

The background of the entire page is a detailed, high-resolution image of a yellow-green printed circuit board (PCB). It features a complex network of fine lines representing traces, along with various electronic components such as small square surface-mount components, circular pads, and larger rectangular components. The overall texture is technical and industrial.

**North Dakota
Statewide IT Plan**

**Driving
Efficiency
and
Effectiveness**

2011-2013

2011-2013

North Dakota Statewide IT Plan

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Driving Efficiency and Effectiveness

The last two years have been quite eventful for our nation and the State of North Dakota. Economic conditions of historic significance are impacting lives across the country, and now, more than ever, is a time for all of us to be more efficient and effective. North Dakota has been fortunate, and our future looks strong; but the responsibility to serve our citizens and secure our direction remains critical.

As the information technology landscape continues to evolve, we must, and will, evolve with it. This means striving to be more efficient in our use of technology, delivering effective technology solutions that reach beyond traditional boundaries, and ensuring that our students are prepared for a future that will be more technology centric than ever. We are adapting to new media, expanding our reach to mobile platforms, managing and analyzing vast amounts of data, and even reaching into the clouds. Information technology is changing every day, and the State of North Dakota will change with it, while remaining true to the fundamentals of hard work, great education, and accountability that have proven to be a recipe for success.

Lisa Feldner, North Dakota's Chief Information Officer, Randall Thursby, Chief Information Officer for the North Dakota University System, and Dan Pullen, Director of the North Dakota Educational Technology Council, present this plan for technology progress for the 2011-13 biennium. State government, K-12, and the North Dakota University System are committed to driving a more efficient and effective information technology landscape for North Dakota. The initiatives described in this plan are intended to ensure that our state continues to be a leader in delivering solutions to our citizens and preparing our students for a bright future. Together we are confident that information technology in North Dakota will travel a road that leads to great things.

North Dakota State Government

Information Technology (IT) Process

Every even numbered year, North Dakota State Government agencies prepare their Information Technology (IT) Plans for the next biennium. The process for the 2011-2013 biennium began in March, 2010 with the Information Technology Department's (ITD) planning analysts presenting a planning briefing in March. Updates to the planning process, ITD rates, and technology direction were discussed at the briefing. ITD planning analysts met with each agency during May and June to discuss their direction and any concerns the agency may have. IT Plans were due on August 16th and were submitted to ITD via an Agency Operations document and Project Worksheets. Each plan was reviewed as to the agency's technology direction, compliance to technology standards, and verified that the operational budget included in the IT Plan was consistent with previous operational budgets. In September, the State Information Technology Advisory Committee (SITAC) prioritized the large projects (over \$250,000) included in the IT plans. This State IT Plan document includes a summary of the agency plans, along with summary information from K-12 and the North Dakota University System. Fifty-three agencies submitted acceptable IT plans as required.

SITAC Prioritized Projects

The State Information Technology Advisory Committee (SITAC) ranks projects requesting funds of more than \$250,000 each biennium. SITAC ranks the projects by funding sources including General, Special and Federal funds. The prioritization of large projects assists legislators during the appropriation process.

General Funds

- Department of Human Services - Eligibility System
- Adjutant General - Dispatch Console System
- Highway Patrol - Cview
- Information Technology Department - Longitudinal Data System
- Highway Patrol - Automated Routing
- Adjutant General - Baseline Map Phase II

Special Funds

- Attorney General - Criminal History Planning
- Department of Transportation - Drivers License Redesign
- Bank of North Dakota - Servicing Direct Student Loans
- Department of Transportation - Estimating System Rewrite
- Information Technology Department - Billing System Rewrite

Federal Funds

- Department of Human Services - Vocational Rehabilitation Information System (VRIS)
- Job Service North Dakota - Data Quality Initiative

North Dakota State Government



Overview

*Lisa Feldner, Chief Information Officer
North Dakota Information Technology Department*

The State of North Dakota is driving efficiency and effectiveness through the alignment of IT resources and business objectives to provide exemplary service to its citizens.

Technology is a key enabler of citizen interaction with government. With more than 100 applications available online, North Dakotans can obtain government services anytime, anywhere – from renewing motor vehicle licenses and obtaining vital records to purchasing a hunting license. Behind the scenes, the network infrastructure that supports these transactions has been upgraded to accommodate the increased demand. That network, STAGEnet, provides cost-effective voice, video, and data services for state agencies, cities, counties, and the education community across the state.

A major driver of this IT plan is to deliver solutions that empower decision-makers through the use of business intelligence. Business intelligence refers to computer-based techniques used in spotting, digging-out, and analyzing data. Education, workforce, management, and human service agencies are using data warehouses to archive relevant data. Using analytics software, users analyze the data to make effective and informed decisions.

The plan illustrates a continued emphasis to offer IT solutions that help government operate more efficiently and reliably. The challenge is to provide excellent service and secure access to important information, while reducing costs, risks, and complexity. Public safety agencies are proposing a number of initiatives and upgrades to reliably serve the citizens of North Dakota and to increase the effectiveness of law enforcement. In addition, the Information Technology Department offers solutions to enhance efficiencies such as consolidation and virtualization, while maintaining security and

disaster recovery efforts for the state's valuable data resources.

Finally, the plan illustrates agencies ongoing effort to replace aging legacy systems with more efficient and cost effective solutions. North Dakota state agencies continue to deploy innovative technology solutions that meet their business needs, increase interagency collaboration, and maximize the economies of scale with purchasing and contract sharing between agencies.

As you will find in the following plan, information technology enables the State of North Dakota to provide more services to constituents while meeting the demand for greater effectiveness and cost efficiencies.



Lisa Feldner, Chief Information Officer
North Dakota Information Technology Department

Goal One

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

Initiatives

Adjutant General

During 2009, the Department of Emergency Services (DES) began a 3-year project to develop a Statewide Baseline Map. The Department has approached Federal agencies to participate in the project and will implement phase II funding to complete the needs of all state and local partners. The completed map will have several applications allowing layers of information to be displayed on the map on the GIS Hub to include road centerlines and address points. When completed, all Public Safety Answering Points (PSAPs) in North Dakota will be able to use the same map, greatly improving statewide interoperability. The State of North Dakota, local and tribal government, and the private sector needs a seamless base map dataset that is spatially accurate and which contains the necessary attributes to be used by multiple applications and users. In particular, such a dataset is needed for emergency services and daily state agency activities. This mapping project directly ties to dispatch mapping, computer aided dispatch (CAD), and automatic vehicle location (AVL).



North Dakota Highway Patrol

The Highway Patrol has seen a substantial increase in the demand for permits, to the degree that 5 permit specialists cannot keep up. Only oversize permits are sold online via an electronic permitting application and anything with increased weights or routes (Superloads) have to be routed into the permit office for approval. An automated routing product will allow all types of load movements to be permitted using the E-permits application, reducing call volume, and allowing permits to be issued 24X7. The automated routing application will route the load movements on the correct highways based on height, width, and weight, resulting in less wait time for the public and eliminating the need for more staff.

Legislative Assembly

Legislative Assembly will leverage the new LEGEND system to produce a legislative bill tracking web application for state agency staff, lobbyists, and the public to track bills during the legislative session. The application will be hosted in-house and be provided as a free service to all users of the web site. The new application will also allow additional control features such as RSS feeds to simplify the user experience.

Legislative Council

The North Dakota Legislative Assembly and Council will implement a new public web site for all legislative information (www.legis.nd.gov), including budget and fiscal reports. The current website is out of date and much of the content is no longer ADA compliant. The new web site will utilize a web content management system to maintain the site's content and will include the implementation of LEGEND and other NDLC application generated content. The content will also include dynamically generated pages for the

legislative daily calendar, constituent views, and conference committees. It also will provide the ability to easily add more services such as RSS feeds and enhancements for educational and public consumption.

Accomplishments

Bank of North Dakota

The Bank of North Dakota (BND) implemented a new Cash Management system that provides customers with timely, same day financial information such as current available balances, electronic transfers, liquidity, and posted transactions. Other benefits include central login capabilities and multiple file formats for exporting account information. This allows the Bank of North Dakota to operate within regulatory constraints and make the best decisions for their institutions and depositors.

Department of Public Instruction

The Department of Public Instruction (DPI) Office of Special Education, in collaboration with local school districts and special education unit personnel, implemented a statewide web based special education case management system, known as the Special Education Individualized Education Program (IEP). The system has reduced the paperwork burden and improved data reporting to the Department of Education and the Office of Special Education Programs. It has also enhanced local management tools resulting in increased teaching time.

Job Service North Dakota

Enhancements to the Appeals/Unemployment Insurance Employer Account System (EASY) have resulted in additional self-service capabilities that are user-friendly and easy to learn. The processes for electronic filing have resulted in a decrease of 2-3 distribution days for those

choosing to use electronic filing vs. using the US Postal Service. In addition, the automatic notification of electronic hearing reminders, hearing notices, exhibits and appeal decisions have greatly increased internal efficiencies of Job Service North Dakota.

Office of Management and Budget

The Office of Management and Budget (OMB) implemented the PeopleSoft Enterprise

Learning Management (ELM) module. The ELM system provides employees with an online, self service, and administrative employee training module for State agencies that elect to participate. ELM provides a catalog of courses being offered, allows employees to sign themselves up for training, and integrates

with Microsoft Outlook to schedule the training dates on employee calendars, which significantly reduces the time administrative staff spends managing employee training. Managers can review their subordinates learning and easily enroll them in classes they deem important for their future growth. The training includes online courses, allowing users to conduct their training at their desks, avoiding driving to different locations which saves time and money. The ELM also provides proof of completion and easy access to training records.

Office of Management and Budget

OMB implemented PeopleSoft's HCM Absence Management Module. Absence Management functionality includes self service leave requests, routing and manager processing. This has resulted in a reduction in paper processes for state employees, payroll and human resources administrators, and supervisors.



Goal Two

Information: Deliver solutions that empower decision makers

Initiatives

Department of Human Services

The Department of Human Services (DHS) needs to replace its eligibility determination systems and incorporate Healthcare Reform requirements that are needed by January 1, 2013, and January 1, 2014. The current eligibility systems are mainframe-based, expensive to operate, and in danger of no longer being supported by the vendors. A new application developed by DHS and ITD will be a web application developed in Java and will be stored in a database. Eligibility

workers will be able to access all Temporary Assistance for Needy Families (TANF), Medicaid Eligibility, Low Income Home Energy Assistance (LIHEAP) and Child Care in one application. DHS will substantially improve its ability to share information regarding clients interactively amongst its service programs resulting in more efficient and effective reporting for decision making.

Information Technology Department

The department needs to rewrite three legacy billing systems that are 27 years old and currently run on ITD's mainframe. ITD's development staff will perform a detailed system analysis and requirements gathering process, then re-write the system utilizing one of the current ITD technology platforms. The new billing system will build enhancements into the monthly data collection processes and billing preparation processes and give the agencies better access to billing detail and reports.

Information Technology Department

The America Competes Act State Fiscal Stabilization Funds mandates that systems are developed to measure the effectiveness of pre-kindergarten, K-12, Higher Education, and workforce. Federal programs require measuring the success of students as they transition from secondary to postsecondary education and into the workforce, as well as workforce development programs as they translate into workforce readiness and economic development. To achieve longitudinal outcomes of participants, education and program data must be combined and historically stored to answer the questions of how participants transition and grow through these programs. The state Longitudinal Data System (LDS) Committee, through its partnerships with governing members, is



developing the architecture to provide the longitudinal data required to unify key data from K-12, higher education, and workforce development initiatives. The Department of Public Instruction is building the foundational K-12 student data warehouse; the North Dakota University System is building a foundational post-secondary data warehouse; and the 2009 legislature has provided the initial funding for the third leg of the SLDS consisting of workforce data. The future data environment for North Dakota will include the sharing of quality data across agencies and the establishment of a state data warehouse that integrates select education and workforce data. The future environment will support highly expanded analytic capabilities and provide user-friendly business intelligence tools. This environment will allow agencies to independently access the full array of data needed and will provide a stable, scalable, and sharable data repository for cross-agency longitudinal data analysis. The state LDS will also provide all FINDET reporting capabilities, allowing the FINDET application to be retired.

Job Service North Dakota

The Workforce Data Quality Initiative will develop a Job Service North Dakota (JSND) data warehouse and implement a reporting tool as part of the state initiative to build a comprehensive education and workforce longitudinal data system. This will include key information for JSND data sources in the Master Index System to link with educational data sources and development of corresponding data sharing agreements. By improving the quality of workforce data and expanding the capacity to link workforce and education data, JSND will demonstrate the value of longitudinal data by generating important research.

