Officer (CIO)

2. Delivering solutions that empower decision makers.

One of the benefits of updating systems is that business staff gets a chance to take a fresh look at the types of data they need to run their units effectively. Therefore, goal two is driven by the quest for better information. Data warehouses and business intelligence are key terms in this arena, and for the 2017-19 biennium the state will be pursuing efforts to improve the methods, processes and tools to gather, store, and report on data. Significant to this goal will be the Data Utilization Project to enhance the Statewide Longitudinal Data System (SLDS).

3. Meeting changing business needs by delivering secure and effective technology services while safeguarding citizen privacy.

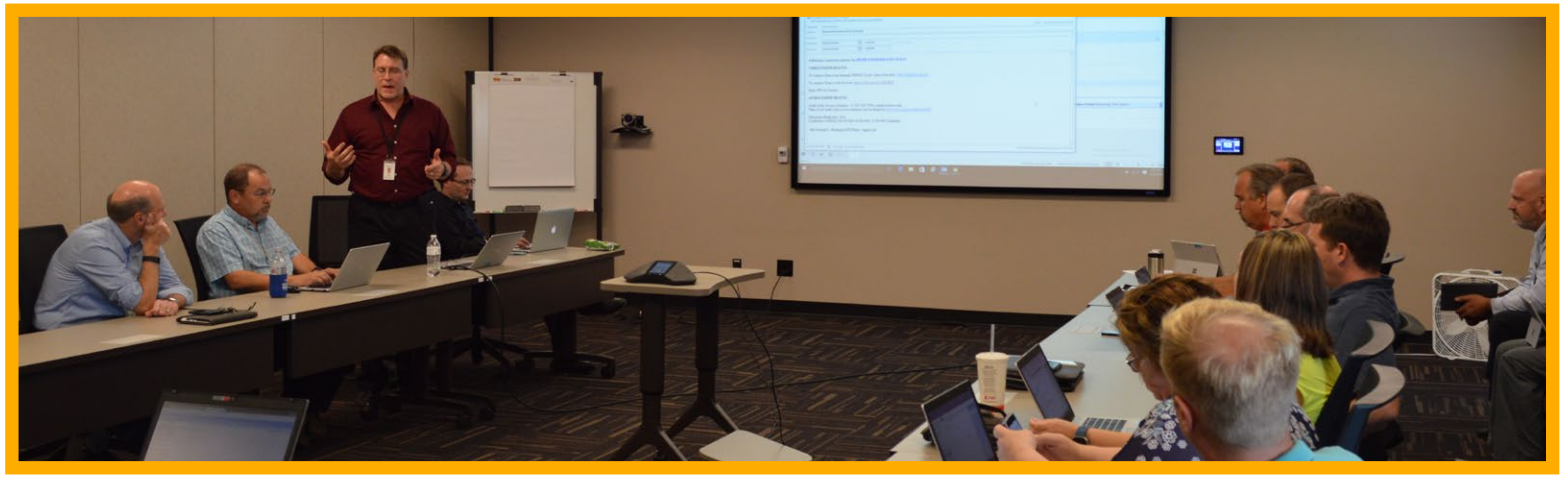
Reliability, security, safety, privacy: These are the pillars of goal number three. Cyber threats and the risks they pose continue to grow. In 2015 Governor Dalrymple announced the formation of the Cybersecurity Task Force to help address the rapidly evolving and expanding cyber threats facing the nation and our state. Recommendations and improvements have been determined to improve cyber security in state government, and initiatives have been ongoing – and will continue into the future – to minimize the risk of any losses due to technology-based crime. As our executive branch leadership changes hands to Governor Burgum security will remain a top priority.

4. Pursuing streamlined business processes and innovative partnerships that improve North Dakota's government service.

Efficiency is the name of the game for goal number four. To achieve this goal, we seek out the right people, processes and partnerships to keep costs in check and to improve the way government service is delivered. Improvements such as this may come in the form of the Department of Health's effort to move a paper-based benefits payment program to an electronic, card-based system; or they may come in the form of the Information Technology Department's (ITD) push to build a new, secure and cost-effective web portal framework.

As is always the case with IT, there are newer and evolving technologies which state agencies will look at to leverage more solutions such as the Internet-of-Things, biometrics tools, cloud solutions, and unmanned aerial vehicles.

The following Information Technology Plan outlines our projects, initiatives and accomplishments, while mapping them to the strategies they support as we move into the 2017-19 biennium.



North Dakota

THE INFORMATION TECHNOLOGY PLANNING PROCESS

Each Executive Branch state agency, as well as the Judicial and Legislative branches, spends a portion of every "even-numbered year," per NDCC § 54-59-11, preparing an "IT Operations Plan," which is submitted to and reviewed by the state's Information Technology Department (ITD). Each IT Operations Plan consists of an Agency Profile, Technology Strategy Information, Technical Infrastructure Information, Application Information, Current Biennium Accomplishments, Planned Activity Information for the next biennium, Technology Being Investigated or Considered, and a "New Project Worksheet" which details a simple business case for all planned projects that are expected to cost $100,000 or more.

ITD planning consultants then analyze this information in order to share it between relevant stakeholders, as well as to extract key findings for publishing in this document.

SITAC PROJECT PRIORITIZATION

Another primary function of the Information Technology Planning Process is to prioritize IT projects that have estimated budgets of $500,000 or more. This ranking is done by the State Information Technology Advisory Committee (SITAC).

Per NDCC §54-59-02.1, "The department [ITD] shall submit information regarding proposed major information technology projects for executive branch state agencies, departments and institutions, excluding institutions under control of the state board of higher education and agencies of the judicial and legislative branches to the state information technology advisory committee. The committee shall review the projects and rank those projects that receive the committee's affirmative recommendation. The chief information officer shall submit recommendations of the committee regarding the prioritization of major information technology projects to the information technology committee, the office of management and budget, and the appropriations committees of the legislative assembly. The judicial and legislative branches shall notify biennially the committee on their major information technology projects and priorities."

After reviewing this information, SITAC holds a meeting at which agencies present a summary of their project's business case, and also field questions from committee members. Projects are grouped by funding source (General, Special, or Federal) and are ranked separately within each group. The results are then communicated to the Office of Management and Budget and the Legislature as input to the appropriation process. Please note that not all projects are necessarily funded; budget allocations are contingent upon the Legislative Session.

SITAC RANKING FOR THE 2017-19 BIENNIUM

General Funds

1. **Department of Corrections**, Electronic Health Records Project: To implement a replacement for the existing DOCR Electronic Medical Record system, which is no longer a supported system

2. **Information Technology Department**, Statewide Interoperable Radio Network (SIRN) Project: To establish reliable communications consistently across the state in support of public safety, while improving the ability of responders and incident managers to adjust communications tactics to meet incident needs

3. **Office of the Secretary of State**, E-Voting Tabulators Project: To replace the vote tabulation equipment used by ND counties to conduct elections

4. **Department of Human Services**, Child Care Licensing System Project: To develop a system that supports core certification and licensing business functions as well as provide a centralized repository of provider license/certificate, inspection, and sanction information

5. **Office of the Secretary of State**, E-Poll Books Project: To replace the paper-based poll book method with newly acquired electronic poll books

Federal Funds

1. **ND Health Information Network (NDHIN)** with the Department of Human Services, Care Coordination Project: To support the onboarding of health care providers' Electronic Health Record integration to the NDHIN and to enhance the care coordination services available through the NDHIN

2. **Department of Health**, Women Infants Children (WIC) Electronic Benefits Transfer (EBT) Project: To install an electronic solution that utilizes a "swipe" or "chip" card in the place of paper checks to deliver WIC benefits to families

3. **Department of Public Instruction**, ND Foods 2.0 Project: To incorporate the Family Childcare Home Sponsoring Organizations (FCHSO) budget and financial management functions into the existing ND Foods system

