2010-2011 Annual Report

Evolving Innovating Technology

Our Vision

We see ITD as the trusted business partner and preferred IT provider for strategic services within government and education.

Jack Dalrymple, Governor of North Dakota

Lisa Feldner, Chief Information Officer

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The 2010-2011 Annual Report

Evolving|Innovating

Technology

was produced by the North Dakota Information Technology Department (ITD).

It is a response to requirements outlined in Chapter 54-59 Section 19 of the North Dakota Century Code. The report provides an update on information technology and major information technology investments.

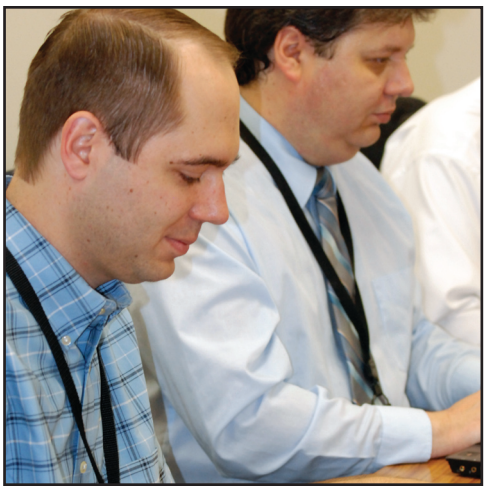
ITD's mission is to provide leadership and knowledge to assist our customers in achieving their mission through the innovative use of information technology. Through our annual customer survey, our customers tell us how well we deliver services to meet their expectations.

90.7%
agree ITD is aligned with its mission

91.1%
agree that ITD's services meet their business needs

94.4%
view ITD as a trusted business partner

86.8%
say ITD is their preferred IT provider



85.5%
believe ITD provides technology direction

Executive Summary

As technology evolves, we continue to explore the interaction of innovative technology to better serve our customers' technological needs.

Our statewide alliances bring disparate entities together through the use of information technologies. The Health Information Technology Office is coordinating an effort to exchange electronic medical records among healthcare facilities across the state. In addition, it coordinates a low-interest loan program for facilities, such as long-term care, small clinics, rural hospitals, and others to implement electronic medical records. EduTech provides professional development and technology support for school districts across the state.

"This report highlights our progress in providing streamlined business processes and innovative partnerships that improve North Dakota's government service."

The Criminal Justice Information Sharing program allows law enforcement entities from cities, counties, and statewide to access information electronically to improve public safety. As technologies are evolving, ITD is weaving them into the day-to-day operations to increase efficiencies and provide better customer service. Technologies such as SharePoint and Wikis allow employees to better organize and archive information while allowing customers access to project documents.

ITD has a new look. This year the department rolled out a new website using Drupal software which distributes content management and provides much needed efficiencies to the process. In addition, ITD is embracing social media with its new page on Facebook and its ongoing use of Twitter to broadcast maintenance events.

The Computer Systems Division has been busy virtualizing over 1,000 servers it maintains in the data center. Now, instead of 1,000 physical server boxes, we are able to virtualize several servers onto one box to save space, power, and cooling.

Our Telecommunications Division has spent the year implementing a new Voice over Internet Protocol (VoIP) technology across the state. This technology replaces the old analog phone technologies. Not only is VoIP efficient, but also allows added features such as voicemail to email integration and video-conferencing capabilities. In addition, the division has a broadband mapping initiative sponsored by a federal grant. This interactive map allows consumers to locate the broadband speeds and providers available at their address or any location across the state.

Please take a look at the many innovative projects within the report that highlight the work ITD does to help agencies become more efficient and better serve the citizens of North Dakota through the use of technology.

Lisa Feldner, Chief Information Officer

Statewide Alliances

Criminal Justice Information Sharing (CJIS)

The CJIS program, created to improve public safety, includes information systems that are used to capture and share complete, accurate, and timely information so law enforcement entities can make better informed decisions across jurisdictional and organizational boundaries statewide. Following are ways the program continues to evolve:

Pam Schafer, Director of CJIS

- The CJIS Portal consists of over 1,650 authorized users with over a million transactions being processed.
- Forty-seven agencies, totaling 300 users, are utilizing the Law Enforcement Records Management System (NetRMS), which was upgraded in December of 2010.
- The North Dakota Statewide Automated Victim Information and Notification System (ND SAVIN) continues to expand notification capabilities. This system informs victims about an offender's movement throughout the criminal justice system.
- Additional information is available through the Portal such as hunting and fishing licenses for the Game and Fish Department and Child Support data for the Department of Corrections.

Health Information Technology

The state health information exchange program promotes innovative approaches to the secure exchange of health information within and across state lines. This will allow providers to have accurate and complete information about a patient's health, allow for better coordination of care and provide information to help doctors diagnose health problems sooner, reduce medical errors and provide safer care at lower costs. The program is overseen by the Health Information Technology Advisory Committee (HITAC) which consists of representatives from the Governor's Office, ITD, Department of Health, Legislature and Department of Human Services, as well as stakeholders appointed by the Governor, who represent providers, consumers, and trade associations. The HITAC's vision is "quality healthcare for all North Dakotans anywhere, anytime."

A statewide health information exchange (HIE) strategic and operational plan was developed by the Health Information Technology Advisory Committee and approved by the Office of the National Coordinator. Once the plan was completed, procurement of a health information exchange system began with the release of a request for proposals. The team, comprised of various

Sheldon Wolf, Director of HIT

healthcare stakeholders, completed a thorough review of vendor proposals and viewed demonstrations by the top three vendors. Contract negotiations with the selected vendor are currently underway and a comprehensive project plan is being developed. The first phase of the HIE project will include the deployment of the Direct functionality. Direct is a simple, secure method for participants to send encrypted health information directly to known, trusted recipients. Some examples of information that can be pushed include documents, images, an HL7 message string, or a Continuity of Care Document. Once the HIE is fully implemented in 2011-2012, participants will be able to use a robust bi-directional health information exchange to fully support meaningful use and health information technology requirements.

Additionally, in 2011, the North Dakota Legislature appropriated an additional $5 million dollars for a low-cost, revolving loan fund to help providers acquire certified electronic health record systems. These funds will allow providers to acquire and adopt certified electronic health record systems, utilize them in a meaningful way and facilitate the exchange of information between stakeholders through the use of Direct and the bi-directional HIE.

"Our goal is to improve healthcare quality and efficiency by providing health information to those who need it, where and when they need it."

EduTech

EduTech provides innovative information technology services and education technology professional development to the K-12 community in North Dakota. Services are designed to give educators access, training and support to use technologies in their classrooms to improve teaching and learning statewide.

PowerSchool

By January 2013, all ND K-12 schools will be using PowerSchool, the state supported student information system. PowerSchool is a web-based classroom management system that provides students and parents the capability to access grades along with other features needed to provide an efficient school management.