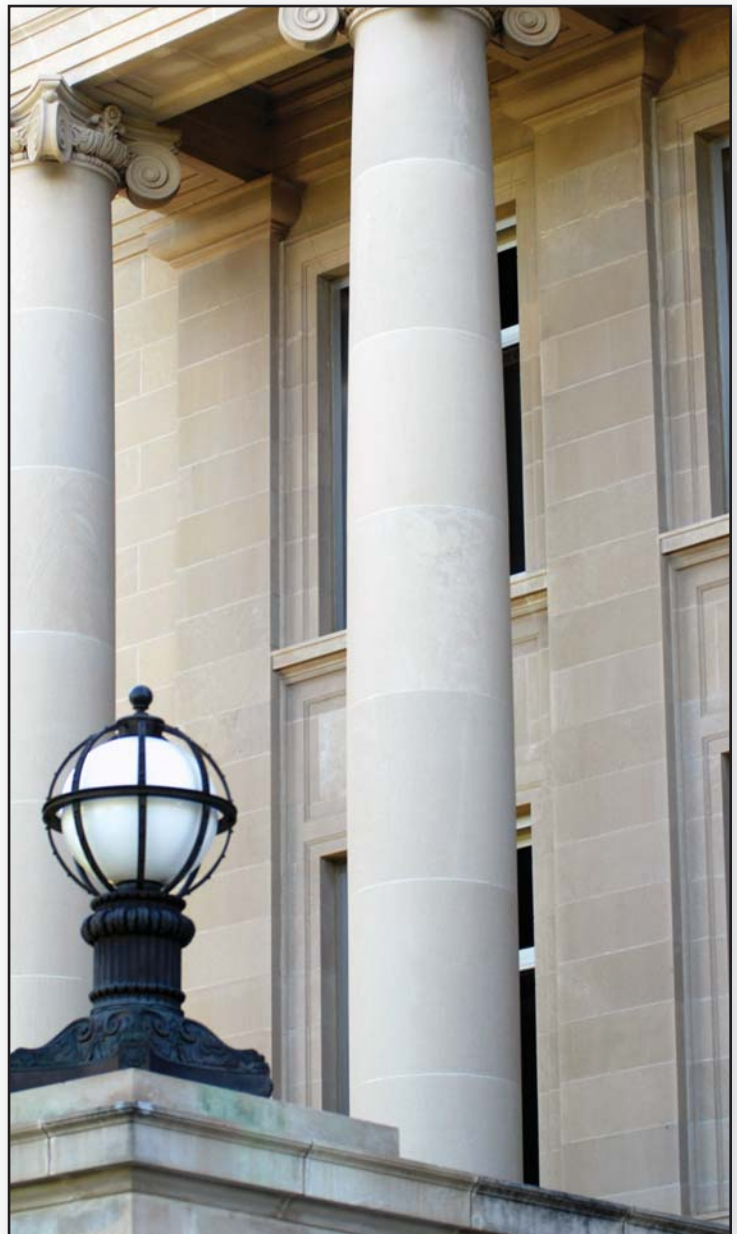
Legislative Council

North Dakota Legislative Council will provide a JAVA application utilizing the LEGEND repository to maintain legislative research material currently input into mainframe applications. These applications are used to search and locate research information for legislators and Legislative Council staff. The

new application will provide a point and click application to users and decrease mainframe dependencies.

Legislative Council

Archived legislative content currently stored on the mainframe is searched by using a mainframe application called Search Manager. The North Dakota Legislative Council (NDLC) will convert the current 97 Search Manager Databases from the mainframe into the LEGEND repository, and the Barnum client will be enhanced to allow searching of the converted content. This will provide a common user interface (UI) for the user to locate and retrieve queries and decrease mainframe dependencies.



Accomplishments

Department of Human Services

The Department of Human Services (DHS) implemented the Children & Family Services Front End (CFS Front End) project. The CFS project built a single case management web application for the Child Abuse and Neglect, In-Home Treatment/Wraparound, and Foster Care programs. This provides transparent navigation, reduction of duplicate entry between multiple applications and databases, and a single comprehensive case plan for children and families. It also provides for a comprehensive historical view of a child and family across current multiple applications and databases.

Department of Human Services

The Master Client Index Project provided the base architecture needed to create a single client view across DHS services and programs. Initially, this system will provide a means to share eligibility information to MMIS. Ultimately, it will provide a basis to extend the architecture to all DHS systems. DHS is better prepared for emerging e-Health initiatives by providing a secure mechanism to interact with clients and

private sector providers regarding client health information. The system also provides cross-program analysis for the department's research division.

Department of Public Instruction

The Department's Foundation Aid project replaced and created financial data collections and reports needed to compute foundation aid calculations modernizing the current payment system and allowing better integration with the existing online reporting system used by school districts today. Districts are now able to drill down into the detail of their payment, and the financial reports allow districts to upload data and validate information. The online system has reduced the process of school district financial reporting from three months to one day. The payment system and PeopleSoft systems are easier to compare to ensure they are balancing.

Office of Management and Budget

The Business Intelligence (BI) project deployed a reporting solution for State agencies regarding Financial and Human Capital Management (HCM) data currently stored in PeopleSoft applications which can be implemented to

state agencies which elect to participate. The BI solution provides a user friendly tool enabling end users without IT expertise to access PeopleSoft HCM and Financial data and create reports. The project has expanded the user base beyond back office financial and human resource staff to front line program managers and provides the ability to publish reports to public facing applications.



Goal Three

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

Initiatives

Adjutant General

The State Radio Central Electronics Bank (CEB) controls the dispatcher's access to the radio towers. This system is critical in providing radio communications, dispatching and page outs. This system is used by law officers, fire departments, and emergency medical services throughout the state. In addition, this system provides the ability to page first responders for emergencies. The CEB equipment has reached its end of life as well as its ability to allow tower expansion so it will be upgraded to a new system. The upgrade will ensure that the State Radio Communications and the Dispatch Center can reliably continue to perform its mission of dispatching, conducting radio operations, and paging responders to report to duty. The upgrade to the equipment will also allow for additional tower sites to be added in the future.

Adjutant General

The North Dakota Message Switch provides state, local, and federal law enforcement officers with National Crime Information Center (NCIC) and National Law Enforcement Teletype System (NLETS) data plus access to statewide law enforcement data. The state message switch is the critical link between law enforcement officers and timely criminal information and data. The current platform was installed in 2004 and cannot be upgraded to the level required for adequate security. The unit has also reached its maximum processing capability and is unable to meet the demands placed on it by local law enforcement officers and other public safety officials that have access. The demand for more information, including the ability to view photographs and archived documents, needs to be met to allow for the greatest amount of information to be gathered by users making

decisions in the field. An upgrade to the current processor technology will enhance the server's processing ability to support the message switch updates. This upgrade will increase processor speed resulting in better and faster support to officers and safety officials in the field. The upgrade will reduce security risks within the system and come into compliance with ITD standards. The upgrade will also provide the ability to meet future compliance and processor requirements.

Adjutant General

The department needs to purchase a backup license for State EOC's web based EOC management and communications software (WEBEOC). WEBEOC has been used by the Department for the past four years, resident on an ITD server, but is not backed up on the alternate site due to the lack of a backup license. WEBEOC has proven itself invaluable with nearly all state agencies, local jurisdictions, and partners using it daily. The purchase of a WEBEOC backup license is essential to sustain continuity of government and continuity of operations if there is a loss of service from ITD's main system.

Attorney General

The Bureau of Criminal Investigation (BCI) will make changes to the Motorola software used to submit Crime Reporting Statistics. This will allow BCI to keep current with the latest FBI specifications and will make it easier to implement critical changes in the future.

Department of Transportation

The DOT needs to redesign and replace the Driver's License Master Systems (DL1 & DL3) over a four-year period. The initial Driver's License application was developed in 1984 and programs are written in Cobol/Natural

with an ADABAS database and are becoming increasingly difficult to maintain. The programs driving DL systems are extremely complex and, by nature, high maintenance due to the impact of frequent Federal and State legislative changes and administrative requirements. Driver License is one of the most important information technology applications within North Dakota State Government, and yet it is probably one of the oldest remaining legacy systems within the State. Development of a redesigned system that can take advantage of the latest in technology will position it for long term stability and maintenance.

North Dakota Highway Patrol

The North Dakota Highway Patrol would like to replace the aging Panasonic Arbitrator digital video system installed in patrol cars with the new version 360, which features simultaneous multiple cameras and sound input. The new version 360 will require a backend software update and data conversion, reducing the number of backend servers from eight to one central server. Implementation of the new 360 backend software will allow the purchase of additional units as needed. The new system will also provide the ability to run the main camera and the backend camera simultaneously so activity in front of or behind the vehicle will be captured, and it will result in more efficient classification of video.



Accomplishments

Adjutant General

North Dakota's Department of Emergency Services (NDDes), Division of State Radio, acquired and implemented Computer Aided Dispatch (CAD). CAD is a method of dispatching emergency services assisted by a computer. It provides the ability for local sheriff and police departments to operate off a single system, and for State Radio supported counties' Fire and Emergency Management Services to be dispatched from the system. The CAD also provides Automated Vehicle Location (AVL) functionality and additional mapping components.

Department of Human Services

The Department of Human Services (DHS) upgraded its Office Vision Mail (OVM) system. OVM is a word process/document generation tool running on the mainframe used to create, update, retrieve and print documents in Foster Care, Child Support, and TECS applications. 102,215 TECS records, 1,300,108 Child Support records, and 2,330,258 Foster Care records were converted to the OVM replacement system.

North Dakota Department of Transportation

In order to curtail identity theft and driver license fraud, North Dakota Department of Transportation (NDDOT) integrated facial recognition into their Drivers License operating environment. The enhancements have resulted in a Memorandum of Understanding between the Bureau of Criminal Investigation (BCI) and the Drivers License Division for BCI to act as the sole law enforcement agency with access and to serve as the contact point for all North Dakota law enforcement. The application allows the Driver's License Division to forward probable fraud cases to BCI for further investigation. Facial Recognition has also provided a means to resolve non-fraud cases where images or records were incorrect.

Goal Four

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

Initiatives

Attorney General

The current Criminal History Repository is written in older technology and needs to be replaced with current standard technology. The department continues to build interactions between other applications and other agencies, requiring more record checks and more need to automate processes. The expertise needed to re-evaluate the current processes and re-engineer where necessary will be retiring in 5-6 years. The total project to replace all the pieces that interact and provide information concerning criminal records, background checks, collection of funds, sending information to the FBI, and communicating with the Fingerprint database in Minnesota is a huge undertaking. Phase I will be defining the changes needed to modernize the processing of criminal records and preparing for new programs at the Federal level. The department will hire a consultant that has done similar projects and has thorough knowledge of the criminal justice processes. The consultant will work with the staff to create a plan to automate all arrest, prosecution, and disposition information coming from the local law enforcement entities, the states attorneys, and the courts. The plan will also address all the interfaces to State Radio, CJIS, FBI, Health Department, Human Services, and others that do record checks. The plan will break the process down into several projects that could be done independently

of each other once funding is obtained. The phase I planning will provide the confidence needed to present future projects to executives and legislators for budgetary purposes and to others for grant purposes. The plan will also identify opportunities for improvement in the criminal justice process for managing and exchanging information concerning criminal records, reducing mistakes due to handwritten records, increasing turnaround, and eliminating duplication of data entry.

Attorney General

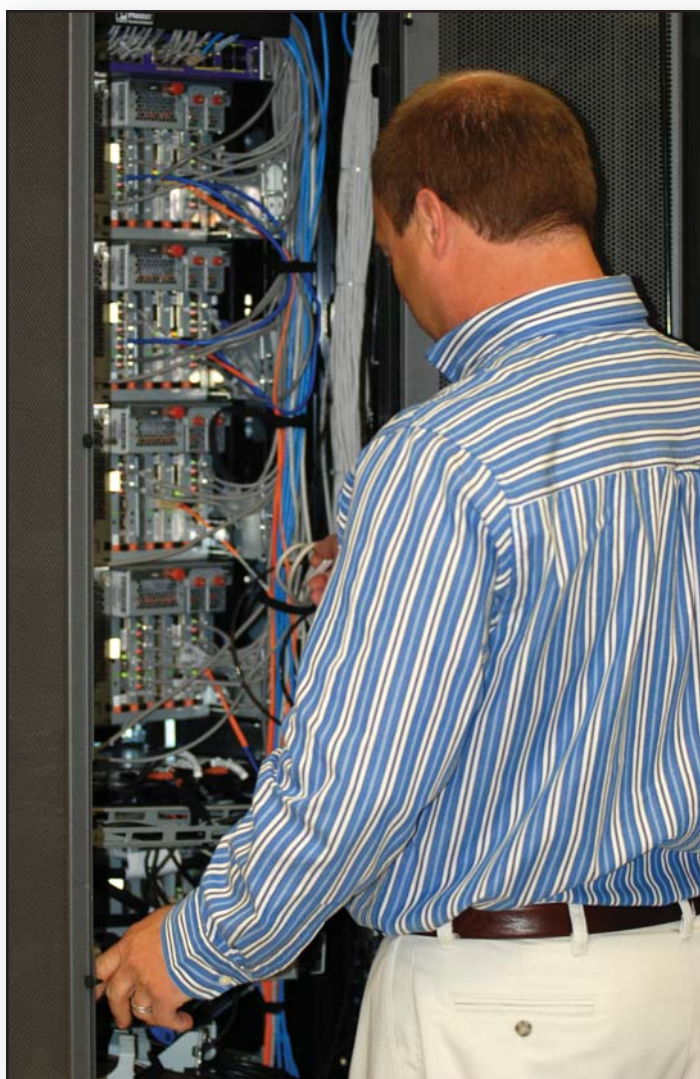
The Bureau of Criminal Investigation (BCI) needs to rewrite an aging case time-tracking system originally written in 1989. The current application requires numerous hours of preparation each month to calculate the information to be entered into PeopleSoft. The new time-tracking system will be a module built upon BCI's new case management system



using the existing infrastructure and application development methodology and be supported by staff with current technology expertise. The manual efforts to track the agents' time will be greatly reduced, and time spent by administrative staff will be included in the new time-tracking system on a per case basis.