Special Funds

1. **Department of Transportation**, Real-ID Project: To improve the security of state-issued drivers license/identification cards and the integrity of the issuance process

2. **Workforce Safety and Insurance**, Claims and Policy System (CAPS) Program, Phase 3 Projects: To upgrade and improve the systems that support the Policy and Employer Services business units

3. **Job Service North Dakota**, Unemployment Insurance Modernization Project: To replace the unemployment processing system which currently resides on a mainframe platform

4. **Department of Transportation**, Drivers License System Rewrite: To install a new system to replace the aging and outdated one that supports the drivers licensing process

5. **Department of Trust Lands**, Trust Lands Replacement System Project: To replace the current system, which is used for the majority of the agency's units for conducting their business functions

6. **Workforce Safety and Insurance**, Extranet Project: To enable WSI's customers to securely access needed information via the Internet

7. **Department of Transportation**, Traffic Data Editing and Analysis Project: To upgrade the software program the agency currently uses to edit, analyze, and factor traffic counts

8. **Workforce Safety and Insurance**, Oracle Reports Replacement Project: To migrate an existing transactional reporting system to a better supported platform while editing and upgrading various reports

GOAL ONE

Expand North Dakota's services to reach citizens and businesses anytime, anywhere.

Purpose

Electronic access to government services through the Internet and other electronic means has not only allowed North Dakota's citizens to "serve themselves" at their convenience at any time of the day or night, but it has also increased the demand to continually add to the state's "anytime, anywhere" list of offerings. IT departments across state government therefore strive to continually roll out new electronic services while improving the ones that currently exist.

Objectives

- Expand upon existing, electronically available services
- Add new electronically available services
- Provide electronic services that are accessible to as many citizens as possible, on a "24x7x365" basis

2017-19 PLANNED OR REQUESTED INITIATIVES

MAJOR PROJECTS

DEPARTMENT OF CORRECTIONS AND REHABILITATION:
Electronic Health Records

DEPARTMENT OF HUMAN SERVICES:
Child Care Licensing

DEPARTMENT OF HUMAN SERVICES:
Self-Service Portal and Consolidated Eligibility System (SPACES), continued from 2015-17 biennium

DEPARTMENT OF TRANSPORTATION:
Real-ID License/Identification Enhancements

ND HEALTH INFORMATION NETWORK AND DEPARTMENT OF HUMAN SERVICES:
Health Information Exchange, Care Coordination

WORKFORCE SAFETY AND INSURANCE:
Extranet Portal

2017-19 PLANNED OR REQUESTED INITIATIVES

OTHER INITIATIVES

COUNCIL ON THE ARTS:
Maintain and enhance social media presence

DEPARTMENT OF COMMERCE:
Maintain and enhance social media presence

INDUSTRIAL COMMISSION:
Develop web-based data submittal methods to support pipeline section requirements

OFFICE OF THE TAX COMMISSIONER:
Update and enhance the Taxpayer Access Point

OFFICE OF THE STATE TREASURER:
Update reports to reflect changes to mineral tax distributions

RETIREMENT AND INVESTMENT OFFICE:
Reorganize and update the agency's web site

SCHOOL FOR THE DEAF:
Redesign and update the School for the Deaf/Resource Center for Deaf and Hard of Hearing web site

2015-17 Accomplishments

- **Department of Agriculture:** Launched the "Bee Map," which helps facilitate contact between landowners, beekeepers, and pesticide applicators
- **Department of Parks and Recreation:** Implemented upgrades to the online reservation system for campsites, corrals, cabins, yurts and tipis
- **Department of Transportation:** Deployed "NDRenewals," an app that lets people renew their motor vehicle registrations from their mobile device
- **Job Service North Dakota:** Deployed "Job Service ND," an app that allows job seekers to search for and apply for jobs from their mobile device
- **North Dakota Public Employees Retirement System:** Deployed "PERSLink," an app that allows members to manage their plan and enrollment information from their mobile device
- **Office of the Attorney General:** Deployed the Sex Offender for Law Enforcement Administrative Application, which allows law enforcement to verify sex offender information

2015-17 WEBSITE REDESIGNS

- Aeronautics Commission
- Department of Public Instruction
- Game and Fish Department
- Information Technology Department
- North Dakota Mill and Elevator Association
- North Dakota Public Employees Retirement System
- North Dakota Racing Commission
- Office of the Governor
- Office of Management and Budget
- Office of the State Tax Commissioner

GOAL TWO

Deliver solutions that empower decision makers.

Purpose

With the constant enhancement and development of new electronic systems to serve citizens and to manage government operations, state agencies have access to ever-increasing sources of data. Through sophisticated reporting and analysis, this data may be leveraged by state leaders to solve complex problems that have a direct impact on their agency's missions.

Objectives

- Where multiple versions of data sets exist, consolidate systems (when possible) to make data more accessible
- Present data from state systems in an easily "consumable" fashion so agency decision makers may leverage it to make informed business decisions
- Collect and present data in a way that balances the requirements of state and federal laws, the needs of the agency to analyze that information, and the rights of an individual's privacy

2017-19 PLANNED OR REQUESTED INITIATIVES

MAJOR PROJECTS

DEPARTMENT OF HUMAN SERVICES:
Electronic Health Records System to support behavioral health, continued from 2015-17 biennium

INFORMATION TECHNOLOGY DEPARTMENT:
Data Utilization Project for the Statewide Longitudinal Data System (SLDS), continued from 2015-17 biennium

DEPARTMENT OF TRANSPORTATION:
Traffic Data Editing and Analysis Project

2017-19 PLANNED OR REQUESTED INITIATIVES

OTHER INITIATIVES

OFFICE OF THE ATTORNEY GENERAL:
Crime Statistics Repository Replacement

WORKFORCE SAFETY AND INSURANCE:
Oracle Reports Replacement Project

2015-17 Accomplishments

- **Department of Human Services:** Implemented the Transformed Medical Statistical Information System (T-MSIS), a decision support and data warehouse system which is an expansion of the existing Centers for Medicaid & Medicare MSIS extract process
- **Department of Public Instruction:** Added a new early childhood report to the State Automated Reporting System (STARS)
- **Department of Public Instruction:** Completed the Workforce Innovation and Opportunity Act project, which aligned and integrated workforce and education data systems to provide “common participant outcomes” for federal performance-measure reporting
- **Industrial Commission:** Implemented a web-based system to serve geological maps and LIDAR (Light Detection and Ranging) data
- **Information Technology Department:** Produced a feasibility study for the Statewide Interoperable Radio Network (SIRN)
- **Information Technology Department:** Completed the core Statewide Longitudinal Data System which is used to share and analyze education and workforce information

GOAL THREE

Meet changing business needs by delivering secure and effective technology services while safeguarding citizen privacy.

Purpose

Citizens expect that the systems they use will maintain their privacy, will keep their information safe, and that the systems will be there when they need them. Therefore the technology solutions provided by the state must be secure and reliable, and also be aligned to industry standards and agencies' business needs.

Objectives

- Offer reliable, cost-effective systems and services
- Operate within a cybersecurity framework that strives to keep state and citizen information safe and secure

CYBERSECURITY TASK FORCE

On Sept. 28, 2015, Gov. Jack Dalrymple announced the formation of a Cybersecurity Task Force to help address the rapidly evolving and expanding cyber threats facing the nation and the potential impact on North Dakota's state government. The Task Force was comprised of representatives from 17 agencies and produced a final report with cybersecurity recommendations.

