# ITD

## Information Technology Department

State of North Dakota
Information Technology Department

# Moving IT Forward

Annual Report | 2009-2010

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

# ITD's Balanced Scorecard
# [ Strategy Map ]
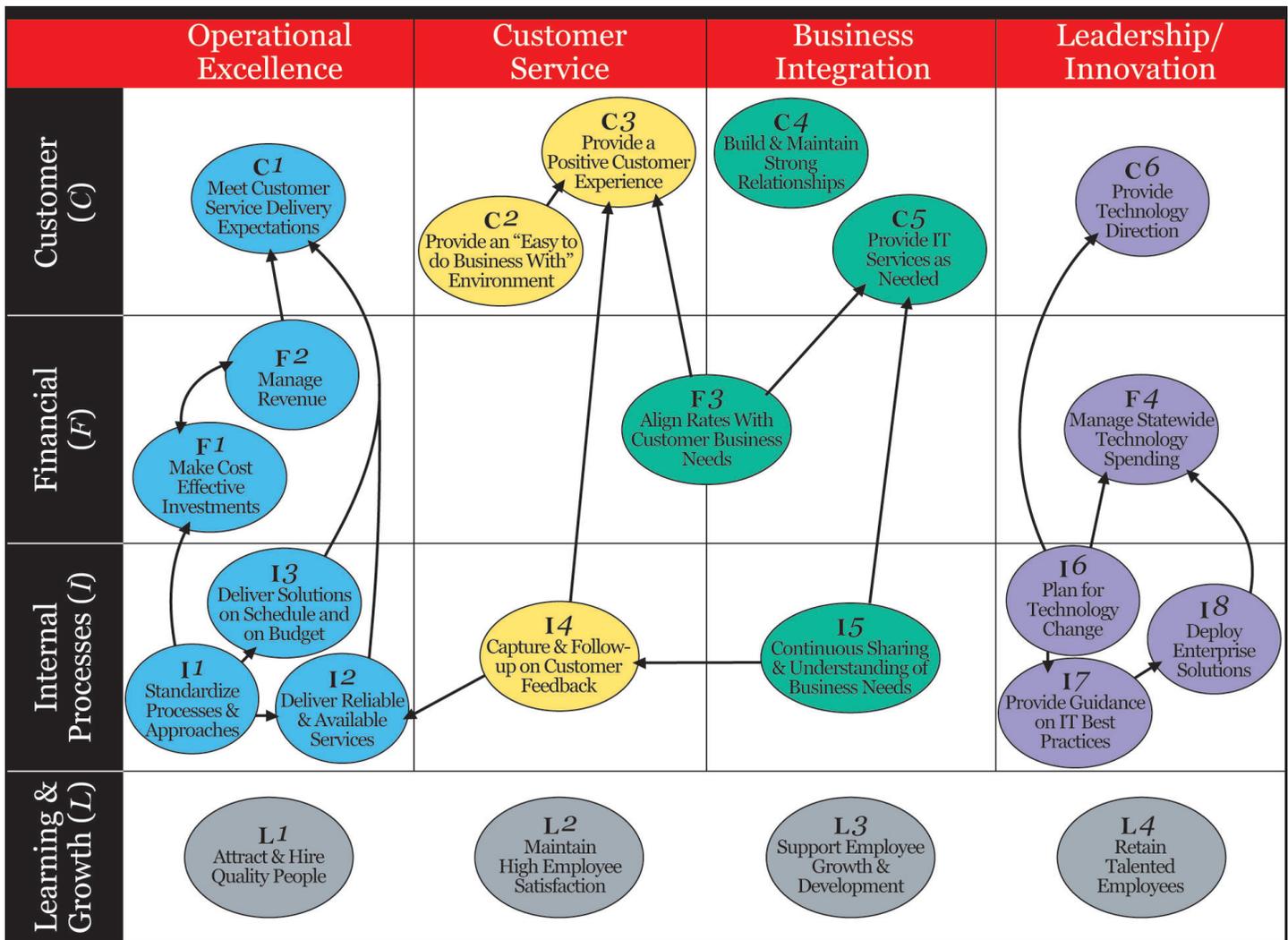


This strategic map shows the relationships among ITD's business perspectives, core strategies, and objectives. They're tied to tasks and performance measures designed to keep decision-making aligned with our mission, vision, and guiding principles. It's our pledge to be customer-centric, employee-focused, financially-responsible, and process-driven.