Attorney General

The Bureau of Criminal Investigation's (BCI) new case management system tracks evidence for each case, but the information is manually recorded when sent to the crime lab. BCI will write the information to barcodes to be placed on the evidence. Once at the lab, the new crime lab application can scan the evidence and log it into the lab for processing. This will save time and possible errors by automating the process and eliminating duplication of effort.



Attorney General

The Bureau of Criminal Investigation (BCI) will accept requests from the public over the internet for background checks with acceptance of credit or debit cards for payment. This will eliminate the paperwork, and the electronic payments will be automatically deposited.

Bank of North Dakota

The Health Care and Education Reconciliation Act of 2010 (HCERA) revoked the authority for the Bank of North Dakota (BND) and other lenders to originate or insure new federal student loans under the Federal Family Education Loan Program (FFELP). HCERA requires the Secretary of Education to contract with eligible and qualified not-for-profit entities to service Federal Direct Loans, and the DOE has determined that BND meets the basic eligibility requirements to become a direct loan servicer. BND will evaluate the necessary steps to meet the security and servicing system requirements in order to be designated as qualified to service direct loans by the DOE. If BND does pursue the Authority To Operate (ATO) from DOE, North Dakota parents, students and colleges will receive quality service they can count on from BND whether they need help on past FFELP loans, new Federal Direct loans or their state alternative DEAL loan.

Department of Career and Technical Education

North Dakota schools currently submit plans defining how state and federal dollars will be spent. The plans go through an approval process, resulting in the plans being mailed back and forth several times during the year. The department will move the submittal and approval on-line which will streamline the entire process.

Department of Human Services

The Division of Vocational Rehabilitation (VR) needs to replace its mainframe based VR system originally designed in 1978. The need for a modern system was identified in the VR federal monitoring report from the Rehabilitation Service Administration (RSA) in August, 2009. DHS will publish an RFP to

procure a product that can meet the business needs of the Vocational Rehabilitation Services providers and will implement a web-based case management system. This will resolve the IT system related issues in future monitoring reports by RSA and will address federally mandated changes. The new system will also provide much needed efficiency to VR counselors such as automatic notification of due dates, spell checking, effective copy/paste functionality, and access to the system outside of the regional offices.

Department of Transportation

The Department of Transportation (DOT) needs to streamline the process for estimating project costs, focusing primarily on minimizing re-keying of information. Presently, bid information is extracted from MicroStation and Geopak and re-entered into a RIMS Engineers Estimate system. The information is then passed to the Pacer application for the actual bidding. Additional programs also use this information for electronic bidding; and finally, the project is paid for through the Construction Automated Records System (CARS) application. The DOT also needs tools to evaluate trends in cost between related projects. The streamlining project will minimize re-keying of project information, allow for historic project comparison on multiple bid items and project locations, and integrate the tools with GEOPAK D&C Manager and other quantity calculating programs. Added benefits will be fewer errors, ease of sharing engineer's estimates with other applications, and less time needed to prepare estimates.

North Dakota Highway Patrol

The North Dakota Highway Patrol (NDHP) will incorporate a Commercial Vehicle Information Exchange Window (CVIEW) as a single point of information for troopers at the roadside. This web-based system will provide a snapshot of information from several federal and state databases that include permits obtained, credentials, and safety inspections. It will also move the ND CVISN program towards attaining Core CVISN compliance and open up further grant funding. CVIEW will provide a database system to support e-screening activities and a

common, internet based portal through which current motor-carrier and vehicle information is available to multiple agencies.

Job Service North Dakota

Job Service North Dakota (JSND) will evaluate partnering with a consortium of states (Arizona, Wyoming, Idaho, and North Dakota) to build or obtain a modernized Unemployment Insurance (UI) system to replace a 30-year-old mainframe system. This will result in an opportunity to receive a completed UI Tax and Benefit system through a joint state initiative or utilize the outcome of the feasibility study to begin development of a new UI system. An updated UI system will allow improved service to UI claimants and the ability to make necessary computer system changes required by federal legislation.

Legislative Assembly

The new LEGEND repository and bill drafting suite will be leveraged to produce a fiscal note request, tracking mechanism, and delivery model for the legislative process. The current fiscal notes application is built on a Lotus application suite that is no longer supported. This application is heavily used during the legislative assembly process by fiscal and research staff. The documents are highly important to legislators during session activities. This application will be built to have content reside in the LEGEND repository as well as to have increased automation with fiscal note requests and tracking for deadlines.

Legislative Council

The Legislative Council (NDLC) will migrate the maintenance of administrative code into LEGEND, eliminating the separate Arbor Text text-editing software. With North Dakota Century Code (NDCC) being converted to Open Office Legislative Workbench application, converting this data set and application tools decreases maintenance costs and increases efficiencies as staff/operators only have one authoring tool to learn and use. The project will include a user interface for agencies, boards, and committees to download their administrative code titles for editing specific sections and

then upload the edited administrative code documents(s) and hearing notice information. Also, the current subscriptions for administrative code changes will be replaced with a free RSS feed.

Legislative Council

The North Dakota Legislative Council (NDLC) will replace the current event system used by NDLC staff with SharePoint WSS. The current mainframe based application is a large event “tickler” system used to trigger preparatory and execution work during a biennium. This system is event number driven with corresponding hard files being kept by event owner/manager. The current event data will be extracted from the mainframe and transformed into the necessary format to load into a custom SharePoint task list. SharePoint WSS provides many features for NDLC staff to collaborate for many other business processes so the usage of SharePoint will not be limited to the replacement of the Events System.

Legislative Council

The North Dakota Legislative Council (NDLC) will replace the current Lotus Notes Meeting Notices and Expense Vouchers databases, which provides all legislators with vouchers needed for reimbursements and pay for legislative duties. The meeting notices, agenda, and minutes will be documents created and maintained in LEGEND, and the business process around these documents will be managed via LEGEND workflows, including the origination of the business process using a work request. The hardcopy expense voucher document which is handed out to legislators will also be created in LEGEND. The expense voucher data entry, reviews, approvals, and reporting functionality will all be completed within ConnectND (PeopleSoft) utilizing the newly implemented expense module and reporting data warehouse (Cognos). The current Lotus Notes expense voucher data will be extracted and stored in a database which allows a Cognos report to include both this archived data and future ConnectND data warehouse data in a single report execution. The public web site will be automatically updated with meeting notices, agendas, and minutes,

including an RSS feed for all interim committees and each committee individually.

Legislative Council

NDLC will replace the current Lotus Notes People Database (database of record for legislative members) with a SharePoint WSS custom contact list. The current contact information will be extracted from the Lotus Notes database and transformed into the necessary format to load into the custom contact list. This will increase the supportability of the application and provide integration with Microsoft Office Access, Excel, and Word.

Accomplishments

Department of Corrections and Rehabilitation

A new Electronic Medical Records System replaced the paper medical records kept on each inmate in the DOCR allowing the scheduling, treatment, lab work and prescriptions to be managed in an integrated fashion. EMRS features include an integrated pharmacy system, physician order entry processes, an integrated lab system, chronic care clinic management, physical therapy care management, dietary care management, and infirmary care management. The system has also reduced filing time for clerical support staff.

Department of Human Services

The Food Stamp Program re-procured a vendor to provide EBT of food stamp benefits. DHS was able to implement new equipment with minimal disruption of service. The cost per case month (CPCM) was decreased significantly (64 percent), with much of that savings passed on to the counties.

Department of Human Services

The Continuous Eligibility project enhanced the Vision Eligibility System (VES) and appropriate dependent systems to accommodate Continuous Eligibility coverage for Medicaid recipients, providing up to 12 months of continuous coverage for children through age 18 enrolled in Medicaid as authorized by the 2007 legislature.

The VES is now compliant with Senate Bill 2012 and meets federal Medicaid guideline 3307.2.

Information Technology Department

The Mainframe Migration project migrated existing applications from the State's mainframe environment to a Linux environment. This project was a preparatory stage to eliminating the legacy mainframe. The completion of this project did not result in the ability to shut down the mainframe due to the continued existence of major applications that are in the process of being re-written. However the applications that were migrated have matched or exceeded the functionality and performance measures of the legacy applications. ITD continues to focus heavily on new applications being developed to run on a Windows or Linux platform resulting in downsizing of the mainframe environment and potential outsourcing of remaining mainframe processing.

Information Technology Department

The CJIS Portal provides criminal justice personnel access to valuable information from cross-jurisdictional record sources. This project developed a standard interface for the indexing of all records. By developing this standard interface, there will be a reduction in the time and cost associated with adding access to new records. Initial metrics show a 48 percent reduction in cost per record type added. Development efforts have also been simplified allowing agencies that want to contribute records to do so more easily.

Job Service North Dakota

Job Service North Dakota (JSND) procured a study of the modernization options and make a recommendation regarding future direction. The result of the vendor study was to migrate the code from the Unisys LINC programming language which fits within JSND's funding and resource constraints. JSND is also participating in a federally funded consortium to determine the feasibility of developing a core UI tax and/or benefits system that could be used by multiple state workforce agencies. The consortium is comprised of Arizona, Wyoming, Idaho, and North Dakota. Another option for JSND is to

stay on the mainframe environment using a new version of the Unisys LINC development tool, AB, which offers lower costs, lower risks to a major application change and is less staff intensive. Deliverables and information gathered from the Direction Study will be utilized in the future modernization efforts.

Job Service North Dakota

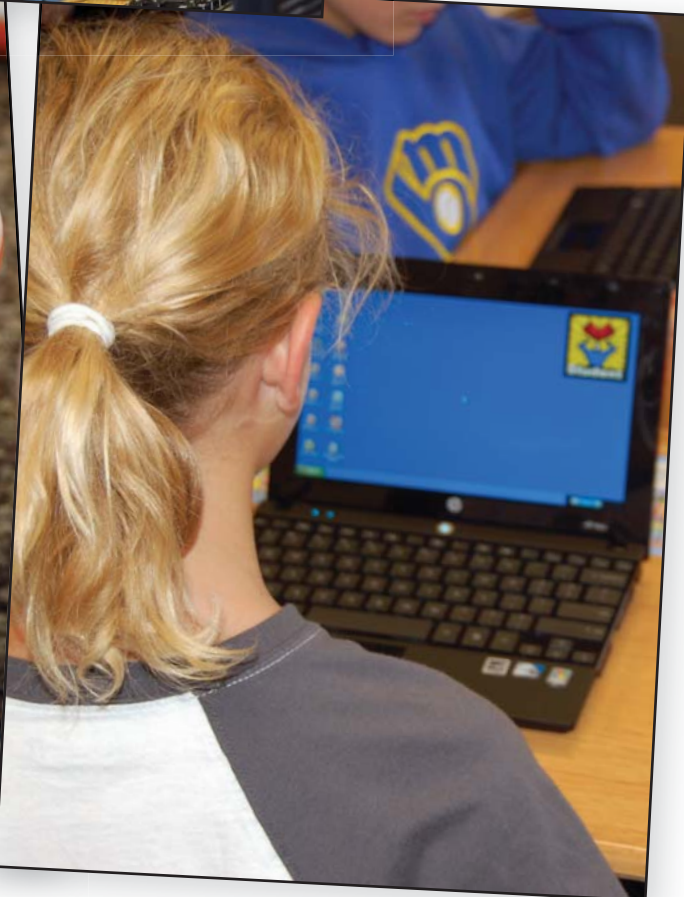
The department replaced an existing customized Oracle Forms case management NDWorks application with a commercial off the shelf (COTS) application from Geographic Solutions Inc. (GSI) called the Case Management System (CMS). The new CMS has reduced the infrastructure cost by 21 percent and reduced contract services expenses by \$63,000 per year. The application has provided JSND the ability to manage the Parental Responsibility Initiative for the Development of Employment (PRIDE) program and the ability to case manage TAA participants and process payments for them. Additionally, employers are experiencing a reduction in the amount of time spent posting job orders in multiple places.

State Treasurer

The Tax Rewrite project re-built the existing State Treasurer outstanding checks and tax distribution (Oil & Gas Tax Distribution, Cigarette Tax Distribution, Highway Tax Distribution, State Aid Distribution, Township Road Tax Distribution and Estate Tax Distribution) applications.