2017-19 PLANNED OR REQUESTED INITIATIVES

MAJOR PROJECTS

DEPARTMENT OF PUBLIC INSTRUCTION:
NDFoods 2.0 System Enhancement Phase 2 Project

DEPARTMENT OF TRUST LANDS:
Trust Lands Replacement System Project

INFORMATION TECHNOLOGY DEPARTMENT:
Statewide Interoperable Radio Network (SIRN) Project

2017-19 PLANNED OR REQUESTED INITIATIVES

OTHER INITIATIVES

BANK OF NORTH DAKOTA:
Implement Anti-Money Laundering System

BANK OF NORTH DAKOTA:
Implement Risk Management Solution

BANK OF NORTH DAKOTA:
Upgrade Imaging System

INFORMATION TECHNOLOGY DEPARTMENT:
Investigate/enhance network requirements to support the growth of the "Internet of Things"

JUDICIAL BRANCH:
Digitize existing microfilm

LEGISLATIVE ASSEMBLY AND LEGISLATIVE COUNCIL:
Review and implement new disaster recovery practices

OFFICE OF THE ATTORNEY GENERAL:
Rewrite Deposits System (upgrade to Background Check System)

OFFICE OF THE ATTORNEY GENERAL:
Upgrade ND SAVIN (Statewide Automated Victim Information and Notification) System

2015-17 Accomplishments

- **Adjutant General/Department of Emergency Services**, Division of State Radio with the Department of Transportation: Completed the development of a statewide, seamless base map for use in emergency dispatch and other map-based applications throughout state government
- **Bank of North Dakota:** Implemented a managed file transfer platform and associated policies, processes, and procedures as a replacement for existing file transfer systems and practices
- **Department of Human Services:** Developed the Health Enterprise Operating Rules system to support business rules for the Medicaid Management Information System
- **Department of Human Services:** Implemented the Health Enterprise Medicaid Management Information System (HE MMIS) to provide an updated system to manage all aspects of the Medicaid claims management process
- **Department of Public Instruction:** Implemented the NDFoods 2.0 System Enhancement Phase 1 Project
- **Department of Transportation:** Launched a new Motor Vehicle System to support vehicle registration, titling, dealer regulation, and financial accountability
- **Judicial Branch:** Established a disaster recovery site in a remote location

GOAL FOUR

Pursue streamlined business processes and innovative partnerships that improve North Dakota's government service.

Purpose

In order to discover and implement more efficient ways of providing services, conducting business, and maintaining operations, the state should be continually evaluating business processes, finding new partners, and actively managing processes, projects and relationships.

Objectives

- Continually improve frameworks for managing and delivering professional services
- Expand the utilization of business process modelling and other analytical methods to cut waste and improve efficiency
- Leverage procurement processes to keep costs, tools, and vendor-partners competitive

2017-19 PLANNED OR REQUESTED INITIATIVES

MAJOR PROJECTS

DEPARTMENT OF HEALTH:
Electronic Benefits Transfer for the Women, Infants, Children Program

DEPARTMENT OF HEALTH:
North Dakota Immunization Information System, continued from 2015-17 biennium

DEPARTMENT OF TRANSPORTATION:
Drivers License System Rewrite

JOB SERVICE NORTH DAKOTA:
Unemployment Insurance Modernization Project

OFFICE OF THE SECRETARY OF STATE:
E-Poll Books Project

OFFICE OF THE SECRETARY OF STATE:
E-Voting Tabulators Project

OFFICE OF THE SECRETARY OF STATE:
Business Licensing System, continued from 2015-17 biennium

WORKFORCE SAFETY AND INSURANCE:
Claims and Policy System (CAPS) Program Phase 3 Projects

2017-19 PLANNED OR REQUESTED INITIATIVES

OTHER INTIATIVES

BANK OF NORTH DAKOTA:
Replace and migrate selected WebSphere Applications

INFORMATION TECHNOLOGY DEPARTMENT:
Develop a secure, cost-effective web portal framework

INFORMATION TECHNOLOGY DEPARTMENT:
Examine user experience for managing requests, projects, work

INFORMATION TECHNOLOGY DEPARTMENT:
Incorporate Agile development methodology where appropriate

NORTH DAKOTA HIGHWAY PATROL:
Migrate select Federal Inspection Database functionality to the cloud

NORTH DAKOTA PARKS AND RECREATION DEPARTMENT:
Replace Point of Sale Software

OFFICE OF ADMINISTRATIVE HEARINGS:
Leverage video conferencing technology to conduct hearings

OFFICE OF THE STATE TAX COMMISSIONER:
Develop a process to distribute 1099G forms electronically

2015-17 Accomplishments

- **Information Technology Department:** Implemented a new single Billing System to replace three aging legacy systems
- **Information Technology Department:** Deployed Microsoft Office 365
- **North Dakota Highway Patrol:** Deployed a new, web-based Case Management System
- **North Dakota Veterans Home:** Finalized the implementation of an Electronic Health Records System
- **Office of the Attorney General:** Implemented a system to share protection orders information between the ND Courts System, the Office of the Attorney General, and the Federal Bureau of Investigation
- **Office of the Insurance Commissioner:** Deployed a new, web-based Boiler Inspection System
- **Office of Management and Budget:** Deployed new PeopleSoft functionality within the ConnectND system (Time and Labor module, Job Description Questionnaire and Reclassification module, Real Estate module, and Financial Tools upgrade)

2015-17 Accomplishments

- **Office of the Secretary of State:** Implemented a new web-based system to manage Central Indexing functions (e.g., Uniform Commercial Code, Central Notice, liens)

- **Office of the State Treasurer:** Implemented FileNet

- **Public Service Commission:** Partnered with the federal Office of Surface Mining to implement a mapping data portal (ArcGIS Portal) to allow data to be added or updated easily by personnel in the field

- **Workforce Safety and Insurance:** Rolled out the Claims and Policy System (CAPS) Program's, Phase 2, Releases 0 and 1. These releases laid the foundational work on which future functionality will be built while rewriting WSI's aging Claims and Policy software applications

Initiative: Business Process Modeling

Business process modelling, or BPM, is an activity in which a business' (or in our case, a state agency's or department's) processes are mapped out in a detailed diagram. BPM is an activity that is leveraged to not only understand everything the people in a business do to complete their work, but also to understand where efficiencies can be gained by altering those processes.

In the 2013-15 biennium two agencies, Workforce Safety and Insurance, and the Department of Transportation, piloted the concept of conducting a BPM project before procuring new major IT systems. The outcome was so positive that other agencies conducted BPM projects in the 2015-17 biennium, including the Department of Agriculture, the Department of Human Services, the Department of Trust Lands, and the Office of the Secretary of State.

CONSOLIDATING DESKTOP SUPPORT SERVICES

A study commissioned by the North Dakota Legislature recommended that ITD and OMB work together to expand ITD's Desktop Support offering. In support of this, during the 2015-17 biennium the following agencies switched from performing this function "in-house" to utilizing ITD's Desktop Support service offering.

- Aeronautics Commission
- Agriculture Department
- Center for Tobacco Prevention
- Council on the Arts
- Department of Financial Institutions
- Indian Affairs Commission
- ND Commission on Legal Counsel for Indigents
- ND Dept. of Career and Technical Education
- ND Securities Department
- ND University System (Bismarck Office)
- ND Department of Veterans Affairs
- Office of Administrative Hearings
- Office of the Auditor
- Office of the Governor
- Office of the Labor Commissioner
- Office of the Secretary of State
- Office of the State Treasurer
- Protection and Advocacy Disability Rights ND
- Public Employees Retirement System

NORTH DAKOTA
UNIVERSITY SYSTEM

ACCESS. INNOVATION. EXCELLENCE.

OVERVIEW

Darin King, Chief Information Officer
North Dakota University System

Core Technology Services (CTS) of the North Dakota University System (NDUS) has made significant and exciting changes this past biennium.