PowerSchool implementation, training and support services for schools are provided by EduTech staff.

Technical and Support Services

Centralized IT services allow educators and administrators to use technology resources to improve teaching, learning and business productivity. EduTech provides email, internet filtering, web hosting and desktop protection for schools. EduSocial, a social networking platform, allows for safe social exploration and is only available within ND K-12 schools. EduTech's E-rate consulting services assist school administrators in completing their applications for federal telecommunications discounts.

Professional Development for Educators

Professional development is delivered online, via video or in face-to-face sessions. Specific content areas are available for administrators and educators; also included are:

- Workshops in the areas of computer fundamentals
- Student product creation
- Curriculum integration
- Videoconferencing

Educational grants are sought to deliver additional services to schools and communities in the area of technology.

Jody French, Director of EduTech

Enterprise Services

Customer Services

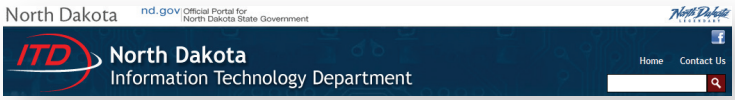
ITD's Service Desk is the "Single Point of Contact" for providing customers with advice, guidance, and rapid restoration of services. The past year included:

- 63,795 incidents
- 36,871 service requests
- 99.9% overall satisfaction rate

North Dakota Century Code requires ITD to document information related to service support and delivery, which includes formal complaints regarding dependability, responsiveness and cost. From July 2010 through June 2011, no formal complaints were filed. However, ITD is asking for, listening to and acting on customer feedback each and every day.

Innovating Customer Communications

ITD is committed to improving customer communications. During this past year:



- ITD's website (www.nd.gov/itd) received a fresh, new design. The site is now organized by services and alliances, and the content is presented from a customer's perspective rather than by ITD's organizational structure. It is built upon the Drupal Web Content Management system which empowers subject-matter experts to quickly and easily provide relevant information to customers.

- ITD launched a new Facebook page (http://www.facebook.com/ndgovitd) to give customers and potential employees a glimpse at our day-to-day activities, including job openings, new hires, promotions, retirements, events and special achievements. The site also provides ITD with valuable first-hand experience in the world of social media.

Enterprise Architecture (EA)

Through the EA process, state agencies collaborate to set the future direction of IT in the State of North Dakota. During the past year, 142 people from 27 agencies were involved with:

- Expanding the scope of EA to include Business Architecture
- Establishing a Project Management Domain Team
- Revising the standard for project management of large IT projects
- Updating the standard for encryption
- Transitioning responsibilities from the Network Domain Team to STAGEnet
- Reviewing newly developed Service Level Agreements
- Processing four requests for exemptions to IT standards
- Addressing three requests for technical analysis related to encryption of data at rest, security of multi-function print devices and multi-factor authentication

IT Planning

IT Planning is a process to establish clear objectives for IT organizations that link directly back to the enterprise's strategic business goals. In 2010, as in all even-numbered years, a structured IT planning process was used to publish 54 state agency IT plans for the upcoming biennium. Those plans provided input to the SITAC large-project ranking process and were used with content from Higher Education and K-12 schools to produce the 2011-13 Statewide IT Plan entitled "Driving Efficiency and Effectiveness."

Over the past year, ITD also began working with agencies to make IT planning more of an ongoing, iterative process.

IT Procurement

ITD reviews and approves the acquisition of technology by state agencies. By providing guidance on procurement best practices, ITD helps to ensure that the state receives the best value for its technology dollars. During the past year:

- 85 contracts and requests for proposals were submitted and reviewed within the five-day response time objective.
- A re-procurement of the state's IT Professional Services Contract Pool was facilitated resulting in 51 contract awards for 36 different IT professional service categories.
- Savings of 40% below normal state contract pricing were achieved through ITD's leadership in a multi-state consortium that develops standard PC configurations and solicits PC manufacturers for special premium pricing within the WSCA-NASPO PC contract.

Geographic Information Systems (GIS)

GIS provides the ability to analyze and display geographically referenced data using specialized software. Data examples include aerial photography, administrative boundaries such as city boundaries, and transportation data such as railroads and snowmobile trails. ITD and the ND GIS Technical Committee operate the GIS Hub, an infrastructure comprised of geospatial data storage, data services and application interfaces. The GIS Hub supports state agencies in the development of their GIS and the dissemination of common interest data to other levels of government and the public. During the past year, two noteworthy items stand out:

Gary J. Vetter, Director of Enterprise Services

- The majority of the GIS Hub data services were migrated to a newer technology that provides significant performance improvements and makes it easier for application developers and users to find and access services via a web interface.
- The GIS Hub was put to the test beginning in late May 2011 when the map services alone experienced over a million image requests, most of which occurred during the last six days of the month when flood-fighting efforts began in Bismarck-Mandan.

Business Intelligence (BI)

BI refers to the skills, processes, technologies, applications and practices used to support decision-making. This past year:

- The Department of Human Services data warehouse was expanded to encompass additional federal reports
- The Office of Management and Budget data warehouse was expanded for PeopleSoft Financial and Human Resource Management data marts in order to create the ND Public Accountability Portal
- ITD's Criminal Justice Information System and Large Project Oversight programs both added new warehouses and data marts for ad-hoc and scheduled reporting.

ITD's BI efforts have additionally expanded into the Microsoft suite of products, utilizing SQL Server, Integration Services and Reporting Services to deliver cost-effective solutions.

State Longitudinal Data System (SLDS)

ITD is partnering with state and local agencies to create a SLDS. This project will allow state and local entities to leverage approved data from education and workforce training programs for use in reporting, program evaluation and improving participant outcomes of education and workforce training programs. As part of this initiative, ITD is working with the Department of Public Instruction and Job Service North Dakota to create agency data warehouses that will grow to include

pre-K and postsecondary data. Included in the Public Instruction K-12 data warehouse is an education portal to provide a secured means of delivering data to ND schools.

Enterprise Document Management Systems (EDMS)

EDMS is a collection of technologies for imaging, document management, forms processing, report management and workflow. During the past year:

- ITD planned and implemented a FileNet upgrade. This involved 24 state agencies and over 6 terabytes of data.
- Over 500 new users were added to FileNet.
- The State of North Dakota received the IBM Information on Demand Enterprise Content Management Outstanding Advanced Case Management Solution Award.

Basic Content Services (SharePoint)

SharePoint is a group of products developed by Microsoft for collaboration, file sharing and web publishing. During the past year:

- Agency adoption continued to increase with a growing use of SharePoint for project-related collaboration.
- The migration to SharePoint 2010 was tested and scheduled for completion in 2011 Q3.