North Dakota K-12 Education



Overview

*Dan Pullen, Director
K-12 Technology*

“Efficiency and effectiveness” are not vague concepts when it comes to the role technology plays in North Dakota K-12 schools. Effectiveness has one measure: Are high school graduates prepared to be successful in college and work? Efficiency has an equally clear meaning: Less duplication of effort and more time and effort available to guide each student toward success in reaching his/her potential.

Technology’s role in driving efficiency and effectiveness in K-12 schools can be seen when groups of students work together on classroom assignments across distance and time, or when an individual student completes a high school course online. Teachers use technology systems to manage daily classroom activities, communicate electronically with parents and analyze student data in order to individualize instruction for struggling students. School administrators also gain efficiencies and effectiveness through online state reporting systems and data analysis systems to better understand assessment results and their effects on achieving adequate yearly progress proficiency levels (AYP).

The North Dakota Educational Technology Council (ND ETC) has statutory responsibility to coordinate educational technology initiatives for elementary and secondary education. The ND ETC meets that responsibility by providing leadership for several key technology initiatives in the state and by providing policy oversight for the North Dakota Center for Distance Education (ND CDE) and EduTech.

During 2009-2011 biennium, the ND CDE began a process of refining its mission and making technical advancements in the way it delivers online courses to North Dakota high school students. ND CDE began working with other

providers of online course materials placing more emphasis on credit recovery.

EduTech significantly ramped up the activities of its PowerSchool team to implement the legislatively mandated common student information system in all schools. EduTech continued to strengthen its long standing services such as e-mail, web hosting, anti-virus, and internet filtering, in order to provide more value to educators and students in North Dakota K-12 schools. By centrally providing these services, schools have the core tools in place to use technology effectively and efficiency. Newer services, like blogging, podcasting and social networking, gave educators and students the ability to create, connect, and publish among



Dan Pullen, Director
K-12 Technology

their global peers. Face to face, online and one to one professional development was made available for teachers to develop the skills to effectively integrate technology in their teaching.

For the 2011-13 biennium the ND ETC plans to support schools that need to upgrade the video classrooms they use to share high school courses so that their transmission equipment is up to current technical specifications and continues to be an effective way to provide a full high school curriculum as enrollments decline. Upgrading the core technology of these classrooms creates efficiencies in the ability of ITD's network staff to maintain and support K-12 use of video.

In the next two years, ND CDE will continue to reorganize to better serve North Dakota schools, but will also reposition itself as a high value, full-service distance education resource for schools statewide. ND CDE will foster efficiencies by making online courses available to all students at an affordable price and will increase the effectiveness of distance education through more

robust teacher-student interaction and increased course completion rates.

In the next biennium EduTech will complete the implementation of the PowerSchool student information system in all the remaining school districts in the state, will continue to support the schools' use of PowerSchool for daily operations and state reporting, and will enhance its use as the primary source for K-12 data in the statewide longitudinal data system. EduTech will also improve e-mail, web hosting, and social networking services to offer students and educators the most current and useful learning applications. Professional development will be made more easily available in online formats where educators can get the instruction they need when they need it.

The directors of ND ETC, ND CDE, and EduTech work with a number of state-level partners to create efficiencies, avoid duplication, and ensure that North Dakota's K-12 technology systems serve K-12 students and educators.

All of the initiatives undertaken by the ND ETC, ND CDE and EduTech are in line with ETC's five Results Policies. As a result of our efforts:

- 1.** North Dakota educational technology systems will continuously improve educational opportunities for students.
- 2.** Technology systems to enhance educational opportunities will be more efficient, effective, and coordinated on a statewide basis.
- 3.** Distance education systems will be in place to deliver a comprehensive curriculum to North Dakota 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.

Goal One

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

Goal Description

Statewide K-12 educational technology initiatives are focused on improving the learning opportunities for and 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.

Objectives

- Make funding available to schools, enabling them to move toward using more technology-rich teaching and learning environments.

- Implement the PowerSchool Student Information System in all public schools, regardless of size by providing implementation, training, and support to ensure every school is successful in using PowerSchool for daily operations and State reporting.
- Redefine the mission and operation of the ND CDE, expanding and aligning ND CDE programs to better meet the needs of North Dakota K-12 students for distance education courses and other services.

Initiatives

North Dakota ETC will request funding in its 2011-13 budget to provide more schools with opportunities to receive Classroom Transformation Grants for start-up projects that

bring new, cutting-edge educational technologies to their classrooms.

All North Dakota public schools will be using PowerSchool by Spring 2013. EduTech will request legislative funding for two additional temporary staff for the 2011-13 biennium to provide implementation, training, and support services to existing and new PowerSchool schools. The two additional staff will make it possible to meet the goal of having every school

North Dakota State Government

ndCDE North Dakota CENTER FOR DISTANCE EDUCATION

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using PowerSchool by spring 2013. Reservation (BIA) schools that are required to use Infinite Campus will be waived from using PowerSchool if they meet state reporting requirements using alternative methods approved by Department of Public Instruction (DPI).

EduTech and DPI will work with schools to ensure that PowerSchool becomes the foundational data source for state reporting and the Statewide Longitudinal Data System.

Increased high school graduation requirements and the need for upper-level curriculum for college readiness will drive the repositioning of ND CDE to better meet the needs of North Dakota students.

Partnerships will be developed by ND CDE with commercial providers of online learning courses and services to add value to those products and ensure their quality for the benefit of North Dakota students and teachers.

implement music instruction technology, e-book readers for struggling students, online science labs, and nanotechnology modules.

A private social network for ND K-12 schools was developed by EduTech. This social networking area is inaccessible to those without EduTech accounts, making it a safe area for students and teachers to become familiar with social networking. This service, along with the existing blogging and podcasting services, are named EduSocial and have been made available to more than 60,000 people with EduTech accounts.

New director of ND CDE Dr. Alan Peterson developed a reorganization plan for the center that includes standardized pricing, reconfiguration of staff, performance measurement and improvement processes, and realignment of CDE's online products based on discussions with school leaders from around the state.

Accomplishments

The ND ETC awarded Classroom Transformation grants to 22 schools to implement a wide range of new teaching/learning technologies including interactive white boards, document cameras, netbooks, response systems, projectors, video media production tools, electronic science lab equipment, and classroom sound reinforcement systems. Training for teachers in using these new technologies was included in all grant-funded projects.

ND ETC received Qwest Foundation grant funds to award classroom technology grants to



Goal Two

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

Goal description

In order 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.

Objectives

Create a North Dakota global K-12 directory to more efficiently deliver IT services across the state by offering students and educators a single user name and password to access DPI, EduTech, and other online services.

Implement new data analysis and reporting systems by working collaboratively with the Department of Public Instruction (DPI), other state agencies, North Dakota University System, and schools districts.

Promote a broad vision of online distance education to K-12 and other stakeholders.

Work with REAs and other service entities to fulfill distance education needs of all students.

Initiatives

Collaborative work will continue with DPI, school districts and others to ensure that new data systems meet the needs of schools and can be used to improve student achievement. Assessment results and other school and

student data will be able to be disaggregated and analyzed to identify strategies for improved instruction.

New self-service tools will be made available by EduTech for K-12 educators and students so they can more efficiently receive technical support for PowerSchool, blogging and other EduTech services. Quick reference documents, tutorial videos and other support media will be made available on the EduTech website where they can be easily accessed.

EduTech's help desk ticket tracking system, iSupport, will offer a Self Service Portal which is available to anyone in North Dakota K-12 who wishes to submit tickets to the EduTech Help Desk without having to call or send e-mail. Frequently asked questions and answers

will be edited and made available in a searchable database for customers to use for support.

Technology assessments based on 21st Century Skills research will be used to assess DPI's Title II-D grant funded educational technology projects. EduTech staff will

use comprehensive, research-based assessment tools from the Metiri Group to evaluate the impact of grant projects. Six essential conditions will focus on student impact, effective practice in teaching and learning with technology, educator proficiency with effective practice with technology, digital age equity, robust access, anywhere, anytime and shared vision, systems and leadership.



EduTech and other divisions of ITD will partner with DPI to identify methods of creating a global K-12 directory which will automatically be updated as students enter, leave and transfer between public schools. This directory will be used to more efficiently deliver IT services across the state by offering students and educators a single user name and password.

The work of the North Dakota Studies Textbook Project will cooperatively be transitioned from ND CDE to the State Historical Society of North Dakota.

ND CDE will work with DPI and other state-level stakeholders to ensure that ND statutes are being followed related to the qualifications and reviews of all online course providers.

Accomplishments

The 2009-2012 State Educational Technology Plan was developed by ND ETC and representative K-12 stakeholders. This plan guides the activities of ND ETC and other state entities and is used to qualify for E-Rate and other federal funds.

Technology plans were developed by all public schools districts modeled after the priorities set in the state plan. All school technology plans were approved by the ND ETC in order to qualify schools for state and federal education technology funding.

The broadband connectivity to all K-12 schools in the state was increased through a cooperative project led by ITD. EduTech assisted in this implementation that was completed in time for the 2009-10 school year.

Working cooperatively with the national organization of State E-rate Coordinators (SECA) and North Dakota higher education groups, EduTech provided feedback for the FCC and Schools and Libraries Division. The comments proposed by these groups affected the development of new or revised initiatives for the E-rate program. Many of these

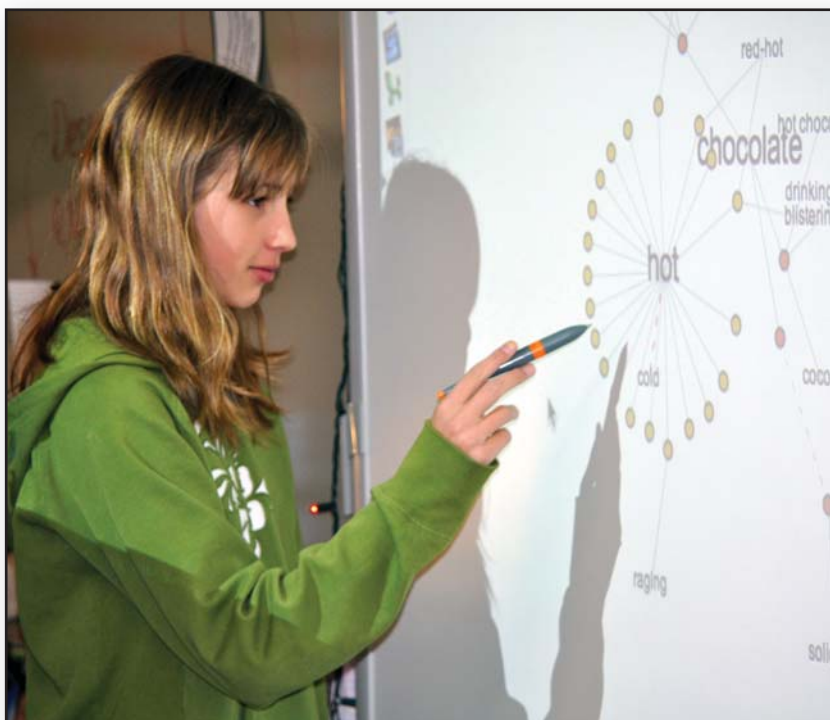
proposals have now become the new directives of the program.

On July 1, 2009 EduTech employees transitioned to become regular classified ITD employees. Previously EduTech staff members were employees of North Dakota State University under a contractual agreement between NDSU and ITD. This transition allowed for improved communication and collaboration among the workgroups who deliver PowerSchool, E-rate and other services.

To reduce time and complexity for school administrators, EduTech changed the required school letter of agency for the state E-rate application from an annual cycle to a 3-year cycle. Instructions were simplified from previous version resulting in less confusion and more forms being completed accurately and on time.

ND ETC hired a new state director of ND CDE to lead the organization through its reorganization and repositioning during the next biennium.

Working with the leadership of the Governor's Commission on Educational Improvement the ND CDE director developed a repositioning and funding plan to ensure the Center provides high value services to the K-12 students and schools of North Dakota.



Goal Three

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

Goal Description:

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 and dual-credit courses. The use of web-based and video delivery is increasing in K-12 schools, and the online high school courses available through the ND Center for Distance Education are an important asset to K-12 education in the state.

Objectives:

Support the upgrade and standardization of video classrooms in K-12 schools that need video to share courses.



Alan Peterson, Director
North Dakota Center for Distance Education

Implement strategies to connect K-12 schools to high-value digital education resources outside the state.

Expand the partnership between ND CDE and ND schools to better align all ND CDE programs and services with district needs.

Develop value-added services to ensure commercially produced online curriculum meets the needs of K-12 learners in the state.

Initiatives:

ND ETC will budget general funds to support schools that need improved video classrooms to meet their curriculum needs. Most video classrooms in ND K-12 schools that are used for offering high school courses have been in service for many years and need to be upgraded so that they can be maintained by the manufacturer and supported by ITD. The core video components in these classrooms need to be upgraded as they reach end-of-life.