For starters, a new, dynamic leadership team is in place to enhance the vision for CTS while providing the foundation for innovative and far-reaching initiatives across the University System. The new faces to the CTS leadership team include: Jody French, a new Assistant CIO who is responsible for leading the Enterprise Services, Campus Solutions, and Finance and Human Resource teams. Jody comes to CTS with an extensive background in K-12 technologies. Next, Dirk Huggett was hired in 2014 as the director of P3M and is responsible for leadership in areas of Procurement, Planning and Project Management. The P3M department has provided a tremendous amount of value not only to CTS, but to the NDUS as a whole. Dirk previously worked for the state's Information Technology Department. Internally, Jerry Rostad has transitioned into an Assistant CIO for the Academic Support and Communications department. Jerry and his team are responsible for developing and implementing a CTS communications strategy, for serving as academic liaisons for institutions, and for assisting with special projects as assigned. I have transitioned this past year to the Chief Information Officer for the NDUS. This move allows Lisa Feldner, the former NDUS CIO, to take on the duties of the NDUS Chief of Staff, which also positions her to concentrate on all aspects of Information Technology: K-12, the State of North Dakota, and NDUS. We are confident that with the many changes CTS has embraced, we are prepared to lead the organization to successfully deliver the initiatives planned in the next biennium.

Left to Right: Jody French, Darin King, Dirk Huggett and Jerry Rostad

One of the largest CTS initiatives for the coming biennium will be the implementation of a consistent, enterprise learning management system (LMS). Currently, three different LMS applications are spread across eight separate installations within the 11 institutions of the NDUS. During the next two years, the plan is to consolidate all of these systems into a single environment of Blackboard Learn. Back in January of 2012, the State Board of Higher Education (SBHE) identified six IT initiatives in its "Maximizing Results Through Efficiencies" document. The first item on the list of efficiencies was a common LMS. Blackboard Learn will provide a consistent software approach; shared curriculum content, when appropriate; a content repository; and consistent mobile device interfaces.

NORTH DAKOTA
UNIVERSITY SYSTEM
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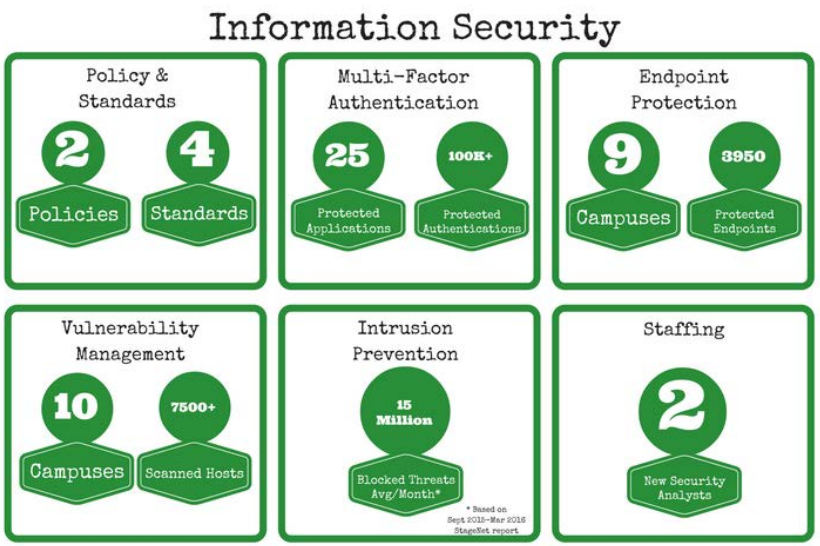
OVERVIEW

Currently, a surprising number of faculty members teach at multiple NDUS institutions while a growing pool of students are taking online classes from more than one NDUS institution. In both cases, a consistent learning management system will eliminate the need to learn multiple systems, providing an enhanced experience for faculty and students. The consolidation of LMS applications and the reduction of separate installations will also provide tremendous cost savings.

Phase one of the Functional Consolidation project, directed by NDCC § 15-10, kicked off this past year. CTS staff met with leaders from each campus to better understand the institution's IT environment, develop an inventory of IT infrastructure, and determine the best fit for the consolidation plan. The goal of the project is to provide efficiencies and cost savings across the state while enhancing overall quality of services. CTS will be looking for additional funding to support the next phase of the project to improve the datacenter infrastructure to support these additional consolidation services.

One of CTS's greatest accomplishments is the significant progress in the area of Information Security. Threats to NDUS systems and users continue to rise and the emphasis has been on reducing risk across the system. The Information Security Council (ISC) was created in August 2015 and is a sub-council to the NDUS CIO Council. During its first year, the ISC developed a NDUS Information Security Strategic Plan and worked to establish security policies and standards. There are six priority objectives listed in the plan and many have been implemented by CTS and the institutions. The enhancements to security include: multifactor authentication, vulnerability management, intrusion prevention and endpoint protection at institutions and CTS. Including improved protection for CTS users with elevated privileges, centralized logging at CTS and endpoint protections for institutions and CTS.

The following information outlines NDUS's goals and objectives, and some of the accomplishments and initiatives that are planned or requested as we move forward into the 2017-19 biennium.



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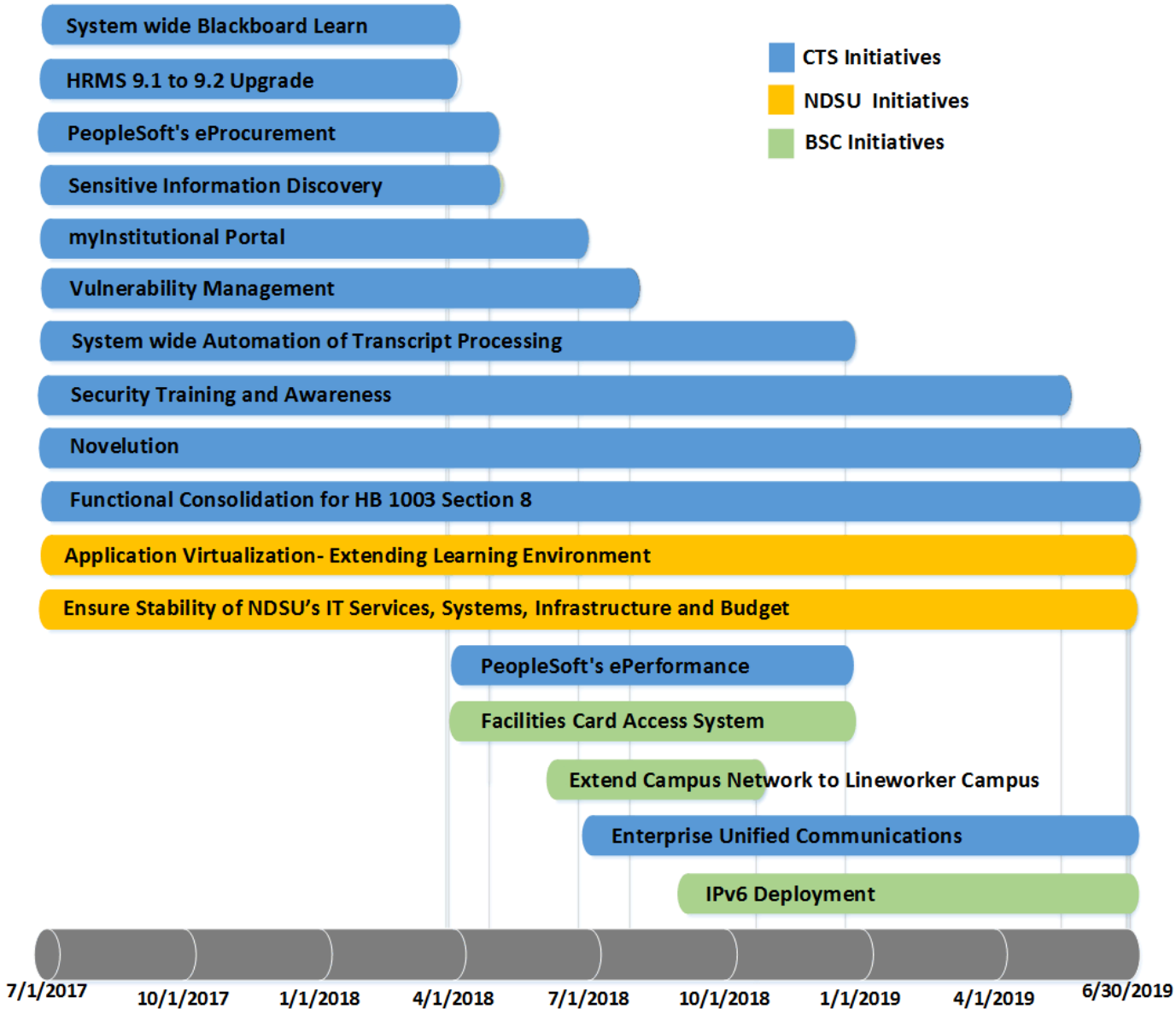
2017-19 PLANNED OR REQUESTED INITIATIVES



NORTH DAKOTA UNIVERSITY SYSTEM
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GOAL ONE

To support North Dakota University System infrastructure needs.