# Contents

John Hoeven
Governor, North Dakota



Lisa Feldner
Chief Information Officer, ITD

The 2009-2010 Annual Report *Moving IT Forward* was produced by the North Dakota Information Technology Department (ITD). It is a response to requirements outlined in Chapters 54-59-Section 19 of the North Dakota Century Code. The report provides an update on the information technology oversight process and major information technology investments.

**Lisa Feldner**
**Chief Information Officer**

While many states across the nation are battling tough economic times, North Dakota has fared well overall, likely due to our conservative nature. Although we're not immune to the national economic highs and lows, we consistently operate conservatively and within our budget.

Our approach to managing IT has been one of partnerships. Our goal is to have agencies talking to each other, both in person and electronically. When agencies collaborate, better decisions are made, efficiencies are created, and technology dollars are maximized.

Consolidation efforts have allowed us to centralize hosting services and share applications when possible; and ultimately, reduce costs for licensing, hardware, and administrative staff. The statewide network, connecting state and local governments, K-12 education, and Higher Education, has provided numerous benefits from high speed internet connectivity to security.

While many states are now envisioning a private cloud for government and education, North Dakota has been doing that since 2000. One of ITD's first implementations was PowerSchool, a student information system used by North Dakota K-12 schools. PowerSchool data imports into ViewPoint and ndSLEDS (North Dakota State Longitudinal Education Data System), ITD hosted data warehouse applications, which provide educators with a data-driven decision-making environment used to improve instruction and student achievement statewide. Going forward, K-12 schools have now asked ITD to provide statewide directory services.

A new buzz word in IT is Business Intelligence. ITD is now working with several agencies to create data marts where agencies can share data with each other. Currently, a statewide longitudinal data system is being created to provide analytics on education and workforce data, which will help the State address education and training needs.

Last year, North Dakota Legislature passed Senate Bill 2332, which established a Health Information Technology Advisory Committee (HITAC), to help implement a comprehensive system to manage health information. Lawmakers also appropriated money for a Health IT Office, established loan funds, and provided an appropriation for anticipated federal funds and associated match.

Statewide initiatives like the Criminal Justice Information System (CJIS), Geographical Information Systems Hub (GIS), and ConnectND have proven to be valuable statewide resources, making government more efficient and saving tax dollars. With each passing year, they continue to capture more information and gain new users.

Our Balanced Scorecard approach to initiatives helps keep us aligned with our mission. Based on results from the 2010 Annual Survey, we're proud to say our customers continue to view us as a trusted and preferred business partner.

We remain strongly committed to providing a positive customer experience. Our first set of Service Levels Agreements (SLAs) were published earlier this year to help manage our expectations and our customers'.

We are committed to strengthening IT in state government and providing customer-centric services. I invite you to read on to learn more about ITD and how we're moving IT forward in North Dakota.

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.

**98.9%**

*view ITD as a trusted business partner*

**93.5%**

*agree that ITD's services meets their business needs*

**94.6%**

*say ITD is their preferred IT provider*

**88.9%**

*agree ITD is aligned with its mission*
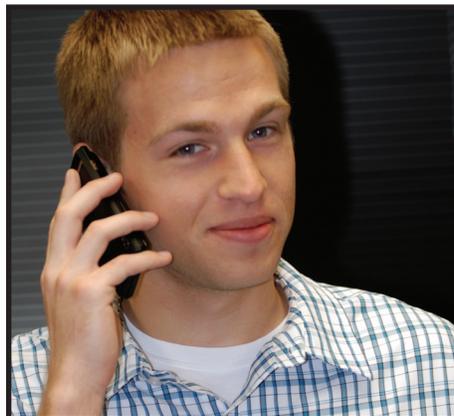
**87.1%**

*believe ITD provides technology direction*

The Information Technology Department (ITD) coordinates people, processes, and technologies across state government. Our goal is to create a collaborative environment among state agencies that maximizes technology investments, streamlines business processes, and improves IT activities. North Dakota's success is a credit to agencies participating in these ventures.