Educators, with support from EduTech, will engage students in educational outreach opportunities to impact their learning by exploring and building partnerships with state and regional education networks such as colleges and universities, schools, libraries, museums and other educational agencies. Content provider programs such as Live Surgical Suites, visits to the Mote Marine Laboratory and the National Park Service will offer students experiences to learn in a “live” environment. Classrooms will participate in global collaborations such as Read Around the Planet and be connected to global experts via EduTech’s guidance. Jazz 1, 2, 3 will offer teachers an opportunity to learn with their peers across the globe via videoconferencing.

ND CDE will seek additional general funds through the recommendation of the Governor's Commission on Education Improvement. These new funds will be used to reduce the price of online courses for North Dakota students and to allow the Center to organizationally restructure its staff and services. The Center will use high quality commercially produced online curriculum and support that content and the enrolled students with local, highly qualified teaching staff. These initiatives are aligned with existing state laws and will better serve students in completing their high school curriculum and being prepared for college or work.

Accomplishments

Six video consortiums of 69 schools received ND ETC grants to replace and upgrade video transmission components and classroom equipment. Statewide, over 3,100 high school students take courses each semester in their local high schools that are delivered by video from other schools within their own consortium or from schools in other parts of the state.

Career Technology Education Centers and interactive television consortia have been added to PowerSchool by EduTech. The teachers in these consortia no longer need to log in to all of their students' home district sites to enter grades. They can make the entries on a single site and the home district site administrators then transfer the grades at end of term. Parents are able to log in to the CTC/Video sites to monitor their students' grades.

Dozens of classrooms took advantage of opportunities to participate in global learning activities via videoconferencing. EduTech provided leadership and support for classrooms to participate in over twenty-five programs in which students connected with a content expert or participated in a global collaboration. The COSI Live Surgical Suite where classrooms were able to observe a heart or knee surgery and interact with the operating room staff was especially successful.

Working collaborations with three commercial providers of online course resources were initiated by ND CDE. Each of these relationships allow ND ETC teaching staff to work closely with enrolled online students, mentoring them in the learning process and prompting them to progress toward completion. This change is organizational focus allowed CDE teachers to work exclusively on student learning instead of on course development and testing.



Goal Four

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

Goal Description:

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.

Objectives:

Produce and deliver additional on-line professional development workshops for educators to increase the use of EduSocial as a learning management system.

Provide professional development for teachers that models the use of interactive and collaborative teaching/learning methods made available with Web 2.0 tools.



Jody French, Director
EduTech

Teachers at the ND CDE will be trained and certified to standards set by best-in-class, commercial and nonprofit distance education providers.

ND CDE will apply its teacher certification experience toward developing an online teaching certification for ND teachers.

Initiatives:

One new online course will be offered by EduTech each semester to provide convenient and timely professional development opportunities for educators. Additional titles will be added to the current list: Digital Citizenship, Online Tools for the K-12 Classroom and Microsoft Office applications.

Instructional Technology Partners (INSTEP), a professional development program delivered by EduTech that is designed to support teachers as they move along on the continuum of technology integration, will be delivered to more educators

and administrators. INSTEP uses technology resources currently available in the school;

EduTech assists classroom teachers one-on-one through the process of developing and implementing technology-enriched activities in their curriculum. This instructional coaching model is more sustainable than traditional professional development activities.

CDE teachers certified to industry standards will make that training available to other North Dakota educators who facilitate distance education courses in their local districts. The relationship between CDE and those local online teachers will be supported in order to ensure the quality of online instruction statewide.

Accomplishments

Leadership and consulting services were made available to the districts for the development and writing of their current 3-year technology plans. This service was provided to ensure district technology plans were aligned with services that are requested on E-rate applications and to

head off problems with possible future E-rate application reviews. Schools received detailed assistance on how to improve their technology plans.

Over 450 workshops were delivered to K-12 educators by EduTech staff. Classroom teachers received instruction on how to use and integrate software, hardware and internet resources into their teaching and learning processes. Administrative and education staff participated in PowerSchool workshops ranging from basic use to reporting and data-mining. Nearly all EduTech workshops were available for graduate credit which allows educators to maintain their teacher licensing.

ND CDE provided informational sessions related to emerging issues in distance education for REA leaders, school administrator groups, ND ETC members, ND School Boards Association members and other education leaders.



Goal Five

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

Goal description:

School technology systems are becoming mission-critical in schools. Uninterrupted network service and reliable local technology systems 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 on a daily basis with a high degree of confidence and success.

Objectives:

The ND K-12 community will be aware of internet safety and able to take action in schools to ensure that students can use online resources in a safe environment.

Statewide computer desktop protection, anti-virus software, and internet filtering will be provided in every K-12 school connected to STAGEnet to ensure the stability of the shared infrastructure.

Initiatives:

EduSocial will provide internal messaging, social networking, blogging, podcasting and group communications which can function as online course management tools. EduSocial is an effective multi-purpose communication tool delivered by EduTech. EduSocial is expandable to enable additional course management tools to be added to increase its classroom functionality of this service.

Training and technical staff at Edutech will provide education, resources and communication tools to instruct the K-12 community about safe online practices. These include online and face-to-face classes as well as online resources and regular reminders from support staff focusing on appropriate technology use and digital

citizenship. Topics include cyberbullying, phishing, identity theft, i-Dosing and sexting.

Accomplishments

Each school district had the opportunity to have an individual Internet Filtering Self Management profile set up for them by EduTech. The individual profile allows them to configure their own Internet filtering preferences, such as categories of sites or individual sites to block or allow. School districts can also set their own Internet filter password that works exclusively within their district. EduTech provided training and continues to offer support to schools that choose to use this flexible option for Internet filtering.

The technology team at EduTech worked to improve K-12 computer security from the desktop to the Internet. Every public school computer has access to managed security software at no cost as well as no cost internet filtering customized to the needs of their district. The desktop security software includes a firewall, antivirus software and intrusion detection and prevention monitors. These solutions provide maximum flexibility to each district while removing the burden of managing the technology.

EduTech blocked over 132 million virus and spam messages each year in the 55,000 email accounts it maintained for K-12 teachers and students.

The ETC, ND CDE and EduTech maintained ADA compliant websites for their clients.

EduTech services continued to be reliable and stable: frequently reporting no unplanned downtime during a quarter, and never exceeding the acceptable downtime limit of 0.5%.

North Dakota University System



Overview Higher Education

by Randall Thursby, Chief Information Officer

“Driving Efficiency and Effectiveness” is a very appropriate theme for not only what has been done over the past two years but also maintains our focus for the future. Information Technology is an ever-changing field and a key means to improve business processes, provide new services, increase efficiencies and allow for excellence in programs that impact students, faculty, and staff.

During the 2009-11 biennium, a number of initiatives were completed that improved services for students, faculty and staff; however, three key initiatives laid the foundation for future services and had an impact on all NDUS institutions. These three initiatives include; establishment of a Strategic Architecture Vision, migration of student’s e-mail services to Microsoft’s hosted Live@edu, and an initiative we call Integrated Services.

The Strategic Architecture is a multi-level pyramid of supported infrastructure, applications, and services beginning with the Common Communications Systems (STAGEnet) network and culminating with applications (such as ConnectND, ODIN Library Services, Ancillary Systems, Course Management, e-mail and calendar, Help Desk, etc) accessible by users through a web portal.

Microsoft’s Live@edu hosted service for students not only provides for added e-mail storage (10 gigabytes vs less than 2 gigabytes previously), an additional 25 gigabytes of file storage, calendar, document sharing, instant messaging, video chat, mobile e-mail, and other functionality all are accessible through the student’s web browser.

The Integrated Services initiative includes e-mail and calendaring for faculty and staff using Microsoft’s Business Productivity Online Services Standard Suite (BPOS) that, is also hosted by

Microsoft. Additional functionality available includes instant messaging, presence, SharePoint Online for document sharing and collaboration, and web conferencing.

While the above three initiatives laid the foundation for future services, several initiatives completed had an impact on academic services, and I’ve highlighted a few below.

We have seen a growth in students taking on-line courses, and one initiative was the replacement of videoconferencing technologies with High Definition (HD) systems. HD systems were installed across the university system, including more than 30 new rooms and upgrades at all eleven institutions. HD video now allows courses requiring detail, such as science and nursing



Randall Thursby, Chief Information Officer
North Dakota University System

courses, to be delivered more effectively. Even labs that required students at a distance to travel can be shown in sufficient detail to eliminate that travel, yet give access for students to courses requiring detail.

Another initiative implemented was Moodle learning management software as the NDUS SITS supported open source learning management system, and implementation was completed at four institutions reducing cost of having their own servers, support staff, and operational expenses. The system is in use to some extent at four other institutions and is being used for internal staff training within SITS. This system is also available 24x7 as are its help desk services. By moving to Moodle and implementing system-wide support services, the overall costs were reduced by more than half.

The WIMBA collaboration software has seen increased use for on-line courses, classroom instruction, meetings and training at no increased cost to the institutions or students. This software is now in use across all eleven institutions allowing for economies of scale in training and operational costs.

Additional library resources were acquired. Working with the State Library and with Minitex regional library network, the number of databases licensed for the entire state increased from 17 to 49 giving not only more library resources to students of NDUS but people in all of North Dakota.

For the 2011-13 biennium, the Integrated Services initiative will be rolled out to all institutions. For some institutions, selected services will be linked with their existing on-site systems. For example, an institution could tie integrated services into their telephony systems to take advantage of unified communications. Once this project is completed, sharing

of calendars will be possible no matter where or at which institution an individual is located, an individual's availability will be detectable through the use of "presence", and the most appropriate means of communications can be selected. Additionally, the means of communications can be escalated at any point during the conversation. It may start out with an instant message but escalate to use of the phone or use of video, and include other individuals as necessary.

A second key component of our integrated services initiative for 2011-13 is a more comprehensive expansion of the initiative into the support of classroom technologies and on-line course and program delivery. This effort has the potential to not only expand program offerings available to the citizens of the state, but also to help deliver on the goal of improved efficiency and effectiveness in the core academic mission of the NDUS.

The Integrated Services initiative is just one example (however, it is a complex undertaking) of how we are driving efficiency and effectiveness. The following pages include a snapshot of initiatives included in the individual institution's and NDUS SITS 2011-13 IT plans, their alignment with the goals of the NDUS Strategic Plan, and accomplishments during the past biennium.



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 such as STAGEnet. It includes such things as security and access control that is called “middleware.” In addition, policies, procedures, and guidelines must be developed and updated as needed. The process that provides a blueprint for establishing information technology policies, procedures, and guidelines to promote effective use of information technology is called Enterprise Architecture. Also of critical importance to research and economic development is North Dakota’s involvement in the Northern Tier Network Consortium to connect North Dakota and other northern tier states to national research networks.

Strategy Objectives

1. Offer reliable, cost-effective and appropriate NDUS network services.
2. Provide middleware tools and technologies to help people more easily use networked resources and services while ensuring security and privacy of the information.
3. Prepare the data network Internet Protocol (IP) infrastructure for the convergence of voice, data, and video along with other collaboration tools on a single network.
4. Enable libraries to provide easy access to licensed electronic information.
5. Provide IT enterprise architecture and project management leadership.

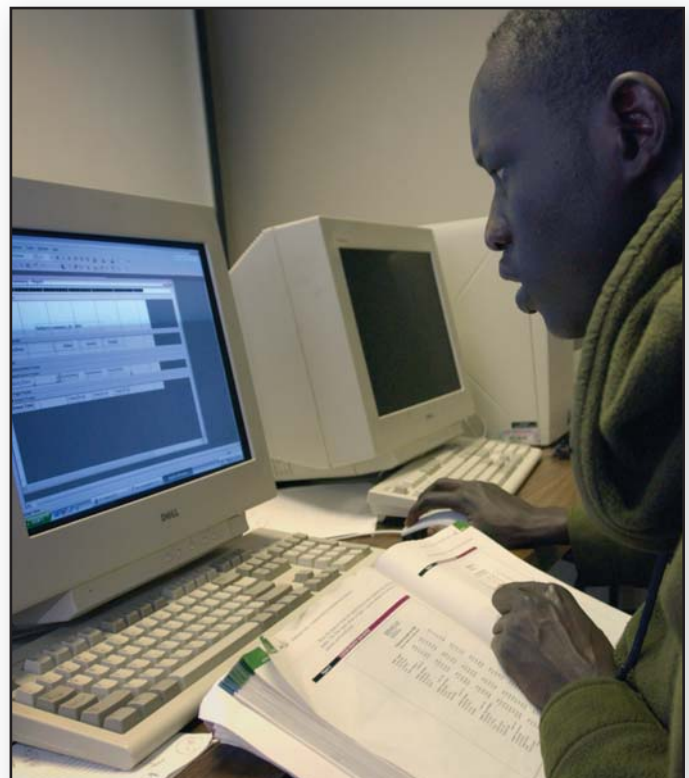
6. Provide linkage through STAGEnet, Internet2, and the Northern Tier Network to national and international research and development networks.