Purpose

This goal is the foundation for Information Technology (IT) in support of NDUS business processes. Infrastructure holds information technology systems together and allows systems to communicate with each other over a network. It includes such things as security and access control for which guidelines must be developed and updated as needed. Enterprise Architecture provides a blueprint for establishing information technology policies, procedures, and guidelines to promote effective use of information technology.

Objectives

- Offer reliable, cost-effective and appropriate NDUS network services
- Provide tools and technologies to help people more easily use networked resources and services while ensuring security and privacy of the information
- Provide tools and technology to enhance data and system security in order to reduce the impact of cyber threats
- Utilize the network infrastructure for the convergence of voice, data, and video along with other collaboration tools
- Enable libraries to provide easy access to licensed electronic information
- Provide leadership for IT enterprise architecture, IT planning, project management, and service management
- Provide linkage through STAGEnet, Internet2, and other national and international research and development networks
- Provide a centralized IT infrastructure with maximized efficiencies that meet NDUS institutional needs

2015-17 ACCOMPLISHMENTS

BISMARCK STATE COLLEGE

Bismarck State College's **Installation of high resolution security cameras coupled with a high capacity server and storage solution replaced analog cameras with inadequate storage. The new system allows storage for 30 days, conforming with the security department's policy on retention. It also has a single management point through a console administered and controlled by security personnel. This project was related to campus safety and benefits students, faculty and staff and others including BSC security personnel, housing staff and those who require the review of incidents on campus.**

NORTH DAKOTA STATE UNIVERSITY

North Dakota State University **provided IT services for the NDSU Nursing program at Sanford Health campus in Bismarck. Services include provision of NDUS network, Internet2, voice/telephone, security and asset management, help desk support, video conferencing, instructional services support, software licensing, Blackboard support, classroom support, desktop management, computer labs, Go-Print services, and Tegrity equipment. This project benefits the students, faculty and staff at the Bismarck NDSU Nursing at Sanford Health campus.**

DICKINSON STATE UNIVERSITY

Dickinson State University **made some changes to its networking infrastructure Life Cycle by planning and designing a secure solution for PCI requirements. They updated credit card machines, target switches and hardware. In return the PCI audit was positive and the recommended changes were implemented. The LAN backbone speed and response increased and was best observed when imaging.**

NORTH DAKOTA UNIVERSITY SYSTEM
ACCESS. INNOVATION. EXCELLENCE.

GOAL TWO

Deliver solutions that empower decision makers.

Purpose

This goal is the core that supports business processes of the institutions and the North Dakota University System (NDUS). In order for institutions to remain competitive and offer information technology support for students, faculty and staff, including research and public service, NDUS must provide and manage information technology resources aligned with NDUS strategic goals.

Objectives

- Maintain critical core functions and implement upgrades and enhancements to the student management, financial/human resources management, data warehouse, library, administrative, and academic technology systems
- Identify and integrate appropriate NDUS CTS systems to create operational effectiveness and efficiencies
- Provide cybersecurity training and materials to faculty, staff and students to assist in the protection of critical systems and data
- Provide enterprise architecture administration, enterprise IT Planning, procurement and project management expertise
- Enhance educational experiences with new or re-purposed resources that expand user services, technologies, and initiatives
- Maximize IT infrastructure to improve services to students, faculty, staff, and the citizens of the state
- Hire, train, and retain highly competent professional staff to meet the needs of NDUS services
- Provide centralized IT procurement services that allows multiple campuses to easily acquire software that meets their business needs

2015-17 ACCOMPLISHMENTS

LAKE REGION STATE COLLEGE

Lake Region State College **implemented ImageNow for document imaging. Departments like Admission, Registrar and Financial Aid are finding it beneficial. Staff have been very satisfied with the system and can easily access student records. The Grand Forks Air Force Base has also benefited from the new system and has access to records more easily.**

CORE TECHNOLOGY SERVICES

Completed the Data Inconsistencies project detailed in House Bill 1003 Section 42. The types of inconsistencies that this project focused on included: personal and demographic information, lack of standardized chart of accounts, absence of standard financial business processes, inconsistent methods of recording/tracking student data, inconsistencies in tuition related expenses, fees, etc., inconsistent account coding and naming, improper use of 'shadow account' systems, and varied 'student' definitions.
The project formed teams of Subject Matter Experts (SMEs) to help drive project goals with expected completion by December 2016.

NORTH DAKOTA UNIVERSITY SYSTEM
ACCESS. INNOVATION. EXCELLENCE.

GOAL THREE

To improve and enhance North Dakota University System student learning and users' focus.

Purpose

Empower student learning and development through the use of technology by providing a near seamless environment for learning through boundless access to information, educational, and research resources both inside and outside the classroom for all types of students from undergraduates to life-long learners.

NDUS encourages and supports an operational environment in which characteristics of its users – student, faculty, staff, North Dakota residents, and affiliates worldwide – are identified, their needs are understood, relationships and expectations are effectively managed, and quality assurance is fostered for high-quality services and support.

Strategy Objectives

- Leverage the IT infrastructure to create an environment for enhancing learning
- Evaluate enhancements to the Online Dakota Information Network's (ODIN) library systems and services to improve functionality that supports the evolving needs of users
- Continually improve standards, policies, procedures, and services that facilitate seamless, integrated learning
- Collaborate with NDUS campuses to identify business needs and respond to their expectations in a timely manner
- Continue to gather feedback from the NDUS user community on services provided by NDUS CTS

2015-17 ACCOMPLISHMENTS

LAKE REGION STATE COLLEGE

Lake Region State College implemented Predictive Analytics Reporting or PAR which will have a tremendous impact on student success. PAR combines student data from a number of sources to create insights into student academic progress. In turn, institutions can use the information provided by PAR to make better informed decisions. A number of committees and councils have participated in PAR demonstrations, including the State Board of Higher Education, the Academic Affairs Council, joint (K-12/SBHE) boards, the CIO Council, the Chancellor's Cabinet, and the Legislative Higher Education Committee. PAR is scheduled to be fully operational across all 11 institutions by mid-January 2017.

MINOT STATE UNIVERSITY

Minot State University implemented Oracle's PeopleSoft Enterprise Student Administration Integration Package (SAIP) with their Blackboard Learn system. MSU went live this past summer with SAIP data feeds, allowing for a more efficient means of transferring data between the student information system and the learning management system.

NORTH DAKOTA UNIVERSITY SYSTEM
ACCESS. INNOVATION. EXCELLENCE.

GOAL FOUR

To improve and enhance North Dakota University System collaborative efforts.

Purpose

Provide a seamless experience for students taking classes at multiple NDUS institutions. By working together and with the state, K-12, and other constituents, NDUS is able to bring new technologies to North Dakota and find efficiencies in supporting existing ones.