Master Client Index (MCI)

MCI compares client records from disparate systems and links them together, creating a master demographic representation of each citizen receiving state services. Maintenance performed over the past year helped to identify duplicate data in several systems and eased the cleanup process.

ConnectND

ConnectND is the State's PeopleSoft implementation of Financial, Human Capital Management, Campus Solutions and Portal applications. During the past year:

- The ND Public Reporting website (http://data.share.nd.gov/pr) was launched to enable public queries into State and University System expenditures, salaries and vendor payments. ITD worked with the Office of Management and Budget in utilizing IBM Cognos, Microsoft SQL server and SharePoint to present the data.
- A Talent Management project was originated by OMB for the acquisition and implementation of PeopleSoft ePerformance.
- The Enterprise Learning Management module grew to 3,975 courses and 60,389 enrollments.

Project Management

The Project Management Office (PMO) currently employs 13 project managers including 10 who have the Project Management Professional (PMP) credential. The team strives for consistency in project management by using uniformed templates and processes. Accomplishments to this effect in the past year include:

- Establishing a Large Project Oversight (LPO) waiver process for projects costing from $250,000 to $500,000
- Revising the LPO Quarterly Status Report
- Establishing new project plan templates for small, medium and large-scale projects

In order to ensure consistency in project management across state entities, the PMO also performs project management oversight on projects with budgets in excess of $250,000. Through reporting processes established to monitor these projects, the following project statistics are available:

- During the past fiscal year, state agencies completed 14 IT projects with individual budgets in excess of $250,000 and a total budget of $18,668,623.
- Thirteen of the 14 projects were completed on or under budget with only one of the projects exceeding the 20 percent negative variance threshold.
- Aggregated variance to total budget was +$1,543,147 or 8 percent under budget.
- Five of the 14 projects were competed on or ahead of schedule and seven additional projects completed within the 20 percent negative variance threshold.
- Two projects exceeded the 20% negative variance threshold.
- Aggregated variance to schedule was -21.4 months or 11 percent over schedule.
- ITD Project Managers managed, or co-managed, 10 of the 14 major information technology projects with a total budget of $8,000,123.

Software Development

The Software Development Division strives to provide innovative software solutions that enable our customers to accomplish their business goals and objectives. Whether it is researching new development platforms and technologies or implementing process improvements, we place an emphasis on providing strong IT leadership to our customers and the citizens of North Dakota.

SharePoint and Wiki Expansion

Software Development is in the process of transitioning several of our internal documentation processes into the SharePoint and Wiki technologies. We have established a Wiki site that documents our software development standards, processes and best practices. This Wiki site allows us to disseminate the authoring and editing of standards and best practices to the entire Software Development staff encouraging collaboration and teamwork throughout the process. We are also implementing a SharePoint template to document project management correspondence and activities such as: minutes, issues, change requests and action items. We chose SharePoint to take advantage of the product's ease of use and strengths in collaboration.

Application Development Lifecycle Improvements

The Software Development Division has been aggressively improving our Application Development Lifecycle over the past year. These improvements help us strengthen the way we collaborate with stakeholders to improve outcomes and ensure we develop quality applications at a reasonable cost. Some of the major improvements include expanding our model driven development, incorporating business analysis and quality assurance processes into the application development lifecycle, and piloting the use of iterative development.

Incorporating business analysis processes such as a requirements traceability matrix and formal requirements documentation help agencies confirm they are receiving what they need from their software applications. Incorporating formal quality assurance processes such as test plans, test cases and test scenarios will help to verify that software applications are produced with the highest quality.

Performance Testing Modifications

Included in Software Development's quality assurance initiative is the performance testing of any application deployed in ITD's shared infrastructure. Performance testing is the process of putting demand on a system or device and measuring its response. ITD has been working on refining our performance testing processes and defining Key Performance Indicators (KPIs) in order to inform customers of the performance expectations for their applications. The new KPIs for response codes, application response times, database response times (Oracle and SQL Server) and application server performance have all been updated and are now the guidelines for all performance tests.

Leadership Changes in Division

In January 2011, Doran Eberle became the Software Development Director. Doran brings 27 years of IT and state government experience to the position. "I feel fortunate to work with such a talented staff in the Software Development Division," Doran said. "We have many exciting challenges and opportunities and we look forward to providing our customers innovative software solutions."

Doran Eberle, Director of Software Development

Accomplishments

LEGEND

ITD provided assistance to the LEGEND project vendor and successfully launched new applications for the Legislative Council. This implementation included components for LAWS, bill drafting, journal, bill status and post session publication. With this solution, the Legislative Council was able to streamline their work flow to meet legislative needs. ITD and Legislative Council will continue to partner in the 2011-2013 interim on additional software components such as, administrative code, bill tracking, events management, fiscal notes and a new library application.

ND Highway Patrol Daily Activity

ITD and the NDHP joined forces to rewrite NDHP's Daily Activity application. This application manages time entry and tracks hours worked, vehicle mileage and radar calibrations for an employee's work activities throughout the day. This system also includes several administrative functions and the ability to generate a variety of reports.

Department of Transportation Projects

The Department of Transportation and ITD partnered together on the following projects:

- The Online Road Test Scheduler application allows ND applicants who hold a current valid driving permit, the ability to schedule their own individual or commercial license road test appointments.
- Employee Management System (EMS) is used for maintaining employee information such as PIQs and performance evaluations. The various forms have workflow functionality and routing processes between the employee, their supervisor, DOT's internal Human Resources and OMB's Human Resource Division.

DPI Direct Certification Success

ITD partnered with the Department of Public Instruction and Department of Human Services on a project to provide free meals to SNAP and TANF eligible students through an electronic direct certification. The Master Client Index (MCI) repository and associated web services provided the key architecture to the project. This solution has made significant increases in the direct certification statistics. Mathematica Policy Research, an agency that conducts research studies for USDA, is highlighting the best practices of this solution in a report that goes to Congress. States that show significant improvement in Direct Certification are eligible for a monetary incentive, which may be passed on to the school districts.

Outstanding Achievement Award

The ITD Tasmanian Devils team of developers received an Outstanding Achievement award at the ND Family Support Council annual conference. The developers on the team support all of the software applications used by DHS' Child Support Division. Daryl Wanner also received the Family Support Council Outstanding Individual Achievement Award for providing exemplary service to the Child Support Division.

Department of Human Services Projects

The Department of Human Services (DHS) and ITD collaborated on numerous projects over the last year. Many of the applications that ITD supports are critical to the department and the citizens of North Dakota. Highlights include:

- The DHS Online Application System (OASYS), a public-facing web application, allows submittal of an online registration for several public assistance programs. Since implementation, the number of online registrations received has progressively increased and is having a positive public response for convenience and usability.
- The DHS Minimum Data Set 3.0 application is a new web application that receives Nursing Home assessments based on a new standard set by the Center for Medicare and Medicaid Services. The validated assessments are used to create classifications and assist in accurately processing Medicaid claims.
- The DHS National Level Repository system, a new web application that manages provider registration for incentive payments under the Health Information Technology for Economic and Clinical Health Act. North Dakota is one of the first states to provide this online registration.