Proposed Initiatives

Incent institutions to work within the System Information Technology Strategic Architecture in the acquisition and implementation of hardware/software systems and services, reducing the cost of operations across the NDUS. (SITS)

Continue with implementation of Integrated Services. (SITS)

- Complete implementation of Active Directory allowing for the use of a single identifier for access to System services for all faculty, staff and students.





- Complete implementation of Microsoft BPOS or on-site Exchange services at all institutions.
- Establish direction for Unified Communications and Telephony and begin implementation of the Unified Communications direction. Planning will be in conjunction with the State ITD.

The information technology common directory and integrated services will drive efficiency and effectiveness across the System. The rapid adoption of the integrated services will lay the groundwork for implementation of other improved services to students, faculty and staff while containing the cost of operation. (SITS)

Seek funding in the legislative session for a shared IT Facility that includes a data center and staff space for NDUS and UND IT operations in Grand Forks. (SITS)

Provide for continued operation costs for the Northern Tier Network in support of the research missions of UND and NDSU. (SITS)

Implement an Identity Management System to help streamline the process of provisioning services, managing individual's identities and managing access to services and resources. (SITS)

Prepare for future transition to Internet Protocol Version 6 (IPv6), including working with ITD to implement on STAGEnet. (SITS)

Continue to move toward virtualizing NDUS systems, consolidating or reducing hardware costs while optimizing staff workloads. (SITS)

Standardize wireless access across the university system, to allow authenticated access to institution networks by all NDUS faculty, staff, and students. (SITS)

Extend the fiber infrastructure at the institution and replace fiber where needed. (MiSU)

Improve efficiency and security by co-locating two existing data centers in one centralized Data Center with dedicated HVAC system and fully redundant power. (MiSU)

Using approved policy and established guidelines, enable networks across campus to use Safe-Connect for network access control and authentication. (UND)

Accomplishments

System Information Technology Services (SITS)

Established a strategic architecture vision as the basis for technology systems and services. This multi-level pyramid of supported infrastructure, applications, and services is portrayed starting with the Common Communications Systems (STAGEnet) network at the bottom of the pyramid (foundation that all else is built on) and culminates with applications (such as ConnectND, ODIN Library Services, Ancillary Systems, e-mail, calendar, course management, etc) accessible by users through a web portal.

Increased network bandwidth to institutions and helped expand the STAGeNet backbone along with external Internet connectivity.

The network is critical for continued consolidation of IT services and initiatives like integrated services. Adequate bandwidth is also needed to continue to expand on-line course and program offerings.

Bandwidth capacity for Internet2 access to other educational entities across the country was increased. Internet2 bandwidth costs less than commodity internet services and by shifting traffic that is eligible for the Internet2 services from the normal internet gateway, both the NDUS and the State experience cost savings.



On-line Dakota Information Network (ODIN) library system has expanded the use of web-based training using Wimba to reduce travel costs and make possible training for more library staff than can attend in person. ODIN library system training is developed once and can be presented to and used by all campuses and libraries.

Implemented a ConnectND Data Warehouse consisting of three data marts (Student Financials, Student Records, and Workforce Profile) that is currently being tuned, reports developed, and dashboards refined for NDUS use.

A security assessment of the ConnectND Student system was completed and recommendations implemented. This reduces the potential that a security breach will occur in the ConnectND system.

Several NDUS institutions have **implemented video surveillance systems** to enhance the sense of security for students and employees, benefit campus security investigations, and act as a deterrent.

Mayville State University has completed migration of physical **server systems to a Hyper-V virtualized infrastructure**. The result is an overall reduction in physical hardware,

power consumption, maintenance, and downtime. Students, faculty, and staff all benefit from this migration. The overall return on investment and increased service availability are indicative of this initiative's success.

Northern Tier – North Dakota State University along with the University of North Dakota, the State of North Dakota, and the Department of Defense extended Internet2 connectivity to research and educational (including K-12) institutions

throughout North Dakota by forming the North Dakota link connecting the endpoints at Chicago, IL and Seattle, WA. A similar project occurred in Montana. Benefitting are research and educational (K-12 and higher education) institutions. Success is measured through increased collaboration efforts and expanded research capabilities.

Goal Two

To improve North Dakota University System information technology-enabled business processes and services while providing and managing resources to align with strategic goals.

Purpose

This goal is the core that supports business processes of the institutions and the North Dakota University System (NDUS). Information technology (IT) is a necessary and increasingly more important resource in achieving the NDUS' goals for student learning, expanding research, and public service. In order for institutions to remain competitive and offer support for students, faculty and staff, the NDUS will provide and manage resources to align with the NDUS' strategic goals. The NDUS will strive to deliver the most effective technology within available resources.

Strategy Objectives

1. Work with state government to maintain critical core ConnectND functions and implement upgrades and enhancements to the financial/human resources management and data warehouse systems.
2. Work to maintain critical core ConnectND functions and implement upgrades and enhancements to the student management, data warehouse, library, and academic technology systems.
3. Enhance the enterprise project management office including enterprise architecture to provide project management oversight, enterprise architecture administration, and IT planning in conjunction with the NDUS Chief Information Officer (CIO).
4. Enhance educational experiences with new or re-purposed resources

that expand user services, technologies, and initiatives.

5. Use the enhanced communications capabilities made available with STAGEnet to improve services to students, faculty, staff and the citizens of the state.
6. Implement a converged environment that supports voice, data, video and collaboration systems.
7. Hire/train professional staff to meet the needs of supporting NDUS services.

Proposed Initiatives

Work with the State ITD to improve data communications services across the state backbone for the benefit of all users. Leverage the new backbone services to provide increased bandwidth to institutions at lowest possible cost. (SITS)





Expand scope of the data warehouse and its reporting and dashboard capabilities. Also provide for the NDUS programs and process to support the higher education data mart of the state longitudinal data system, providing better information for improved decision-making. (SITS)

Implement a master data hub for coordination of biographical and demographical information between and among systems. Eliminates the need for many bi-directional linkage programs between systems providing for more efficient operations and lower support costs. (SITS)

Provide for mobile device access by students, faculty and staff, supporting anytime, anywhere access to information. (SITS)

Support staff and faculty training content and tracking using the System supported learning management systems in conjunction with ConnectND HRMS. For example it was used for fraud prevention training as a test in the summer of 2010, and these efforts will be expanded in conjunction with the Human Resources Council. In the 2011-13 biennium it should be the primary

method for delivery of most such training to faculty and staff. (SITS)

ODIN will be expanding the use of web based and video based training using WIMBA and other tools to reduce travel costs, increase the training available and overcome timing and distance issues. Using lecture capture software this training can be available on demand to any library. (SITS)

Replace the voice communications system. (BSC)

Upgrade network management systems, software and core data switches on a 4-5 year replacement cycle along with replacing the UPS and battery backup appliances. Replace faculty computers and student accessible computers every 3-4 years. (DSU)

Acquire and set up new hardware and ImageNow document imaging application to be used by campus community, including existing ImageNow and ApplicationXtender users. (UND)



Accomplishments

Dakota College at Bottineau, Minot State University, Lake Region State College, Dickinson State University, and Bismarck State College went live with Microsoft's hosted Live@edu services. North Dakota State University, North Dakota State College of Science, and University of North Dakota are migrating and Williston State College will be migrating later in 2011. Live@edu offers



educational institutions free, communications and collaboration services for students consisting of; 10 gigabytes e-mail storage, 25 gigabytes additional file storage, calendar, document sharing, instant messaging, video chat, mobile e-mail and more. This has reduced IT infrastructure costs for hardware and maintenance of e-mail systems, freed up staff resources from administration of these systems and allowed time for more strategic initiatives.

Project management along with Enterprise Portfolio management and IT planning has been implemented under the Office of the CIO. A Project Portfolio Board was created that oversees projects and establishes priorities and resource allocation for System IT projects.

Implementation has begun on an initiative titled **Integrated Services**. A single forest/domain Active Directory concept has been implemented for the use of a single identifier for all faculty, staff and students to access System services. Included was implementation of a Domain Name Author/ID System so that every faculty, staff and student has a unique ID throughout the NDUS.

Implementation of Microsoft's Business Productivity Online Services Standard Suite (BPOS) is underway providing a platform for a common e-mail, calendar, and messaging system across all institutions. Additional capabilities include SharePoint (basic) for document sharing and collaboration, instant messaging, presence, and web conferencing.

The first **comprehensive Customer Satisfaction Survey** related to System IT Services has been conducted. This provided information to allow improvement of services and also to chart priorities, allocate resources, and plan future direction.

Provided **on-line 1098-T's for students**, which has saved thousands of dollars for the campuses and improved workflow.

More **campuses are using the e-bill system within TouchNet** (secure online processing). Statements are no longer being mailed, eliminating postage, time and labor in stuffing envelopes. Some campuses are now sending e-bills to non-students with the capability for non-students to use on-line payment functionality. The increasing usage of TouchNet is allowing many departments to become more versatile in offering on-line stores and payment option. Also regarding TouchNet, more NDUS systems are internally being integrated for improved efficiencies across the NDUS.

Implemented ConnectND HRMS eApps (eProfile, eBenefits, and ePay) which were well received by faculty and staff for self-service use. By having these self-service applications in use the burden on HRMS staff is reduced and employees may view their information at any time from work or at home.

Implemented OrgPlus organizational charting software for use with the HRMS System. Using the organizational trees within HRMS, organizational charts for departments, divisions, etc may be generated without the time and expense of developing and maintaining these in separate software.

Goal Three

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

Purpose

Through the use of technology, empower student learning and development. Provide 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 the life-long learners. Encourage and support an operational environment in which characteristics of its customers – student, faculty, staff, residents of North Dakota, 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:

1. Create an environment for enhancing learning where opportunities and resources are explored, best practices collected,

and deploying strategies are developed, implemented and evaluated. Examples include distributed education, effective use of technology in the classroom, and library linkages.

2. Create the means for easy, efficient, and reliable access to learning resources anytime and anyplace and for learning experiences that enable collaboration among learners.
3. Evaluate enhancements to the Online Dakota Information Network's (ODIN) library systems and services to improve functionality that supports the evolving needs of students.
4. Continually improve standards, policies, procedures, and services that facilitate seamless, integrated learning.
5. Identify customer characteristics and respond to their expectations and needs.
6. Develop and implement a system-wide customer relationship management system in support of customer needs.
7. Establish a mechanism that leverages the resources of the NDUS to facilitate education decision making by customers regarding instruction, research, information access, and service offerings.
8. Continue to gather feedback from the NDUS user community on services provided by NDUS SITS.





Proposed Initiatives

Provide on-line tutorial/writing services in support of on-line and in-class courses to help improve student performance, persistence and retention. (SITS)

Expand on-line capabilities to deliver courses and programs to rural communities and adult place-bound learners. Working with the Vice Chancellor for Academic and Student Affairs candidate programs will be identified and support provided for delivery of collaborative programs offered by two or more institutions. This will lower cost of development and support of the candidate programs. (SITS)

Support development of collaborative general education on-line courses. These courses developed once by faculty representing multiple institutions could be taught by any institution and accepted by any institution, lowering the cost of development and support of quality courses. (SITS)

Work with libraries to acquire a shared purchase pricing advantage for federated search software for ODIN libraries. ODIN is also investigating open source federated search software. (Federated searching will make possible searching library catalogs and licensed databases in a single search.) (SITS)

Provide for mobile device access by student and faculty to NDUS services. (SITS)

Upgrade web page to provide prospective and current students with up-to-date and useful information. (DSU)

Upgrade the Blackboard system to version 9.1 and content system. Integrate Blackboard with PeopleSoft using Snapshot for course creation and user population. (UND)

Identify a lecture capture solution for the campus that can be integrated with Blackboard and general purpose classrooms, and utilized by all faculty, staff and students. (UND)

Assemble workstations with software and hardware that will allow students to collaborate wirelessly with their laptops for projects, using a large display, accessible in common areas on the campus. (UND)

Accomplishments

Bismarck State College, North Dakota State College of Science and several other institutions have expanded their wireless networks to provide wireless access to students, faculty, and staff across their campus. The longer-term intent is to have the ability of logging into the wireless network at any institution using the same login credentials no matter which institution the individual is at.

The North Dakota University System two-way video sites were transitioned to High Definition (HD) video including more than 30 new rooms and upgraded rooms at all eleven institutions. HD two-way video now allows courses requiring detail, such as science and nursing courses, to be delivered more effectively. Labs that required students at a distance to travel can be shown in sufficient detail to eliminate that travel for students. The high definition units improve the student and instructor experience and add more viability and flexibility for students in rural areas to take courses at a distance and receive their degree without the loss of time from family.

The WIMBA collaboration software has seen increased use for on-line courses, classroom instruction, meetings, and training at no increase in cost to the institutions or students. This software is now in use across all eleven institutions allowing for economies of scale in training and operational costs

Moodle learning management software was established as the NDUS SITS supported open source learning management system, and implementation was completed at four institutions. Previously each of those four institutions had their own servers, support staff and operational expenses. By moving to the Moodle server overall cost were cut by more than half, the system is available 24x7 as are help desk services. The system is in use to some level at four other institutions and is being used for internal staff training within SITS.