Strategy Objectives

- Optimize helpdesk services within the NDUS community
- Continually improve communications with all stakeholders
- Collaborate with NDUS institutions, K-12, state/local governments, and libraries to identify and deploy appropriate administrative, learning, and research support systems
- Identify where converged services are appropriate and work with NDUS institutions to deploy the services to enhance collaboration
- Enable collaboration among learners by providing easy, efficient, and reliable access to learning resources anytime and anywhere
- Leverage educational resources and IT systems to minimize barriers between institutions, libraries, and other sources of learning.
- Expand virtual and digital holdings available within the Online Dakota Information Network (ODIN) libraries
- Promote Internet2 and research-level infrastructure
- Continue the integration of video, audio, and data collaborations in cross-platform environments
- Collaborate with business and industry to identify opportunities for innovations that enhance NDUS CTS systems and services

2015-17 ACCOMPLISHMENTS

CORE TECHNOLOGY SERVICES

Core Technology Services' ODIN department created a reporting process to provide normalized library report data to be used by ODIN libraries for reporting to the state library. The goal was to create reports and establish a process to use those that will guide ODIN libraries in the reporting of uniform statistics required by the North Dakota State Library. The process has improved the uniformity across the libraries and reduced the work expended to do the reporting.

CORE TECHNOLOGY SERVICES

Core Technology Services initiated the development of an IT Service Catalog within the Team Dynamix work management system. The Service Catalog will be used to identify services provided by CTS, including the level of expected service, the current consumers of the service, and the metrics to evaluate success. The catalog is in operation and continues to be expanded so that services can be requested directly from the catalog whether the request is from internal CTS staff or from other NDUS staff.

CORE TECHNOLOGY SERVICES

Core Technology Services has been collaborating with the Department of Public Instruction (DPI) and the state's Information Technology Department (ITD) to meet the demands of K-12 longitudinal reporting. The teams worked to identify a collection of data for the postsecondary domain. The project is on track and reports are currently under development in the Data Warehouse environment using data from four Campus Solutions modules: Admission, Student Records, Financial Aid and Student Financials.

NORTH DAKOTA UNIVERSITY SYSTEM

ACCESS. INNOVATION. EXCELLENCE.

OVERVIEW

Jane Hovda, Interim Director, Edutech
Dr. Alan Peterson, State Director,
North Dakota Center for Distance Education

"Learning Equity for All ND K-12 Students" is the focus for Education Technology Council (ETC) initiatives for the 2017-19 biennium. The ETC has statutory responsibility to coordinate educational technology initiatives that promote efficient, effective and equitable technical and online learning services for all elementary and secondary schools in the state. The ETC meets that responsibility by providing leadership for several key technology and online learning initiatives and by providing policy and performance governance for the North Dakota Center for Distance Education (NDCDE) and for EduTech.

EduTech provides services to all North Dakota K-12 Schools, serving their needs through professional learning to improve the skills of teachers and students. EduTech serves as a gateway, providing technical support for state-provided services including PowerSchool, the Statewide Longitudinal Data System (SLDS), eTranscript, web hosting, and Internet filtering. Improving security among the K-12 community is an ongoing endeavor using Active Directory, management tools, and the customer portal. Active Directory works simultaneously with PowerSchool to identify new users and security for those users with Microsoft Office 365, SLDS, and eTranscript.

The North Dakota Access for Government and Education Network (STAGEnet) continues to provide a robust, high-speed and reliable Internet connection to schools. STAGEnet also provides the necessary infrastructure for extended student learning opportunities using interactive video classrooms and online courses.

In the next biennium EduTech will continue to support the K-12 communities' use of PowerSchool for daily operations, use of advanced features, and the vertical upload process for state reporting. The North Dakota Data Steward and EduTech will continue to play a critical role in promoting the effective use of student data within the SLDS, eTranscript, Office 365, and professional learning.

Jane Hovda - Interm Director

Dr. Alan Peterson - State Director

North Dakota Center for Distance Education (NDCDE), North Dakota's virtual school, has a vision that is ambitious, but necessary for North Dakota. Currently our state has 178 school districts with eight of those districts having an enrollment of over 3,000 students. One hundred sixty districts have an enrollment of 300 or fewer.

These small schools drive NDCDE's vision and mission: "NDCDE seeks to ensure that all K-12 students in North Dakota are provided equal access to a high-quality education that is characterized by choice of courses, content currency, personalized learning, pedagogy reflecting the latest brain science, and assessment that seeks to measure mastery (competency)."

ETC, EduTech, and NDCDE initiatives result from the educational needs statewide, with some initiatives being directly requested from schools. All of the initiatives undertaken by the ETC, NDCDE and EduTech are in line with ETC's five Results Policies, which state that as a result of our efforts:

1. North Dakota's educational technology systems will continuously improve educational opportunities for students.

2. Technology systems to enhance educational opportunities will continually improve efficiency, effectiveness, and coordination on a statewide basis.

3. Distance education systems will be in place to deliver comprehensive, quality, teacher-supported curriculum to ND students.

4. Professional development related to the use of educational technology will be available to school administrators and teachers to meet changing education needs.

5. Policies and practices to sustain the integrity, stability, and security of the educational technology systems will be maintained and promoted.

The ETC, NDCDE, and EduTech directors will continue to work with several state- and regional-level partners and local school districts to create efficiencies, avoid duplication and ensure that North Dakota's K-12 technology systems serve K-12 students and educators. These partners include:

- North Dakota Information Technology Department (ND ITD)
- North Dakota Department of Public Instruction (ND DPI)
- North Dakota Department of Career and Technical Education (ND CTE)
- Regional Education Agencies (ND REA)
- Interactive Video Consortiums

GOAL ONE

North Dakota's educational technology systems will continuously improve educational opportunities for students.

Purpose

- Statewide K-12 educational technology initiatives are focused on improving the learning opportunities for and the achievement of students
- New classroom technologies make teaching and learning more engaging and effective
- School-based information systems save time and provide important student information to teachers and administrators
- Online delivery of courses and other digital curriculum content make more learning opportunities available to all students
- Technology and learning environments based on the latest brain research ensure that opportunities validate and enhance the learning capabilities of each student

Objectives

ETC and EduTech

- Make funding available to schools, enabling them to move toward using more technology-rich teaching and learning environments
- Provide SLDS and eTranscript training and support to ensure every school is successful in analyzing and using student data to make decisions that will benefit student learning
- Provide PowerSchool training and support to ensure every school is successful in using PowerSchool for daily operations, state reporting, use of the SLDS, and eTranscript
- Continue to build on the statewide use of Office 365

NDCDE

To ensure that all North Dakota middle and high school students, regardless of location:

- Have access to educational opportunities that meet or exceed students' and parents' expectations
- Are provided access to educational activities that reflect the latest brain research regarding student learning
- Have access to courses that reflect the latest changes and discoveries regarding knowledge, skills, information, and methods

2017-19 PLANNED OR REQUESTED INITIATIVES

ETC AND EDUTECH

- Expand awareness of Microsoft Office 365 applications through communication and training opportunities
- Grant funding opportunities for all public K-12 schools, focusing on using SLDS data to improve teaching and learning
- A North Dakota Education portal to provide K-12 teachers, students, and parents the capability to access eTranscript and the SLDS through the PowerSchool portals with a single sign on

NDCDE

- Identify courses reflecting high-tech careers and prepare them for online distribution
- Installation of 30 SmartLabs
- Visit all 160 small schools to assess needs
- Conduct research via recognized leaders for brain and learning science

2015-17 ACCOMPLISHMENTS

ETC AND EDUTECH

- Partnered with Microsoft to offer Office 365 training and interaction to the K-12 community during EduTech's Microsoft Symposiums
- Maker opportunities were provided throughout the state, igniting enthusiasm and resulting in "makerspaces" being created in schools to create a thirst for more hands-on, student-directed learning opportunities
- ND ETC awarded 73 Build Grants for schools to purchase devices, upgrade infrastructure, and/or improve knowledge and skills from professional learning opportunities
- Statewide Microsoft Office 365 roll out for K-12, with over 150,000 accounts

2015-17 ACCOMPLISHMENTS

NDCDE

- Delivered courses to every school district in North Dakota
- Enrolled 9,000 ND students in courses provided by NDCDE
- Graduated 41 ND students with high school diplomas from NDCDE's diploma program
- Conducted research with the purpose of identifying a "turn-key" learning environment that could be installed in any school of any size to provide high tech, hands-on, project-based learning experiences daily (ranging from STEM to multi-media in content, and applicable to students from grades 1-12)
- Identified Creative Learning System's SmartLab as the turn-key learning environment that met all criteria established by research
- Installed three SmartLabs – one at NDCDE and two in ND schools
- Successfully launched all three SmartLabs

GOAL TWO

Technology systems to enhance educational opportunities will be more efficient, effective, and coordinated on a statewide basis.