Boat Registration

ITD and the ND Game and Fish Department collaborated to rewrite the boat registration process from a legacy application to a Java EE/Oracle solution. This application is a new offering on Game and Fish's Online Services Web portal. The application handles both new boat registrations and renewals.

Computer Systems

Demand for real-time information is one of the leading drivers for computer technology growth. The increasing demand to deliver this information to web-based and mobile devices drives computer technology changes in hardware and software. The Computer Systems Division responds to these demands through the knowledge of skilled staff, consultants and vendors.

Evolving Cloud Computing Platforms

The industry indicates that public cloud computing is the right direction in moving forward for traditional computing infrastructure. You can quickly provide computing resources on demand and utilize dynamic scaling of storage and processing power. There are various cloud offerings:

- Platform as a Service
- Infrastructure as a Service
- Software as a Service

There are many positive and negative tradeoffs when you leverage business over the public internet. Perhaps the largest impact to State Government is the need to process and transact huge volumes of data between disparate systems. Legal requirements and compliance to HIPAA, PCI, GLB, Sarbanes Oxley and other federal oversight rules govern much of the operational processes for applications and data. Public cloud computing platforms are eliminating many of the traditional computer-system platforms and will need to be studied across all facets of the business before government should be moved onto these platforms. There are great benefits available from the public cloud as long as we are aware of the necessary precautions.

Innovating Cloud Computing Platforms

ITD has currently virtualized over 70% of its 1,206 servers. Virtualization positions us to readily move applications to public cloud platforms. We are currently studying the impact of hosted virtual desktops (HVD) where end-users can access their secure and controlled government desktop from mobile devices. The internal State Government private cloud continues to be designed with better methods for security, high availability and disaster recovery posture. We utilize engineers and architects from our vendors and consultants to ensure we are moving down industry best practices through on-site strategy sessions with staff.

Continuation of Technology

The past biennium activity has created a desire to further improve the state's posture for highly available platforms. As a general practice, ITD delivers computing applications to agencies through the Software as a Service (SaaS) method; where the skills to support the application and the computing hardware reside within ITD. In addition to past initiatives that have designed redundancy into the software application, we are currently in the process of renovating the data center to improve the power distribution and cooling systems to handle extensive outages. Combined with the second data center we will improve our ability to keep alive the applications that are critical to the operation of state government.

Dean Glatt, Director of Computer Systems

Server Operating Systems

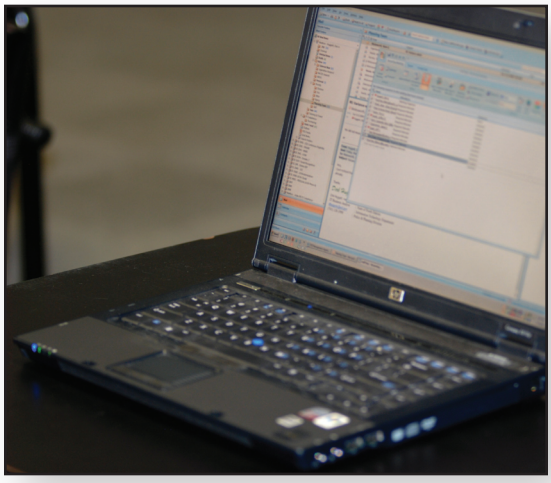
	Physical	w/Virtualization
Windows	261	876
Linux	47	179
AIX/Solaris	23	135
MF/z-series	2	5
AS400/i-series	3	11
Totals	336	1,206
73% Virtualization		

Active Directory Objects

272,789
Users

9,589
Groups

13,686
Computers



Enterprise Databases

	Applications	Tables	GB
SQL Server	484	171,206	4,105
Oracle	367	80,942	3,906
ADABAS	115	551	150
DB2	439	9,359	440
MySQL	44	7,291	24
Totals	1,449	269,349	8,625

Consolidated File & Print Support

1,865
Printers

1,814
Shares

28.5
Terabytes

Daily Email Activity (Averages)

1.2 Million
Inbound Messages

92.71%
Percent of Messages Removed by SPAM Filter

80,305
Inbound "Clean" Messages

Telecommunications

The past year has been an instrumental year in the evolution, growth and innovation of communications infrastructure technology. The first accomplishment was the completion of the state government and political subdivision network infrastructure upgrade. This upgrade provided an increase in bandwidth and it signified the end of an era for ATM technology in the state network. While ATM provided a stable and robust environment for many years, the limitation on bandwidth imposed by that technology was a constraint that limited how the network was utilized. By refreshing the hardware and circuitry, state and local government are able to utilize a highly reliable and resilient network that has the bandwidth that can grow to meet their business needs. The ability to scale from 5Mbps to 1Gbps and beyond provides the flexibility to meet the needs of government whether its data communications, voice over IP communication or video collaborations. In addition to the traditional fixed dedicated services, broadband is evolving to be a viable solution for many members of STAGEnet. The past year included a hardware refresh for those entities where commodity broadband is sufficient to meet their business needs. This refresh provides for a more robust and reliable solution allowing for continued growth in this sector.

Duane Schell, Director of Telecommunications

The past two years have been focused on improving endpoint connectivity. The focus will now turn to the backbone and backbone services. The additional bandwidth and flexibility provided to endpoint sites is adding pressure to the backbone and internet connectivity for STAGEnet. To accommodate that growth, internet bandwidth was upgraded this year with another upgrade planned very soon. With the constraints lifted on the endpoints, the internet and backbone will require improvements to accommodate a 39% average annual growth in bandwidth.

IPv6 Implementation

This year American Registry for Internet Numbers (ARIN) announce the depletion of IPv4 address space. This announcement has created an increased urgency for the deployment of IPv6 worldwide. Although STAGEnet has sufficient IP address space for the relatively near future it's important that the network begin to support IPv6. As such, the STAGEnet technical committee created a strategic plan to begin implementing IPv6 within the network. This plan will be a multi-year effort to implement and support the new protocol. By implementing IPv6 and allowing it to coexist with IPv4 on STAGEnet it will ensure a robust and reliable network infrastructure for the future. IPv6 will provide ample address space for the foreseeable future, allow for new applications that require IPv6 and provide for a seamless interoperability with those entities that choose to deploy IPv6 soon.

Video Communications

Due to the improvements in the underlying network infrastructure as well as the evolution of video technology, we have seen a 50% increase in scheduled video session over STAGEnet. Video communication has long been an effective and proven solution to enhance education for over 10 years. The improvements in the technology, including high definition video and a very simple scheduling solution, are enabling video to be a much more effective solution for government as well.