[
*Collaborating Together*
to *Move IT Forward*
]

## IT Planning

ITD assists agencies in developing their IT plans and publishes a Statewide IT Plan each biennium. The process was revised for the 2011-13 IT planning cycle to give agencies more flexibility and time to prepare their plans. Going forward, ITD hopes to develop a process that encourages ongoing discussions and planning throughout the biennium.

## Enterprise Architecture

Through the Enterprise Architecture (EA) process, state agencies collaborate to set the future direction of IT in the State of North Dakota. Last year, 133 people from 27 agencies were involved with:
- Introducing a Business Architecture component
- Planning for a Project Management Domain Team
- Creating a 24-member Social Media User Group
- Studying encryption of data-at-rest on mobile computing devices
- Studying directories for collaborative application development and resource sharing
- Selecting an enterprise Wiki solution
- Updating governance processes and diagrams

## IT Procurement

ITD assists agencies with procuring information technology in order to maximize the value of the State's overall investment. During the past year:
- Sixty-two contracts and requests-for-proposals were submitted and reviewed within the expected five-day response time.
- New State Term Contracts were established for application security testing and data-warehousing.
- Interactive Voice Response (IVR) development services were added to the State's IT Professional Services Contract Pool.
- ITD led a multi-state consortium in developing standard PC configurations and special pricing that resulted in an average savings of 39 percent below the standard WSCA-NASPO contract pricing.

## Project Management

During the past fiscal year, state agencies completed 12 IT projects with individual budgets in excess of $250,000 and a total budget of $7,208,499. Eight of the 12 projects were completed on or under budget with none of the projects exceeding the 20 percent negative variance threshold. Aggregated variance to total budget was -$72,904 or one percent over budget. When removing the best and worst performing projects, the adjusted variance is +$39,171 or one percent under budget. Five of the 12 projects were completed on schedule and two additional projects completed within the 20 percent negative variance threshold. Aggregated variance to schedule was -22.7 months or 14 percent over schedule. When removing the best and worst performing projects, the adjusted variance is -12.67 months or 10 percent over schedule.

The Enterprise Project Management and Project Management Offices were merged to create more efficient and effective services for customers. This office presently employs 13 project managers including nine who hold the Project Management Professional (PMP) credential and three who are preparing for the exam. The team is working to integrate project management as the first business service to be included in the Enterprise Architecture model.

[ *Transforming Data into Information* ]

ITD is committed to strategies that integrate data and share information across North Dakota state government. State agencies are leveraging information and forming partnerships in order to become more efficient and transparent.

### Business Intelligence (BI)

ITD continues to mature its Business Intelligence Competency Center, an environment that will provide data warehousing services, a BI infrastructure, and analytics to government agencies. Our recent achievement includes the development of a data warehouse for the Office of Management and Budget, an operational reporting environment for the Treasurer's Office, and an enterprise data warehouse for the Department of Human Services.

Currently, a statewide K-12 data warehouse is being built that will deliver reporting to state educational agencies, school districts, school administrators, and teachers. A statewide longitudinal data system is also being designed to provide analytics on education and workforce data. Data is collected on 17 workforce programs and on student outcomes as they transition from secondary to postsecondary education and the workforce.

### Master Client Index (MCI)

MCI provides an enterprise-based solution to store demographic information which presents a common view of clients based on feeds from contributing systems. ITD worked with the Department of Human Services (DHS) to implement a solution that matches client records from multiple programs within the agency. This solution not only improved data quality for client information but has created a comprehensive view of a client's involvement in different programs. The solution was also shared with the Department of Public Instruction (DPI) to match DHS' Temporary Assistance for Needy Families (TANF) and Supplemental Nutrition Assistance Program (SNAP) clients with enrolled K-12 students. Matched students receiving benefits from TANF/SNAP are now directly certified and enrolled in the National School Lunch Program; thereby, eliminating the previously long wait time required to verify their status.

### Electronic Document Management Systems (EDMS)

EDMS is a comprehensive collection of technologies for imaging, document management, forms processing, e-forms, enterprise report management, and workflow. North Dakota implemented the foundation of its EDMS about 10 years ago; it has grown to include 20 agencies with 2,000 users. Accomplishments last year include:

- Imaging and forms processing software was updated and a firm selected to assist with upgrading the document repository.
- The document repository was integrated with the State's financial and human capital management system.
- Over 600 new users were added.