Purpose

To maximize local, state and federal investments in school technology systems, statewide coordination and leadership are required. Purchasing and supporting key applications and infrastructure at the state level creates efficiencies statewide. Where learning services are not available or are inadequate online learning applications provide the most efficient, effective, coordinated effort to provide learning equity to all ND students.

Objectives

ETC and EduTech

- Continue the progress of the ND Active Directory to efficiently deliver additional IT services by offering students and educators a single user name and password to access services provided by EduTech, DPI and other online service providers
- Promote a broad vision of online distance education to K-12 and other stakeholders using existing and emerging technologies
- Collaborate with willing partners of all types – local, governmental, regional, private and for-profit – to fulfill the distance education needs of all ND K-12 students

NDCDE

- North Dakota middle and high school students are assured NDCDE course delivery efficiency and effectiveness to levels that meet school and state expectations
- Delivery efficiency measures will be monitored daily and reported to the ETC and ITD each quarter
- Delivery effectiveness measures will be monitored daily and reported the ETC and ITD each quarter
- Student enrollment process will be error-free for the elements controlled by NDCDE

2017-19 PLANNED OR REQUESTED INITIATIVES

ETC AND EDUTECH

- Expand the use of the K-12 directory
- Continue to provide a central helpdesk for K-12 data support services

NDCDE

- Continued revision of the enrollment 'form' to reduce fields and to further integrate with single sign on
- Assess enrollment needs and wants of all 160 small schools
- Include NDCDE courses as an integrated part of small school student course registration process
- Review all enrollment processes and procedures to ensure consistency and ease of use

2015-17 ACCOMPLISHMENTS

ETC AND EDUTECH

- The ND ETC and ITD continuously monitored and upgraded available bandwidth for North Dakota schools
- EduTech and DPI supported teachers and administrators regarding the North Dakota State Assessment (NDSA) Smarter Balanced online testing to resolve secure browser installation, login support, and other issues
- Established the North Dakota Educational Data Alliance, bringing representatives from each of the Regional Education Associations (REAs) to collaborate on data use training and completing the DataUP Federal SLDS Grant
- Implemented automatic identity management from PowerSchool to Active Directory and Office 365

NDCDE

- All printed course materials were shipped error free
- Online systems supporting students were upgraded to significantly improved availability and performance
- Enrollment efficiencies reduced the time required by 72%

2015-17 ACCOMPLISHMENTS

NDCDE

- Enhanced integration between the registration system and the student information system reduced enrollment data entry errors to zero
- Developed and validated a SmartLab installation and training process to be complete in less than four days, thus keeping costs at lowest possible levels
- Reduced the number of personnel required to enroll students from 2 FTE and 1 PTE to 1 FTE
- Successfully migrated NDCDE's core Learning Management System (LMS) to a newly designed and higher functional core LMS resulting in a system with new functions and capabilities

GOAL THREE

Distance education systems will be in place to deliver a comprehensive curriculum to North Dakota students.

Purpose

Distance learning is an important option for providing North Dakota students with a comprehensive curriculum, including specialized high school courses as well as advanced placement, dual-credit, and credit recovery courses. The Interactive Television (ITV) system is well-established and has assisted many school districts in expanding the number and variety of courses students can take. The use of web-based and digital delivery is increasing in K-12 schools, and the online high school courses available through the ND Center for Distance Education are fundamental to K-12 education in the state. All North Dakota students require contact to high-tech experiences to acquire the skills they need now and in the future. For many rural students, distance education is the only means to attain high-tech experiences and skills.

Objectives

ETC and EduTech

- Continue to research the specific needs of ND schools by continually seeking information from them and their stakeholders by all communication venues, including face-to-face visits
- Support the ITV consortiums to continue their delivery of courses across the state

NDCDE

- North Dakota middle and high school students' learning will meet or exceed expectations, which include completion of courses, grades achieved, competence of instructors, access to advanced courses and high-tech, project-based experiences
- Course completion rates will meet or exceed the national gold standard for online schools of 90%
- Grades per reporting period will exceed 80% passing with a C or better
- Dropped courses will be examined for cause
- Dropped courses will be reduced by 10% per year

2017-19 PLANNED OR REQUESTED INITIATIVES

ETC AND EDUTECH

- ND ETC support of ITV consortiums with communication tools and regular meetings to ensure collaboration and support services are available
- EduTech continues to explore and provide content rich video conferencing programs for North Dakota classrooms partnering with state and regional education agencies

NDCDE

- Provide Adaptive Learning capabilities in 100 of NDCE's 300+ academic courses
- Installation of 30 SmartLabs
- Increase the number and type of tech courses, including aerospace and aviation courses

2015-17 ACCOMPLISHMENTS

ETC AND EDUTECH

- Students statewide participated in many different learning global learning activities using video conferencing technology
- Through the USDA/Rural Utilities Service (RUS) Distance Learning and Telecommunications Grant 37 video classrooms were updated with new high definition video classroom equipment

NDCDE

- Increased the number of Ag courses from seven to 30 courses
- Overall technical course offering increased by 50%
- Technical course enrollments increased by 300%

2015-17 ACCOMPLISHMENTS

NDCDE

- Developed and executed a model for sharing an instructor of World Languages with a school district, ITV consortium and NDCDE
- Core courses (required courses for graduation) constituted 70% of all courses provided by NDCDE (a significant increase versus prior biennia, likely attributed to a teacher shortage)
- Added over 100 courses to the list of NDCDE course offerings
- Developed a series of for-credit courses for the SmartLab
- Expanded the number of course providers approved by NDCDE to 15
- Identified and resolved all networking, device and software issues experienced by students, instructors and school personnel
- Where applicable, conducted root cause analysis for recurring issues and put in place permanent solutions
- Sixty five percent of NDCDE instructors have advanced academic degrees

GOAL FOUR

Professional development related to the use of educational technology will be available to school administrators and teachers to meet changing education needs.

Purpose

Professional development for teachers and administrators is critical to ensuring that the technology systems in place effectively serve student needs. Developing, coordinating and offering professional development at the state level is both cost effective and provides consistency across all districts without regard to size or location. Additionally, professional development for non-certified staff members – who supplement and assist education programs within each school at a distance – is necessary in a system as widespread and as divergent as the educational system in North Dakota.