Voice over Internet Protocol (VoIP)

VoIP was introduced into STAGEnet nearly eight years ago and has served as a reliable and dependable voice communication's protocol. This past year was a highlight year in the acquisition and deployment of a new enterprise voice solution based on VoIP for government. This solution will replace the many individual legacy PBX solutions deployed throughout the state and will be the foundation for communications across state government going forward. The solution is more than a simple traditional voice solution as it is a core platform for all communications across the enterprise. The solution includes integration with presence, unification of messaging and extending voice and collaboration services across both PC's and mobile devices. These higher-level services allow government communication to happen in a more efficient manner whether the consumer is fixed or mobile. Additionally, the communications platform is a foundation for building and integrating communications into a variety of business processes driving higher levels of efficiency and effectiveness.

Broadband Mapping

Through cooperation and input from local broadband providers and assistance from the National Telecommunications and Information Agency (NTIA), North Dakota has gained a valuable tool and information relating to the current state of broadband infrastructure across the state. A map of broadband infrastructure depicting the vast broadband resources across the state is available for all citizens to utilize. This map depicts the areas of North Dakota that have rich broadband resources available to them as well as highlights areas that are in need of additional investments. Going forward this will be a valuable tool for research, business and consumers interested in broadband technologies that exist statewide.

Statistics

1,034
Network Endpoints

145
Fiber Endpoints

110,000
Endpoint Devices

10,000
Phones Supported

32,229
Scheduled Video Conferences

608
Video Endpoints

10,000,000
Minutes of Long Distance

2,253
Cell Phones

843
Smart Phones

254
Mobile Broadband Devices

3 Million
Minutes of Cellular Voice Traffic

1.5
Terabytes of Mobile Broadband Traffic

Human Resources

Finding, hiring and keeping good employees are key to any successful organization. In working to this end, the Human Resources (HR) division is committed to providing comprehensive human resources programs and processes to the fullest extent possible. Additionally, as the information technology field is ever changing and evolving, HR must evolve to continue to be adept and keep pace.

One of HR's main goals is to inspire trust and partnerships with our employees across all divisions in ITD. In doing so, we must focus on strategies that align human resources with ITD's goals and objectives and foster an environment to make ITD a great place to work.

Developing Employee Relations

ITD conducts an employee satisfaction survey every two years to gage employee morale and afford employees another mechanism to provide input for change within ITD. In addition, ITD facilitates Meet & Greet sessions where ITD teams can visit with the CIO, Deputy CIO, HR Director and Division Director to discuss thoughts, ideas and questions relating to their work.

HR also fosters a positive working environment through various programs and committees dedicated to cultural improvement and employee recognition. These innovating programs provide more opportunities and tools to encourage recognition throughout ITD for going above and beyond core responsibilities. These programs are funded through employee support where all the money goes back to the employees in one form or another.

Safety, Health & Wellness

ITD has continued with its focus on healthier employees by holding its second Wellness Week where employees are invited to take advantage of various wellness activities that continue all year long. Healthy snacks and regular exercise are just a few of the things encouraged so employees make healthier lifestyle choices. Additionally, ITD participates in the Risk Management Fund Contribution and Workers Compensation Premium discount programs which promote safety inspections, timely incident reporting and regular safety communication.

Recruitment and Retention

Filling vacancies with highly skilled, service minded individuals who can provide a positive customer experience and bring technology to life can be a daunting task in a tight labor market. However, ITD is proud of the additions we've made to our ITD family as well as the internal promotions from the highly skilled staff within ITD. This can also be a balancing act in order to meet the changing needs of our customers. Thus, ITD will augment our staff with contractors. As a number of our employees reach retirement age, we'll need to keep a sharp focus in this area.

Initiatives

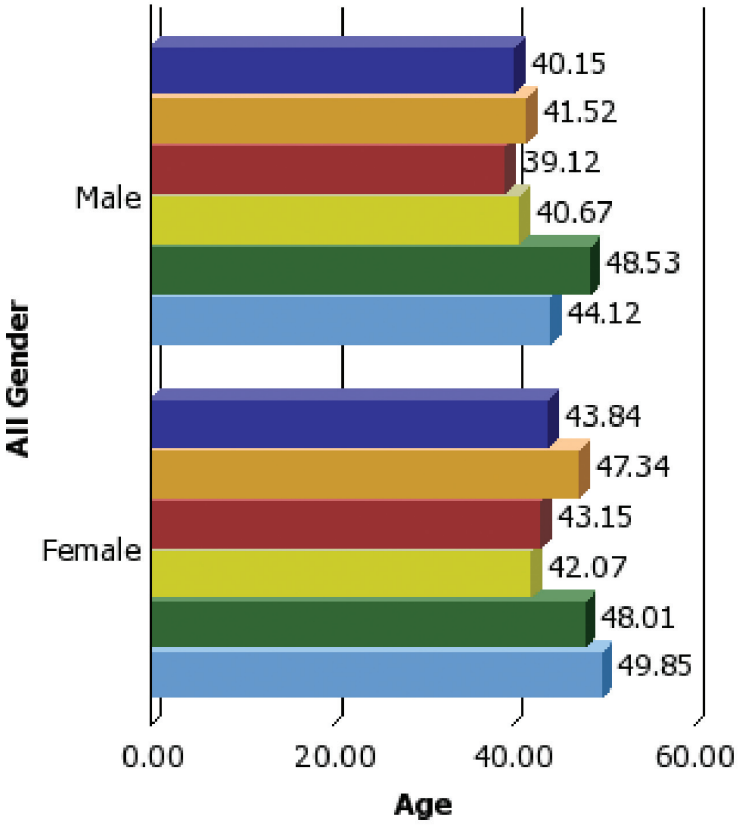
ITD's new time and labor tracking system was completed this past year and we're at the point where we can start

Shelly Miller, Director of Human Resources

generating reports from the data that's been collected. This system eliminates the paper leave requests and allows for electronic leave approvals, automated FMLA tracking, real-time leave balances and new reports assist with effective workload allocation.

ITD HR has also been an active participant as a primary member on the Job Evaluation Committee for the Hay Group implementation. We look forward to the roll-out of the new classifications and grade structures next July.

Over the next year, ITD will evolve to a new web-based performance management system through PeopleSoft's ePerformance. This will allow for streamlined performance evaluations, electronic tracking/routing and numerous other benefits.