### Enterprise Service Desk

Trying to find the right person, with the right answer, at the right time can be frustrating. That's why ITD has designed its Service Desk to be the "Single Point of Contact" for providing customers with advice, guidance, and rapid restoration of service. All incidents are documented and managed consistently in order to identify trends, reduce recurring issues, utilize staff efficiently, and provide a positive customer experience.

### Service Level Agreements (SLAs)

SLAs are designed to manage and improve upon the established levels of service between ITD and its customers. Ideally, SLAs will generate constructive discussions on better ways of meeting customer needs.

During the past year, ITD worked with the State's Architecture Review Board to begin publishing SLAs. At the highest tier, Enterprise Service Levels exist for elements that most of ITD's services have in common. Next, a Hosting Service Level was produced to describe basic functions of application and data hosting. Ultimately, a subsequent agreement will exist for every enterprise service.

**Underlying Causes of Incidents**
Fiscal Year 2010
60,835 total incidents



- Undetermined 2.4%
- Software 10.3%
- Other 3.3%
- Hardware 4.5%
- Customer Inquiry 25.7%
- User Action 3.3%
- Vendor 1.6%
- Authentication / Authorization 33.9%
- Configuration 14.9%
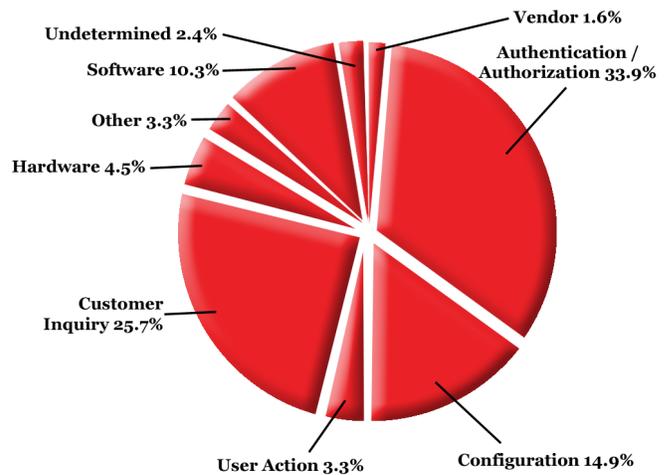
### Keeping Customers Informed

ITD's primary communication channels include a mix of meetings, publications, and electronic avenues including:
- Service Desk Announcements
- IT Directional Meetings
- Incident, Service Request, and Change Notifications
- *Information Link* Newsletters
- Annual Report, Strategic Plan, and Statewide IT Plan
- ITD Website

During the past year, a workgroup was created to specifically focus on internal and external communications. Going forward, a strategy and roadmap will be developed to drive continuous improvement.

### Listening to Our Customers

North Dakota Century Code (NDCC) requires ITD to document information related to service support and delivery, which includes formal complaints regarding dependability, responsiveness, and cost. From July 2009 through June 2010, no formal complaints were filed. However, ITD is asking for, listening to, and acting on customer feedback each and every day.

*Gary J. Vetter*
*Director of Enterprise Services*

## Criminal Justice Information System (CJIS)

The CJIS Portal, 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 some key accomplishments:

- The portal has grown to more than 1,500 authorized users processing more than a million transactions.
- Forty-five agencies use the Law Enforcement Records Management System (NetRMS), totaling 311 users with 200 full-time officers.
- Six counties now use the State's Attorney Reporting System (Justware), which is currently being upgraded.
- The Statewide Automated Victim Information and Notification System (SAVIN) went live in January 2009. This system informs victims about an offender's movement throughout the criminal justice system.
- More information and record types continue to be added to the CJIS Portal, which now includes Bismarck-Burleigh and Minot-Ward data, Highway Patrol citations, and custodial records from jails and the Department of Corrections.