ODIN library system was upgraded for NDUS institutions as well as the state library

and other state K-12 and public libraries. A number of features were added to improve the patrons experience using both the in-library and electronic services delivered at a distance.

Established an ODIN Library link in the NDUS Moodle Learning Management System to more closely integrate library-learning resources with teaching tools. This is a great time saver for students.



Implemented Hobsons Connect CRM software and ApplyYourself on-line application used for Admissions and Recruitment at all undergraduate and graduate schools within the NDUS. Common Undergraduate and Graduate on-line admissions forms were implemented. This is the first time a comprehensive common on-line application has been available for all students.

The UND Chester Fritz Library has created a number of **digital collections** that include image, text, audio and video resources. Many of the collections have involved collaborative work with faculty in different academic departments at UND. These collections are housed on hardware and managed by software located at UND.

Valley City State University implemented CourseEval by Academic Management Systems, Inc., including BlackBoard's Building Block. This has been successfully used in pilot classes during Spring and Summer 2010, and a full rollout is planned for all classes during fall, 2010.

Goal Four

To improve and enhance North Dakota University System collaborative efforts.

Purpose

Working together with the state, K-12, and other constituents we are able to bring and support new and existing technologies to the state of North Dakota. Communicating with stakeholders is an important factor, and we must work together in making necessary information available to every administrator, faculty, staff, and student across the North Dakota University System institutions.

Strategy Objectives

1. Monitor NDUS help services so that they are optimized within the NDUS community.
2. Implement mechanisms to improve communications with all stakeholders of the NDUS System Information Technology Services (SITS).
3. Collaborate with NDUS institutions, K-12, state and local governments, and libraries to identify appropriate learning and research support systems and converged services.
4. Develop a common architecture that encompasses available educational resources and systems and breaks down barriers between institutions, libraries, and other sources of learning.
5. Work with the Online Dakota Information Network (ODIN) libraries to expand virtual and digital holdings.
6. Promote Internet2 and cyberinfrastructure. (NOTE: The term cyberinfrastructure includes computing cycles and broadband networking, massive storage and managed information, observation and measurement tools, and leadership on shared standards, middleware, and common applications for scientific computation. It facilitates new applications, collaboration, and interoperability across institutions and disciplines).
7. Foster efforts that lead to the integration and streamlining of video, audio, and data collaborations in cross-platform environments.
8. Provide information to enhance accountability to stakeholders.
9. Collaborate with business and industry to identify the need for IT workers, promote career opportunities, and provide needed education and training.



Proposed Initiatives

Move to a consistent document imaging system for all institutions that can be integrated with ConnectND and other systems with adequate security and personal information safeguards. (SITS)

Enhance the NDUS data analysis capability while transitioning the non-NDUS related activities associated with FINDET to a new entity under the SLDS Committee. (SITS)

Identify and prepare for implementing a consistent system for use by TrainND that will be linked to ConnectND for improved data capture, reporting and analysis of workforce training activity. (SITS)

Integrate Moodle LMS with ConnectND to provide near real-time data flow between the two systems. (SITS)

Upgrade video scheduling software so that the class scheduling process can be streamlined. Also, integrate video scheduling software with Outlook/BPOS, in order to streamline the process for scheduling meetings. (SITS)

Consolidate the several SITS help and customer services so there is a single point of contact for a system-wide service desk and knowledge base accessible by all NDUS faculty, staff, and students. (SITS)

Track progress of Internet2 collaborative efforts in research and learning, led by NDSU and UND, in support of the Internet2 Sponsored Education Group Participants (SEGP) utilizing R&E network resources. Examples include national/international collaborative learning projects, Virtual Classroom initiatives, and other theme-based projects as available. (SITS)

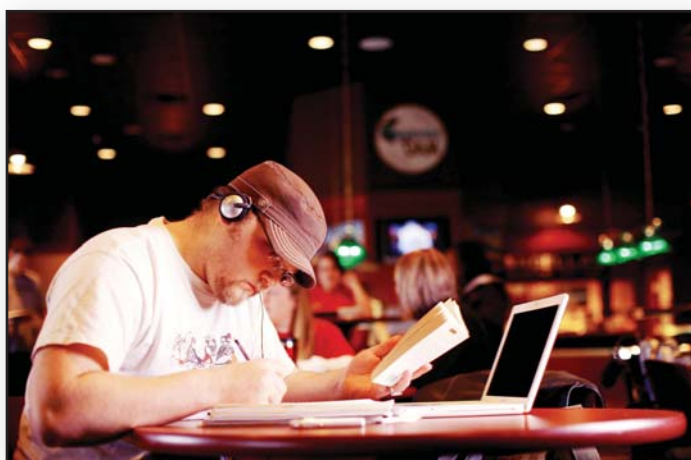
Highlight resources available via newly completed Northern Tier Network. (SITS)

Collaboration between NDSCS and NDSU has taken place over the years; however, additional areas of collaboration are being investigated for areas within IT. This will enable IT staffs at both institutions to gain additional expertise and increase their network of contacts. (NDSCS and NDSU)



Accomplishments

The **Remedy Help Desk system** was upgraded and new on-line software to answer FAQ questions placed into use to provide faster response to questions by faculty, staff and students. Similarly such capability is being added for administrative users of ConnectND Finance and HRMS systems through the use of the User Productivity Kit (UPK).



Service Level Agreements were established with NDSU Information Technology Services (ITS) and UND Information Technology Systems and Services (ITSS) to provide specific services for the NDUS SITS. These SLAs define the services required and cost of delivering those services. This has allowed both the service provided to be more efficiently planned and resources allocated, and for the System to set the proper expectation for services delivered by the provider and the users at the institutions.

ODIN along with the State Library and Minitex regional library network were able to **expand the number of licensed databases** from 17 to 49. ODIN is seeking to expand the NDUS databases further in the future.

Dakota College at Bottineau (DCB) **expanded their Nursing program** from LPN to RN and now includes two **paramedic courses in Rugby and Minot**.

Bismarck State College, in **collaboration** with Lake Region State College, Dakota College at Bottineau, Williston State College and Fort Berthold Community College, offers the Dakota

Nursing Program at the Certificate Practical Nurse and Associate Degree Nursing levels. Effective fall semester 2010, all incoming freshmen will be required to have an iPod touch. These devices will be used for taking tests administered by the program and for researching information on the Internet.

Portable classroom equipment including laptops and projectors were purchased by Dakota College at Bottineau to expand their education **outreach to local area businesses** in cooperation with the Bottineau Technology Center.

Lake Region State College and Dakota College at Bottineau installed new Interactive Video Network classrooms to support delivery of **Information Technology classes shared** with Lake Region State College, Dakota College at Bottineau, Williston State College and Turtle Mountain Community College. Sharing classes among institutions benefits students since they have wider access to qualified instructors; ability to collaborate with other students around the state; and reduces cost of delivery for all campuses involved.

Minot State University will participate in the **Apple Recycling for Education initiative** for the second year. In Summer 2009, 22 pallets of e-waste were recycled at no cost to the university. IT staff are palletizing e-waste for a pickup again this year.

North Dakota State College of Science has partnered with North Dakota State University to have telephone services provided to them by NDSU. NDSU hosts this service and has given NDSCS an opportunity to move forward with newer technology and newer features over a Voice over Internet Protocol (VoIP) system. As a result, both campuses are now able to leverage their existing technology investments, expertise, and cost savings. Several other institutions have implemented telephone system solutions that include VoIP and Unified Communications (UC). These systems may be enhanced with future capabilities provided through the Microsoft BPOS application.

State IT Projects

Completed Projects

July 1, 2008 - June 30, 2010

Project / Agency	Description	Schedule Variance	Project Budget	Actual Cost	(Over)/ Under Budget	Budget Variance
Computer Aided Dispatch Adjutant General	North Dakota's Department of Emergency Services (NDES), Division of State Radio (State Radio), acquired and implemented Computer Aided Dispatch (CAD). CAD as a method of dispatching emergency services assisted by computer.	0%	\$1,794,276	\$1,759,521	\$34,755.00	4.6% Under
Cash Management Bank of North Dakota	The Cash Management system provides customers with timely, same day financial information such as current available balances, electronic transfers, liquidity, and posted transactions. This allows their customers to operate within regulatory constraints and make the best decisions for their institutions and depositors.	27.6% Behind	\$234,514	\$247,764	\$(13,250.00)	3% Over
Electronic Medical Records System Department of Corrections and Rehabilitation	This system replaced the paper medical records kept on each inmate in the DOCR allowing the scheduling, treatment, lab work and prescriptions to be managed in an integrated fashion.	25% Behind	\$858,537	\$858,537	\$-	0%
Children & Family Services Front End Department of Human Services	This project built a single case management web application for the Child Abuse and Neglect, In-Home Treatment/Wraparound, and Foster Care programs.	25.6% Behind	\$938,946	\$1,092,798	\$(153,852.00)	5.4% Over
Master Client Index Department of Human Services	The Master Client Index Project provided the base architecture needed to create a single client view across DHS services and programs. Initially, this system will provide a means to share eligibility information to the new MMIS, but it will provide a basis to extend the architecture to all DHS systems.	16% Behind	\$815,393	\$836,345	\$(20,952.00)	2.5% Over
Office Vision Mail Department of Human Services	This project replaced the current Office Vision Mail (OVM) system. OVM is a word process/ document generation tool running on the mainframe used to create, update, retrieve and print documents in Foster Care, Child Support and TECS applications.	0%	\$426,018	\$399,339	\$26,679.00	6% Under
Electronic Benefits Transfer Department of Human Services	The Food Stamp Program re-procured a vendor to provide EBT of food stamp benefits.	2.4% Behind	\$133,710	\$130,278	\$3,432.00	2.5% Under
Continuous Eligibility Department of Human Services	This project enhanced the Vision eligibility system and appropriate dependent systems to accommodate Continuous Eligibility coverage for Medicaid recipients providing up to 12 months of continuous coverage for children through age 18 enrolled in Medicaid as authorized by the 2007 legislature.	0%	\$378,472	\$294,449	\$84,023.00	22% Under
Foundation Aid Department of Public Instruction	This project replaced and created financial data collections and reports needed to compute Foundation Aid calculations, modernizing the current payment system and allowing better integration with the existing online reporting system used by school districts today.	12.5% Behind	\$326,167	\$359,159	\$(32,992.00)	10% Over

Project / Agency	Description	Schedule Variance	Project Budget	Actual Cost	(Over)/ Under Budget	Budget Variance
Special Education Individualized Education Program Department of Public Instruction	The DPI Office of Special Education, in collaboration with local school districts and special education unit personnel, implemented a statewide web-based special education case management system.	9% Behind	\$913,264	\$889,313	\$23,951.00	2% Under
Facial Recognition Department of Transportation	In order to curtail identity theft and driver license fraud, NDDOT integrated facial recognition into their Drivers License operating environment.	0%	\$481,121	\$485,775	\$(4,654.00)	.9% Over
Mainframe Migration Information Technology Department	This project migrated existing applications from the State's Mainframe environment to another computing environment. This project was a preparatory stage to eliminating the legacy mainframe. However, completion of this project did not result in the ability to shut down the mainframe due to the continued existence of major applications that are in the process of being re-written.	6% Behind	\$5,762,037	\$5,762,037	\$-	0%
CJIS Portal 2.0 Information Technology Department	The CJIS Portal provides criminal justice personnel access to valuable information from cross-jurisdictional record sources. This project developed a standard interface for the indexing of all records. By developing this standard interface, there will be a reduction in the time and cost associated with adding access to new records.	2% Behind	\$279,832	\$234,149	\$45,683.00	28% Under
Appeals/ Unemployment Insurance Employer Account System (EASY) Enhancements Job Service North Dakota	This project provided new functionality in two main areas: 1) New processes to allow the Appeals documents from FileNet to be displayed on-line through the web applications. 2) Multiple enhancements to the UI EASY allowing for additional self-service capabilities, increased user friendly features that are easy to learn, and increase internal efficiencies through the automation of manual processes.	31.5% Behind	\$258,790	\$243,144	\$15,646.00	6% Under
Unemployment Insurance Modernization Directional Study Job Service North Dakota	This project procured a vendor to produce a study of the modernization options and make a recommendation regarding future direction.	0%	\$815,280	\$773,503	\$41,777.00	5.1% Under
Case Management System Job Service North Dakota	This project replaced the existing customized Oracle Forms case management NDWorks application with a commercial off the shelf (COTS) application from Geographic Solutions Inc. (GSI) called the Case Management System (CMS).	74% Behind	\$854,919	\$820,731	\$34,188.00	3.9% Under
Enterprise Learning Module Office Of Management and Budget	This project implemented the PeopleSoft Enterprise Learning Management (ELM) module. The ELM system provides employees with an online, self service, and administrative employee training module for State agencies which elect to participate.	0%	\$425,580	\$390,579	\$35,001.00	8.1% Under
Absence Management Office Of Management and Budget	This project provides State employees with an online, self service, absence request and management application. The proposed solution is to implement Oracle's PeopleSoft HCM Absence Management module to State agencies which elect to participate.	28.6% Behind	\$551,000	\$511,000	\$40,000	7.3% Under
Business Intelligence PeopleSoft Project Office Of Management and Budget	This project deployed a reporting solution for State agencies regarding Financial and Human Capital Management data currently stored in PeopleSoft applications.	0%	\$929,531	\$853,117	\$76,414.00	8.2% Under