Division	Male	Female	All Gender
Software Development	40.15	43.84	41.48
Telecommunications	41.52	47.34	42.76
Computer Systems	39.12	43.15	39.92
EduTech	40.67	42.07	41.42
Center for Distance Education	48.53	48.01	48.15
Enterprise Services	44.12	49.85	44.89

ITD Employees By Gender and Average Age

Administration

The Information Technology Department operates as an internal service fund. ITD tracks and monitors the expense and revenue of each service in cost centers to ensure that one service is not subsidizing another. The federal government does not allow state central service agencies to accumulate an excess fund balance. Regulations establish specific standards for determining allowable costs for services in federally-funded projects. ITD monitors the cost centers and adjusts rates accordingly.

ITD plays an important role in centrally managing the State's private computing cloud, standardizing IT systems, reducing duplication, and ensuring that state agencies can communicate quickly and securely. Our core service areas include the following:

- Server/Data Hosting
- Software Development
- Networking Services
- Telecommunications Services

Actual funding for IT operations and projects are appropriated to each agency which in turn pays ITD for the hosting and/or development services. General-funded IT projects are reviewed by the State Information Technology Advisory Committee (SITAC). This group of senior-level executives prioritizes the IT projects to assist the Legislature and other budget stakeholders as they address the budget requests during the legislative session. The State of North Dakota has historically been a conservative state with regard to funding IT projects and requires a projection of ongoing operating costs for any new IT projects before approval is granted.

Dan Sipes, Director of Administrative Services

In addition to ITD's traditional role of providing services to customers on a charge-back basis, the Legislature has expanded ITD's responsibility to oversee several general-funded technology programs. This includes the following program areas:

- Center for Distance Education
- Statewide Longitudinal Data System
- Education Technology Council
- EduTech
- STAGEnet access for the K-12 schools
- Geographic Information Systems (GIS) hub
- Health Information Technology Office
- Criminal Justice Information Sharing (CJIS) hub

Security

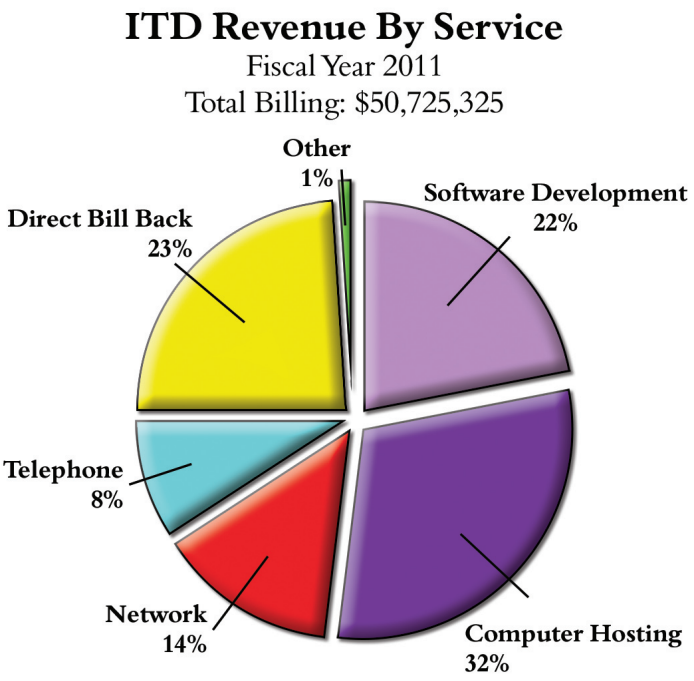
ITD's security section is responsible for the governance and management of security across the enterprise as well as providing cyber security awareness activities. ITD works closely with federal, state, local and private industry partners to collect and analyze information on cyber threats and vulnerabilities that pose a threat to the State's information systems and critical information managed within those systems.

Efforts to ensure security and awareness include a biennial SAS70 audit conducted by the Office of the State Auditor with specialized security testing conducted by an external security consultant. This audit provides assurance to our customers and their auditors that ITD has appropriate controls in place. The latest audit was completed in January 2011. A copy of the SAS70 report can be found at http://www.nd.gov/auditor/reports/SAI112_10.pdf. Additionally, a separate security audit was completed in December of 2009.

Contingency Planning

In response to a power incident in January 2011 ITD is coordinating with OMB to improve the power posture of the primary data center by adding additional power redundancy, renovating the current data center and reducing the time required for the second data center to assume the role of the primary data center in disaster events.

ITD's initial focus in operating the second data center has been to minimize data loss in the event of a disaster – this is commonly referred to as the recovery point objective (RPO) and measures the point in time (relative to the disaster) to which you can go back to recover your data. The second data center houses the backup data for all systems and allows ITD to perform real-time data mirroring for critical systems. In addition to improving recovery point objectives for the State's data, ITD is working with agencies on the recovery time objective (RTO) for their applications. RTO is a measure of how long it takes for a system to resume normal operations. As a result of ITD's briefing to agencies on Business Continuity in March of 2011, we expect more agencies will decide to make additional investments to improve the RTO for critical business functions.

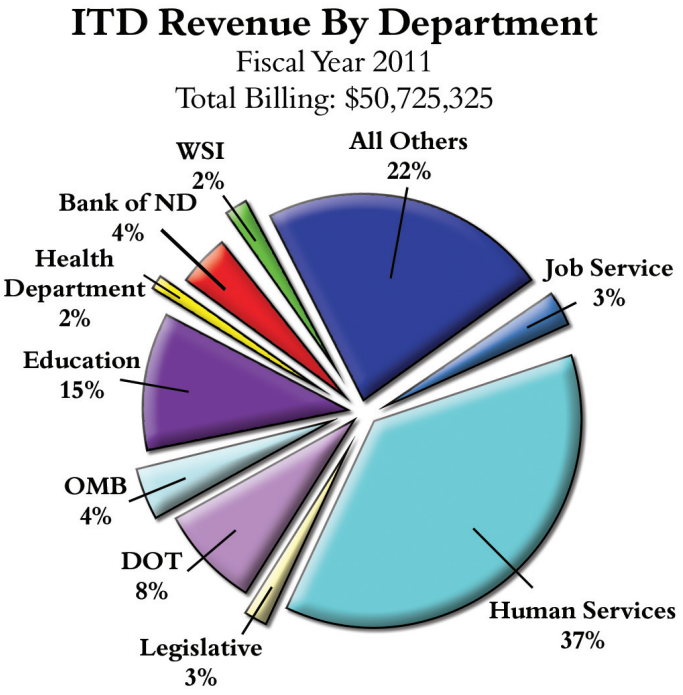


Records Management

North Dakota Century Code (NDCC) 54-46-11 requires ITD to report on records management practices and programs in state government. This program includes records retention schedules, annual disposal of records, forms management, records management, education and consulting.

ITD has implemented records management programs in 89 state and local government agencies, higher education institutions, boards and commissions. Last year state agencies, local government offices, and higher education institutions disposed of 5,623 cubic feet of records that satisfied their retention requirements. This savings in storage space, equipment, and related salaries resulted in a cost avoidance of $1,509,458.