## ConnectND

ConnectND is the State's PeopleSoft implementation of Financial, Human Capital Management, Campus Solutions, and Portal applications. Along with regular maintenance and production support, several initiatives were completed last year:

- Oracle's User Productivity Kit (UPK) was implemented so that application navigation could be recorded and used to produce online play-back features, help links, and training guides. This year, the ConnectND Procurement group used UPK to create help topics for 1099 forms in Finance.
- The Business Intelligence PeopleSoft Project (BIPP) utilized Cognos, a reporting tool, to enable users to create reports and display dashboards of data in a quick and practical fashion. The architecture and data marts are currently being leveraged to build a searchable public database requested by the State Legislature.
- Enterprise Learning Management (ELM) was implemented so state agencies could post, share, and schedule training courses.
- Planning is underway to deploy PeopleSoft upgrades, Recruiting Solutions, and Data Archiving.

## Health Information Technology (Health IT)

In 2009, the North Dakota Legislature passed Senate Bill 2332, which established a Health Information Technology Advisory Committee (HITAC), to help implement a comprehensive system to manage health information. Lawmakers also appropriated money for a Health IT Office, established loan funds, and provided an appropriation for anticipated federal funds and associated match. They additionally appropriated $5 million dollars for a low interest revolving loan fund to help providers acquire certified electronic health record systems. The HITAC committee selected 12 providers to participate in this program.

The legislative action facilitated the 2009 American Recovery and Reinvestment Act, which includes a section on Health Information Technology for Economic and Clinic Health (HITECH). Health IT will allow for comprehensive management of medical information and its private and secure exchange between health care providers and consumers.

HITAC consists of representatives from the Governor's Office, ITD, Department of Health, and Department of Human Services, as well as 19 stakeholders appointed by the Governor, who represent providers, consumers, and trade associations. Additionally, HITAC hired a Health IT Director, who serves at the pleasure of the committee.

## GIS Hub

Through the collaborative efforts of North Dakota state agencies, local government, and private enterprise, the Geographical Information Systems (GIS) Hub continues to grow and provide value. Since its inception in 2004, each passing year provides more interactive maps and information to users.

The GIS database infrastructure was upgraded in 2009, becoming the first database system at ITD to utilize Oracle's Real Application Clusters (RAC) for increased uptime, improved throughput, and database failover. This new Linux-based solution also reduced upfront and ongoing costs. Once an upgrade to the hub's web services is complete, users will enjoy quicker interactive web mapping – comparable to Google Maps.

**GIS Hub – Usage**

2009 — 3,147,671 hits

2008 — 2,237,671 hits

2007 — 1,409,001 hits

ITD's custom enterprise applications are designed and built using industry standards following current best practices in accessibility, security, and scalability; ultimately, creating a more efficient government as agencies work together to share applications. Our projects follow the State's enterprise project management standards, a methodology allowing us to consistently manage projects to achieve success in terms of on-time and within budget.

In addition, State of North Dakota agencies along with ITD participate strongly in the State's enterprise architecture program, which involves cross-agency domain teams and a governance structure that facilitates communication and partnerships among state agencies. These partnerships allow the State to run IT systems within a shared enterprise environment that helps state agencies reduce costs for software licensing, hardware, and administrative staff.

[
**3,639** Service Requests Completed
**97%** on-budget & **92%** on-time
]



**Marlys Axtman**
**Director of Software Development**

## New Tools

### Website Development & Quality
Software Development understands the easier we make it to update websites the more likely information will remain current. With that in mind, we have incorporated the use of two tools which are aimed directly to agencies:

- A new server-based site quality tool was implemented in April 2010 that provides state agencies a consistent method to identify accessibility and site quality issues on their own websites. Following minor setup configurations by ITD, agencies can enjoy the flexibility of scanning and creating reports for managing their own websites.
- An open source web content management tool was implemented earlier this year that allows agency users to easily publish, manage, and organize a variety of website content. After user roles have been identified, agencies can control who has authority to update and release content to their websites. This tool supports multiple content types such as pages, press releases, newsletters, and RSS feeds. Seven sites are now using this tool with many more on the way.

### Voice Integration Tool
A new Integrated Voice Recognition (IVR) system went live earlier this year. North Dakota's Game and Fish Department become the first state agency to embrace the new tool. Following the development of this application, ITD made the decision to outsource this service. In February a Request for Proposal (RFP) was issued with the intent to add vendors for this service to the State's Vendor Pool. Contracts with the vendors were in place by April.