Project / Agency	Description	Schedule Variance	Project Budget	Actual Cost	(Over)/ Under Budget	Budget Variance
Tax Rewrite State Treasurer	This project re-built the existing State Treasurer outstanding checks and tax distribution (Oil & Gas Tax Distribution, Cigarette Tax Distribution, Highway Tax Distribution, State Aid Distribution, Township Road Tax Distribution and Estate Tax Distribution) applications.	49.8% Behind	\$515,560	\$480,591	\$34,969.00	6.8% Under
Totals		13% Behind	\$17,692,947	\$17,400,846	\$292,101	2% Under

Active Projects

July 1, 2008 - June 30, 2010

Project /Agency	Description	Phase
5010 Department of Human Services	This project is for the DHS, Medical Services Division's Medicaid Management Information System (MMIS) and the Point of Sale System to be enhanced to meet CMS's Level I compliancy and be able to successfully create and submit the HIPAA 835 transaction.	Planning
Interactive Voice Response System Rewrite Job Service North Dakota	This project is to rewrite the JSND Interactive Voice Response (IVR) application.	Planning
JobsND.com Rewrite Job Service North Dakota	This project is a rewrite of Job Service North Dakota's JobsND.com website, including much of the JSND intranet site.	Planning
Statewide Seamless Base Map Adjutant General	This project is to obtain a statewide, seamless, spatially accurate, and complete base map dataset of the State of North Dakota that is to be accessible by all state agencies, local and tribal governments, the commercial sector, and the general public.	Execution
Crime Lab Information Management System Attorney General	This project will provide the Crime Lab functionality to manage information tracking evidence, related to cases, training records, statistical information, tracking of techniques in the analysis, identifications, and comparisons of physical evidence involved in the investigation and prosecution of criminal offenses statewide.	Execution
Student Loan Lender System Bank of North Dakota	This project is implementing vendor 5280 Solutions (5280) to replace the existing student loan servicing system.	Execution
Inmate Trust and Commissary Software Department of Corrections and Rehabilitation	This project is implementing an inmate banking trust and commissary accounting software, also known as Finance Module from Syscon Justice Systems that will provide an automated inmate trust, banking, and commissary system.	Execution
Electronic Disease Surveillance and Management System (MAVEN) Department of Health	This project is implementing a Commercial Off the Shelf electronic disease surveillance and outbreak management system.	Execution
Medicaid Systems Project Department of Human Services	This project is to replace the current Medicaid MMIS, POS & DSS/DW systems.	Execution
Minimum Data Set 3.0 Department of Human Services	This project will update the existing Minimum Data Set (MDS) implemented by the Health Care Financing Administration (HCFA) in 1996, and used to gather information on Nursing Home Facility residents, allowing DHS to submit the data required for MDS 3.0.	Execution
Food and Nutrition Program Direct Certification Department of Public Instruction	This project will provide Local Education Agencies (LEAs) with electronic notification of Food Stamps and Temporary Assistance for Needy Families participation data for enrolled students. LEAs will have the capability of conducting searches for eligible students and electronic notification of students entering eligibility; which, in turn, will increase the number of students directly certified and will ensure that meal benefits are provided in a timely manner.	Execution
Mainframe Rewrite Department of Public Instruction	This project rewrites the Education Standards and Practices Board (ESPB) and DPI systems from the mainframe to a modern architecture capable of meeting the data reporting demands that are required by federal and state laws today and in the future.	Execution
NDFoods Department of Public Instruction	The project replaces the existing Child Nutrition and Food Distribution programs (CNFD) within the Department of Public Instruction (DPI) and all CFND program sponsors. The NDFoods project will streamline business processes, provide accurate and timely information, improve communications, speed claims for reimbursement, allow for data collection and analysis, and reduce paperwork.	Execution
North Dakota State Longitudinal Education Data System - Phase 1 Department of Public Instruction	The project is the planning phase to implement a data warehouse and analysis tools to evaluate and deliver data to measure the effectiveness of policies, curriculums, and programs intended to improve student outcomes. The data will be comprised of pre-kindergarten through secondary education (P-12) data to meet the needs of federal and state reporting, the No Child Left Behind Act (NCLB), policymakers, school districts, educators, and the public.	Execution

Project /Agency	Description	Phase
Position Information Questionnaire (PIQ)/Employee Information Rewrite Department of Transportation	This project is a re-write of the existing DOT PIQ system, removing it from Lotus Notes and replacing it with a web-based application.	Execution
Broadband Mapping Information Technology Department	This project allows the state to fulfill the federal requirement of developing a map of broadband coverage across the state. This data will be submitted to the US Dept of Commerce and a public map will be available from the ND GIS infrastructure.	Execution
Statewide Automated Victim Information Notification System Information Technology Department	North Dakota Century Code ch.12.1-34 outlines the responsibilities of the entities responsible for providing victim information and notification. This project provides an electronic system that allows these events to be transmitted and shared among state and local agencies, courts, and victims in a consistent, accurate and timely manner.	Execution
Arizona, Wyoming, Idaho, North Dakota (AWIN) Consortium Job Service North Dakota	Confirm the feasibility of and create a high-level design (including identification of options for building the system, risks and risk mitigation strategies, proposed architecture, estimated costs, estimated timelines, estimated resources, roles and responsibilities, and build and implementation strategies) and plan for building integrated Unemployment Insurance (UI) Benefits and Tax systems which can be implemented or hosted for other states by any of the AWIN (Arizona, Wyoming, Idaho, North Dakota) consortium states.	Execution
Unemployment Insurance Internet Claims Entry (ICE) Reemployment Enhancements Job Service North Dakota	This project expands and enhances the functionality provided by the JSND claimant internet application (UIICE) to incorporate the delivery of individualized intensive reemployment services, provide automated notification of suitable job openings, expand self-service capabilities, and provide automated task reminders and event notifications, in order to better meet the needs of the unemployed served by JSND.	Execution
Unified Court Information System Judicial Branch	This project will implement the Odyssey Case Management environment from Tyler Technologies to replace all case management functionality in the current UCIS system.	Execution
Legislative Enterprise System (LEGEND) North Dakota Legislative Assembly	This project will acquire and implement a solution to replace the legislature's core business processes (bill drafting, bill amendments, resolutions, session management, daily calendars and journals, bill status reports, session laws, and other legislative publications).	Execution
Legacy Application System Replacement - Phase 4 Public Employees Retirement System	This project will implement a new integrated benefits administration solution that will fill the business needs of the departments and staff of NDPERS, as well as the needs of the customers of NDPERS.	Execution
Data Processing System Secretary Of State	This project will acquire and implement software systems to replace the mainframe Central Indexing System and the AS400, which are used to administer Secretary of State's business services, licensing, and administration processes.	Execution
State Seed Application Software 2009 Upgrade Seed Department	This project rewrites the existing business application to Microsoft.net tools and protocols interfacing with Microsoft SQL Server databases meeting state technology standards.	Execution
Taxpayer Access Program / Oil and Gas Tax Commissioner	This project includes the migration of the Oil & Gas tax into the GenTax integrated system along with the implementation of the Taxpayer Access Program (TAP) module.	Execution
Information Technology Transformation Program (AIM) Workforce Safety and Insurance	This project replaces the existing workers' compensation system used for processing and administering approximately 20,000 policies and \$85 million in annual claims.	Execution

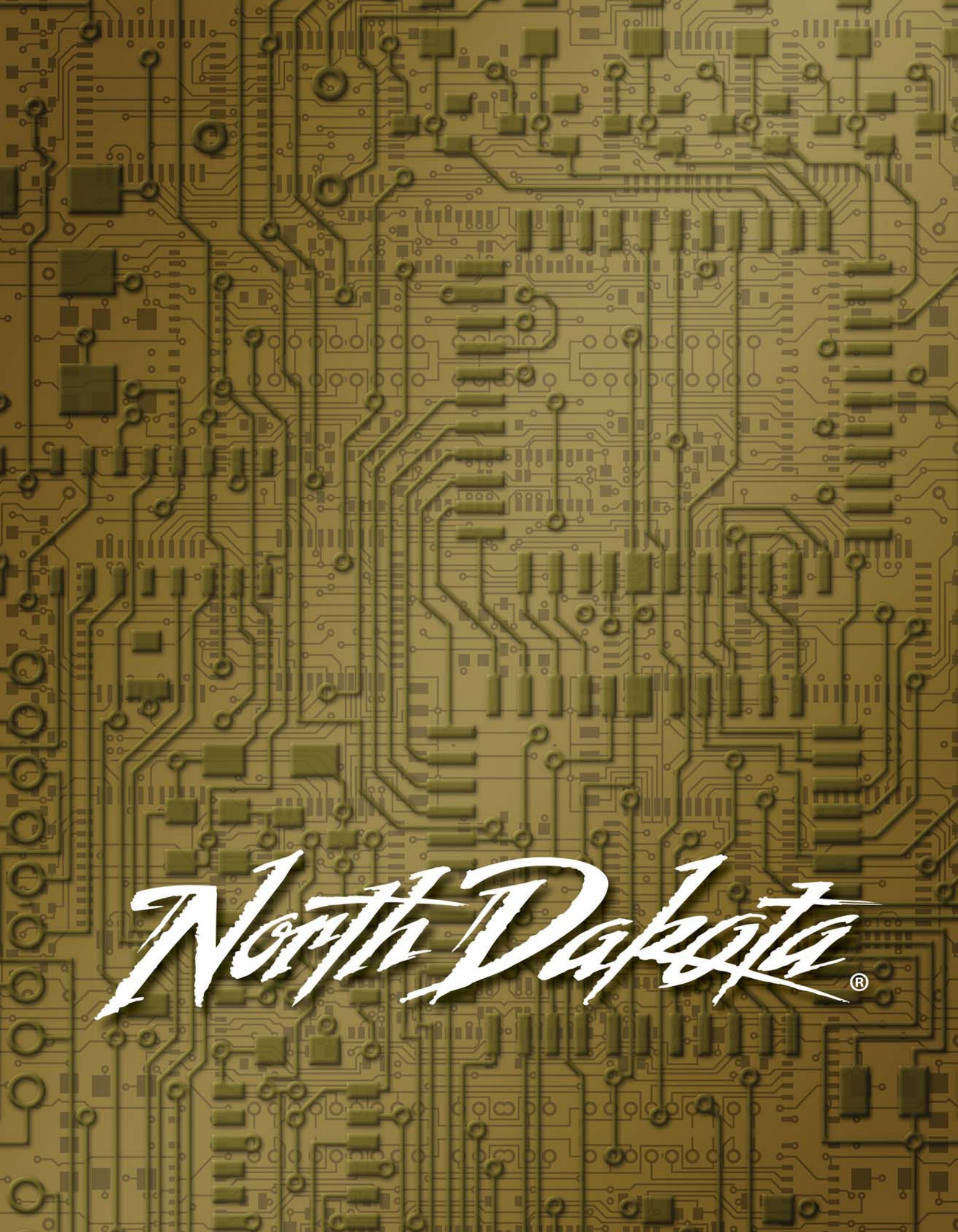
Terminated Projects

July 1, 2008 - June 30, 2010

Project / Agency	Description	Actual Cost
Application Replacement Legislative Assembly	This project objective was to replace existing software systems with a modern, user-friendly editing product, replace the mainframe-based print rendering engine with a cost effective rendering engine, and replace the legacy custom code with new solutions.	\$2,428,848

Websites and Additional Information

North Dakota Portal	www.nd.gov
Information Technology Department (ITD)	www.nd.gov/itd
North Dakota University System (NDUS)	www.ndus.edu
North Dakota University System Online (NDUSO)	www.nduso.org
Statewide Longitudinal Data System	www.slds.nd.gov
Advanced Learning Technologies	alt.ndus.edu
Online Dakota Information Network (ODIN)	www.odin.nodak.edu
Education Technology Council (ETC)	www.ndetc.k12.nd.us
EduTech.	www.edutech.nodak.edu
North Dakota Center for Distance Learning	https://www.ndcde.org
STAGEnet	www.stagenet.nd.gov
North Dakota Geographic Information Hub (GIS)	www.nd.gov/gis
North Dakota Criminal Justice Information Sharing Portal (CJIS)	www.nd.gov/cjis
Enterprise Architecture	www.nd.gov/itd/services/enterprise-architecture
2009-2011 Statewide Information Technology Plan . .	www.nd.gov/itd/service-info/statewide-it-plans



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