ITD has initiated a process of meeting with agencies on a regular basis to review their records management program and practices and offer recommendations to enhance their current processes and offer guidance on records management best practices.



Rates and Trends

The Information Technology Department (ITD) generates revenues by providing 105 services, each with its own rate. Customers are billed monthly for services provided the previous month. Federal regulations do not allow state central service agencies to accumulate an excess of cash. Therefore, ITD closely monitors the cost and revenue for each service and adjusts its rates accordingly.

In April of every even numbered year, ITD establishes budget rates for the upcoming biennium. These rates generally do not increase during the two-year period because agencies do not have the ability to request additional funds. However, if the cost for providing a service decreases, ITD will reduce the rate. ITD also monitors what other entities are charging for similar services in an effort to maintain quality services at a fair price. The following tables reflect ITD's comparisons and history. In summary, service rate increases are the result of higher labor rates along with the need to upgrade old equipment to deploy new technologies.

CPU Rates (per second)

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
Batch CPU	**$ .74**	$ 1.38	$ 2.96	n/a
CICS CPU	**$ .74**	$ 1.38	$ .84	n/a
ADABAS CPU	**$ .84**	$ 1.38	$ 1.73	n/a
TSO CPU	**$. 74**	$ 1.38	$ 3.17	n/a

Network Fees

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
Technology Fee	**$ 49.00**	$ 53.00	$ 45.53	$ 50.00
LAN Administrative Fee	**Included**	Included	$ 117.82 per hour	N/A
Access/Information/ Enterprise Mgt. Fee	**n/a**	$ 49.00	n/a	$ 85.00
DSL Service	**Cost + $230/5mb**	n/a	$ 409.26/1.5mb	Cost + 15%
ETS-5 (5mbps bandwidth)	**$ 890.00**	n/a	$1,743.28	Cost + $ 140 (access) $ 150/mbps (bandwidth)

Telephone Fees

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
Telephone Line	**$ 24.00 - VoIP**	$ 14.00 - Analog	$ 30.76 - VoIP	$ 35.00 - VoIP
Speaker/Display	**$ 5.00**	Actual Cost	Included	Actual Cost
Voice Mail (unlimited)	**$ 5.00**	$ 6.00		$ 5.00
3-minute limit	**n/a**	n/a	$ 7.43	n/a
Additional Minutes	**n/a**	n/a	$ 8.89	n/a

Long Distance

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
In-State	**$.07**	$ .07	$ .072	$ .049
Out-of-State	**$.07**	$ .08	$ .072	$ .070
800 Service	**$.07**	$ .08	$ .084	$ .13

Software Development Rate Comparison

Entity	Location	Billing Rate/Hour of Service
Information Technology Department	**State of North Dakota**	**$ 67 - $ 89**
Applied Engineering	Bismarck, ND	$ 88 - $ 102
Eide Bailly	Bismarck, ND	$ 90 - $ 165
Enterprise Solutions	Bismarck, ND	$ 90 - $ 130
Nexus Innovations	Bismarck, ND	$ 94 - $ 140
Agency Mabu	Bismarck, ND	$ 75 - $ 77
Ardent Technologies	Dayton, OH	$ 55 - $ 77
PiOrion Solutions	Piscataway, NJ	$ 84 - $ 128
Compuware	Plymouth, MN	$ 80 - $ 151
ImageSource	Olympia, WA	$ 174 - $ 228

ITD Service Rate Trends

Software Developer

Service Rates	July 2011	July 2010	July 2009	July 2008
Software Developer	$ 67 - $ 86	$ 63 - $ 75	$ 63 - $ 75	$ 58 - $ 63

Central Computer CPU

Service Rates	July 2011	July 2010	July 2009	July 2008
Batch CPU	$ .74	$ 1.07	$ 1.17	$ 1.17
CICS CPU	$ .74	$ 1.07	$ 1.17	$ 1.17
ADABAS CPU	$ .84	$ 1.17	$ 1.23	$ 1.23
TSO CPU	$ .74	$ 1.07	$ 1.17	$ 1.17

CPU rates for July 2008 were adjusted to be comparable to the faster computer purchased in 2009.

Network Fees

Service Rates	July 2011	July 2010	July 2009	July 2008
Technology Fee*	$ 49.00	$ 43.50	$ 43.50	$ 41.27
ETS-5 **	$ 890.00	$ 890.00	$ 890.00	$ 890.00

*Technology fee for July 2008 was adjusted to be comparable to the new technology fee method used in 2009.
**Beginning July 2010 ITD provided a 5 mb circuit for the same price as a 1.5 mb circuit.

Telephone Fees

Service Rates	July 2011	July 2010	July 2009	July 2008
Telephone Line	$ 24.00	$ 24.00	$ 24.00	$ 24.00
Speaker/Display	$ 5.00	$ 5.00	$ 5.00	$ 5.00
Voice Mail (Unlimited)	$ 5.00	$ 5.00	$ 5.00	$ 5.00

Long Distance

Service Rates	July 2011	July 2010	July 2009	July 2008
In-State	$ .07	$ .07	$ .075	$ .075
Out-of-State	$ .07	$ .07	$ .075	$ .075
800 Service	$ .07	$ .07	$ .07	$ .07

Strategic Planning & Performance Measures

Measurement	Baseline (Previous Years)	Current (June 2011)	Target
Acceptable Level Of Total Net Assets	2008 – 1.4 2009 – 1.7 2010 – 2.4	2011 – 1.7	< or = 2.0

SCORECARD PERSPECTIVE: FINANCIAL. Based on financial end of year "Statement of Net Assets," Total Net Assets does not exceed two (2) times the average monthly expenditures.

Measurement	Baseline (Previous Years)	Current (June 2011)	Target
Percentage Of ITD Rates Reported In Annual Report That Are Competitive	2008 – 100% 2009 – 100% 2010 – 100%	2011 – 100%	100%

SCORECARD PERSPECTIVE: FINANCIAL. Based on 33 service rates representing 74% of ITD's revenue as reported in the Annual Report. "Competitive" is defined as a rate not exceeding 10% higher than the average comparable service rates provided by other government and private entities.

Total Number Of Service Requests And Incidents Completed	2009	2010	2011	Target
Service Requests	33,243	34,247	36,871	MONITOR
Incidents	55,421	60,835	63,795	

SCORECARD PERSPECTIVE: FINANCIAL. Although this measure is largely dependent on client budget appropriations and spending, it provides an indicator reflecting the amount of work volume or output produced by ITD. This measure reflects a 12-month timeframe.