Objectives

ETC and EduTech

- Provide professional development for teachers that model the use of interactive and collaborative teaching/learning methods made available with online resources
- Provide cohesive professional development and support for educators' use of data systems, including PowerSchool, ND SLDS and e-Transcripts
- Provide education professionals – teachers, paraprofessionals, adjuncts, supervisors, with training to develop knowledge and skills needed in an online-supported, blended learning classroom
- Provide education leaders with accurate information about the performance of online course providers and the techniques necessary to manage those providers

NDCDE

- North Dakota middle and high school students and teachers are provided consistent and ongoing contact time with highly qualified online teachers via the use of appropriate, educational technology
- All NDCDE instructors and instructor-support staff are cross-trained on each application of educational technology used by NDCDE
- NDCDE instructor communications to students are subject to requirements applicable to the course and are monitored and reported by managers of the system
- All ND schools and the teachers and support staff, where NDCDE delivers courses, are provided professional development on all educational technology applicable to the courses supplied by NDCDE

2017-19 PLANNED OR REQUESTED INITIATIVES

ETC AND EDUTECH

- A High Octane state-wide educational conference scheduled for July 2017 as EduTech partners with the Department of Public Instruction (DPI)
- New courses offered in a variety of formats including traditional, blended, and online will be developed and offered by EduTech and the Data Steward to provide convenient and timely professional development opportunities

NDCDE

- Complete the documentation of NDCDE's process-based management system
- Complete the implementation of a new NDCDE website and fully implement its new applications
- Installation of 30 SmartLabs and the communications and networking required for blended learning
- Develop internal capability to fully support both Microsoft and Google online management systems
- Begin the use of mobile devices for enrollment and academic purposes

2015-17 ACCOMPLISHMENTS

ETC AND EDUTECH

- EduTech partnered with DPI and Smarter Balanced to provide training and support for the North Dakota State Assessment
- ND Data Steward delivered regional and local workshops to K-12 educators
- PowerSchool Staff delivered 222 workshops to K-12 educators
- EduTech and the Data Steward presented a variety of sessions at conferences, including: AdvancEd, Learning Forward, DPI, North Dakota Council of Educational Leaders (NDCEL), and ND School Boards Association
- Expanded usage of social media, including: Facebook, Twitter, YouTube, and Instagram

NDCDE

- NDCDE developed and provided three graduate professional development courses for teachers
- NDCDE provided graduate professional development courses to over 100 teachers
- All NDCDE teachers were provided 30 hours of professional development per year

2015-17 ACCOMPLISHMENTS

NDCDE

- All schools using NDCDE courses had at least one NDCDE-trained exam administrator
- All schools conducting classes supported by NDCDE had at least one classroom supervisor trained by NDCDE
- NDCDE provided teacher and administrator professional development at eight ND conferences
- NDCDE developed and delivered SmartLab facilitator training to support its SmartLab in ND small school project

GOAL FIVE

Policies and practices to sustain the integrity, stability, security of the educational technology systems will be maintained and promoted.

Purpose

Reliable local technology systems and uninterrupted network service are crucial to teaching, learning and administrative processes in schools. State-level security and support systems provide an efficient and cost-effective way for schools to use high performance systems daily with a high degree of confidence and success. Courses delivered at a distance are particularly challenging because they incorporate many systems from many providers resulting in the need to continually monitor those systems for performance and security.

Objectives

ETC and EduTech

- A new generation of Internet content filter is available to provide K-12 schools with mobile device filtering, allow for self-management and meets the requirements of Children's Internet Protection Act (CIPA)

- Increase awareness of information security to K-12 schools by informing schools of potential risks and threats to network security and by providing training to build their understanding of network, data, and personally identifiable information best practices

- Increase awareness of funding possibilities associated with the Universal Services Administrative Company (USAC), also called E-rate

NDCDE

- Conduct planning per a modification of the Plan-Do-Check-Act (PDCA) model, which is "CAPDo" – Check, Act, Plan, Do – to better apply planning to the accelerated changes occurring in all electronics infrastructures (and the hardware and software that supports them)

- Provide and maintain an electronic infrastructure that is capable of supporting student enrollment, student and instructor interface, implementation and use of online courses, an online business system, a student information system, and a system portal and website

- Provide and maintain an electronic infrastructure, including mobile devices, that is secure per all applicable laws and regulations

- Provide timely and accurate assistance to external and internal customers

2017-19 PLANNED OR REQUESTED INITIATIVES

ETC AND EDUTECH

- Build a Statewide K-12 Security Awareness Program
- Research a Statewide K-12 Phishing Software and Training Program
- Continue adding and updating to the Active Directory MyAdmin Portal
- Inform school officials of new and revised E-Rate services during the annual regional workshops

NDCDE

- Upgrade of business sub-systems to maximize the use of a new website
- Complete the implementation of a new NDCDE website and fully implement its new applications
- Review the visits to all 160 small schools to assess and provide solutions to infrastructure needs

2015-17 ACCOMPLISHMENTS

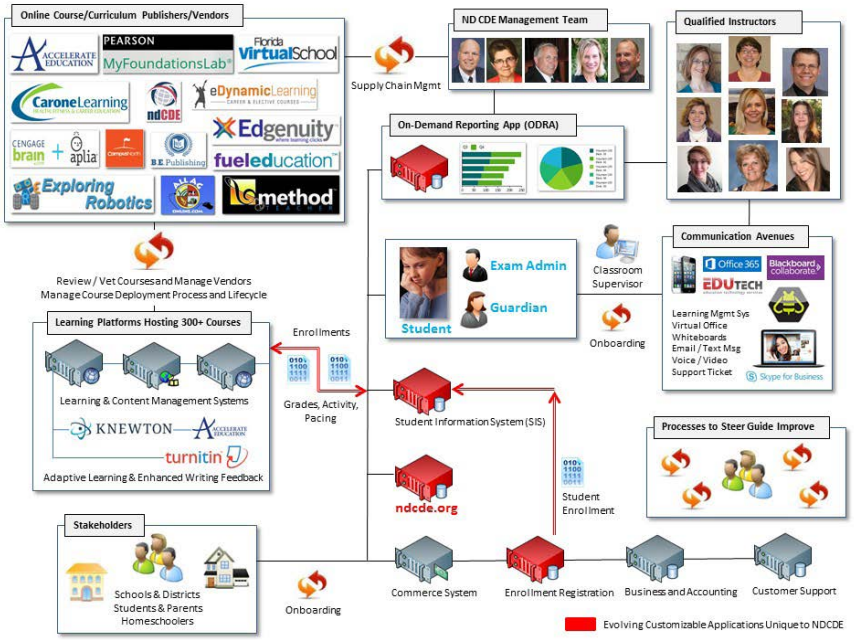
ETC AND EDUTECH

- Hired a K-12 Information Systems Security Analyst to support local and statewide security practices
- Completed installation of an enterprise-level security firewall
- Created the Office 365 K-12 Security Notebook as a knowledge-based reference for Technology Coordinators
- Provided eight regional workshops to assist schools with the E-rate application process
- Conducted a cybersecurity conference in collaboration with NDUS and state government
- Self-management of Internet filtering for K-12 districts
- Completed the migration from the Sendit email service to Office 365
- Built a browser-agnostic Active Directory password reset tool
- Developed a user lookup tool for district technology administrators

2015-17 ACCOMPLISHMENTS

NDCDE

- New website designed, tested, installed and launched
- Upgraded and/or implemented system changes to achieve compliance to the following standards: Payment Card Industry (PCI), NDCDE-state requirements for Family Educational Rights and Privacy Act (FERPA), Americans with Disabilities Act (ADA)
- Developed the processes and procedures required to install an ND SmartLab
- Developed a team and the processes required to maintain an ND SmartLab
- Successfully moved from three Learning Management System (LMS) applications to one LMS, thereby improving performance and lowering costs
- Successfully transferred all courses from the LMS BrainHoney to the LMS Buzz
- Successfully implemented an online ticket/incident management system
- Trained all personnel to access the ticket system and trained several personnel to accurately and quickly close out tickets
- Implemented a system of dual-factor authentication for all NDCDE staff members
- Moved all online functions from in-house servers to the cloud
- Implemented encryption security for all mobile devices



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