Customer Satisfaction Indexes	% Satisfied / Very Satisfied		% Satisfied / Very Satisfied	Target
	2009	2010	2011	
Value	83.9%	87.0%	80.4%	92%
Timeliness	92.2%	91.6%	87.5%	97%
Quality	95.3%	95.7%	94.6%	97%
Knowledge	96.8%	95.8%	96.4%	98%
Professionalism & Courtesy	100%	98.9%	100%	100%

SCORECARD PERSPECTIVE: CUSTOMER. This year, executives and business professionals were invited to join IT coordinators in completing ITD's Annual Customer Survey. As a result, 56 people provided feedback on these attributes. Customers are encouraged to offer candid feedback regarding ITD's ability to meet their business needs.

Measurement	Baseline (Previous Years)	Current (June 2011)	Target
Employee Satisfaction Index	2008 & 2009 – 2.14 2010 – 2.21	2011 – 2.21	2.0

SCORECARD PERSPECTIVE: LEARNING & GROWTH. Every other year, ITD assesses its employee satisfaction. Employees are asked to rate ITD as a place to work. The above survey indexes reflect the overall average score of all employee survey rankings. The grading range is from 0-3 (dissatisfied to very satisfied). Ninety-eight percent of employees participated in the survey process

Measurement	Baseline (Previous Years)	Current (June 2011)	Target
Controllable Employee Turnover	2009 – 3.6% 2010 – 5.0%	2011 – 4.9%	BELOW 6%

SCORECARD PERSPECTIVE: LEARNING & GROWTH. ITD tracks employee turnover on a quarterly basis. Employee turnover is a critical measure of organizational success. Technology skills will remain in high demand and in short supply through the next decade.

Measurement	Baseline (Previous Years)	Current (June 2011)	Target
Percentage of Service Levels Met	2010 – TBD	2011 – TBD	100%

SCORECARD PERSPECTIVE: INTERNAL PROCESS. ITD is currently developing service level objectives (SLO) for its primary services. Once this process has been completed, this measure will indicate ITD's ability to meet its service objectives.

Measurement	Baseline (Previous Years)	Current (June 2011)	Target
Percent Of Strategic Business Plan Objectives Completed Or On Schedule	2009 – 61% 2010 – 47%	2011 – 66%	75%

SCORECARD PERSPECTIVE: INTERNAL PROCESS. ITD creates a strategic business plan that defines business improvement goals and objectives which are achieved through initiatives created at the department and division levels. All initiatives are prioritized and defined as projects through an internal project definition process that describes the scope, cost, timeframe and expected outcomes. This measure assesses management's ability to plan effectively and put business strategy into action.

Financial Statements

Statement of Net Assets June 30, 2010 & 2009

	FY 2010		FY 2009	
ASSETS				
CURRENT ASSETS:				
Cash Deposits at BND	**9,319,860**		4,204,336	
Restricted Cash	**3,972,854**		191,977	
Intergovernmental Receivables	**200,413**		155,547	
Accounts Receivable	**173,417**		235,146	
Due From Other Funds	**4,256,825**		4,805,759	
Prepaid Items	**2,122,568**		1,524,408	
TOTAL CURRENT ASSETS		**20,045,937**		11,117,173
NON-CURRENT ASSETS:				
Unamortized Bond Issuance Costs	**33,247**		39,897	
Capital Assets:				
Building & Equipment - Net	**13,644,333**		13,623,626	
Total Non-current Assets		**13,677,580**		13,663,523
TOTAL ASSETS		**33,723,517**		24,780,696
LIABILITIES				
CURRENT LIABILITIES:				
Accrued Payroll	**1,600,844**		1,573,932	
Accounts Payable	**2,065,651**		920,261	
Interest Payable	**28,455**		302,959	
Intergovernmental Payable	**24,321**		35	
Due to Other Funds	**9,669**		18,062	
Compensated Absences Payable	**79,916**		79,768	
Notes Payable	**1,918,382**		1,049,917	
Bonds Payable	**681,658**		654,108	
TOTAL CURRENT LIABILITIES		**6,408,896**		4,599,042
NON-CURRENT LIABILITIES:				
Compensated Absences Payable	**1,480,945**		1,386,551	
Notes Payable	**7,953,247**		4,950,083	
Bonds Payable	**2,240,880**		2,922,538	
TOTAL NON-CURRENT LIABILITIES		**11,675,072**		9,259,172
TOTAL LIABILITIES		**18,083,968**		13,858,214
NET ASSETS				
Invested in Capital Assets, Net of Related Debt	**3,772,705**		7,623,626	
Unrestricted	**11,866,844**		3,298,856	
TOTAL NET ASSETS		**15,639,549**		10,922,482
TOTAL LIABILITIES & NET ASSETS		**33,723,517**		24,780,696

Financial Statements

Statement of revenues, expenses and changes in fund net assets for years ending June 30, 2010 & 2009

	FY 2010		FY 2009	
OPERATING REVENUE:				
Sales and Services		**48,633,238**		44,992,103
OPERATING EXPENSES:				
Salaries and Benefits	**19,131,773**		18,154,771	
Operating	**19,321,839**		20,881,523	
Depreciation	**4,997,892**		4,206,325	
TOTAL OPERATING EXPENSES		**43,451,504**		43,242,619
OPERATING INCOME (LOSS)		**5,181,734**		1,749,484
NON-OPERATING REVENUES (EXPENSES):				
Interest and Investment Income	**35,407**		233,038	
Interest Expense	**(516,182)**		(717,817)	
Loss on Sale of Capital Assets			(14,442)	
Other	**16,108**		16,108	
TOTAL NON-OPERATING REVENUE (EXPENSES)		**(464,667)**		(483,113)
INCOME (LOSS) BEFORE CONTRIBUTIONS AND TRANSFERS		**4,717,067**		1,266,371
TOTAL NET ASSETS - BEGINNING OF YEAR		**10,922,482**		9,656,111
TOTAL NET ASSETS - END OF YEAR		**15,639,549**		10,922,482

Financing Agreements: ITD has a note for $6,000,000 from SunTrust Leasing at 3.469% for the Department of Human Services (DHS) Medicaid Systems Project. DHS has obtained federal & general funds in the 2009-11 & 2011-13 bienniums to reimburse ITD to pay off note in November 2012.

Guiding Principles

Respect

We treat everyone with dignity and respect.

Teamwork

We recognize ITD's success depends on partnerships and collaboration.

Achievement

We develop quality solutions that best address the needs of our state. We are committed to delivering results – on time and within budget.

Integrity

We build long-term, lasting relationships through mutual trust. We value open, honest, two-way communication.

Leadership

We encourage initiative and creativity. We are committed to investing in knowledge and expertise.

Service

We hold ourselves accountable for a positive customer experience.

Website & Additional Information

North Dakota State Portal
www.nd.gov

State of North Dakota Information Technology Department
www.nd.gov/itd

An electronic copy of the Information Technology Department's Annual Report can be viewed by visiting
www.nd.gov/itd/publications

North Dakota
Information Technology Department
www.nd.gov/itd