# New & Improved Services

### Quality Assurance Forges Onward
Quality has always been foremost in our software development goals, so we continue to refine our processes to become even more structured. Six months ago, we began working under the guidance of our new Quality Assurance (QA) manager. We are now conducting formal quality testing with agencies for both ITD- and vendor-written applications.

### Business Analysts as a Service
The Software Development Division began training and reclassifying staff members to become Business Analysts. These individuals work closely with assigned agencies to understand their business. This provides the individuals the opportunity to assist the agency and ITD in determining how technology and process change could better enable the agency to provide its services. Although ITD is limited in the number of FTE's available for this type of work, the new service is off to a good start.

### Providing Better Estimates
Due to the expansion of ITD services, providing accurate cost estimates is an important component of our service delivery. We are refining our estimating forms and processes in an attempt to provide more accurate estimates.

Each year, ITD reviews on-going costs associated with currently hosted web applications. Through this process, we discovered it has been difficult for customers to determine these costs for vendor-written applications. Our soon-to-be released process will include a form to guide agencies and vendors through related questions to determine a more accurate on-going cost. This form will be required prior to load testing and application hosting.

## Agency Success Stories

### Computer Aided Dispatch (CAD)
ITD provided project management services to both the North Dakota Department of Emergency Services (DES) and the North Dakota State Highway Patrol (HP) to manage a joint project to procure and install a new Computer Aided Dispatch (CAD) and Mobile Data System. The new system streamlines emergency dispatch processes used to respond to incoming 911 calls throughout state and county jurisdictions. This project leveraged a vendor solution to consolidate multiple information systems into a unified communication platform that now answers calls, maps locations, retrieves criminal records information, and dispatches responders.

### Emergency Registration System (ERS)
The Health Department's Emergency Preparedness Division approached ITD for assistance in purchasing a distributed scanning solution for the H1N1 Flu Vaccination Project. ITD's Electronic Document Management Systems (EDMS) group assisted the agency in working with outside vendors to find a solution that would meet the technical and financial requirements of the project. Through a joint effort of the agency, vendor, software development, and server support, this project was implemented on time in October of 2009.

### LEGEND
The Software Development Division is very involved with the Legislative Council's rewrite of legacy systems. Project components include Bill Drafting, Post Session Publication, Journal, Bill Status, and LAWS. The new system goes live for the 2011-2013 biennium. Although the application is being written by a vendor, many of ITD's analysts and developers are working directly as the vendor's counterparts to assist with analysis, design, development, interfaces, and testing. ITD is also providing oversight services, including project management, architecture review, and deliverables review for Legislative Council.

### Child Support Intercept (CSI)
The Department of Human Services (DHS) Child Support Intercept (CSI) application is a .NET web application that gives gaming organizations the ability to determine whether child support arrears are owed by a winning client. CSI alerts the gaming organization of the amount that should be deducted from the winnings and subsequently sends to DHS to be applied to past due child support.

### Application Security Vulnerability Testing
Software Development architects along with several teams within ITD helped procure a tool to test State web applications for cyber vulnerabilities.

The Information Technology Department provides centralized hosting services for all of North Dakota state government. This hosting environment is diverse, encompassing platforms that include Unix, mainframe, Windows, and Linux systems.

The Computer Systems Division is continuing to build private cloud computing systems that are positioning us to move into public cloud offerings. We hold the responsibility to ensure that ITD and other state agencies adopt private and public cloud offerings in a secure manner. We accomplish this through staff education and enterprise architecture reviews.

We keep IT architecture aligned with the consolidation intentions that were set by the legislature several years ago. We understand that consolidation can be bigger than ITD and that elements of ITD itself will be consolidated and virtualized through external providers when feasible.

Our computer services are provided through a shared services model wherever possible in which multiple agencies share infrastructure (e.g., e-mail, .NET,

J2EE, and database services). The use of shared services and virtualization has deferred data center expansion and software licensing with an estimated cost savings in the millions of dollars.

## Strategies for the Future

### Storage
Computer storage in North Dakota is following global trends with transactional data growing by 21 percent and unstructured data increasing by 60 percent annually. To help manage this growth, ITD implemented 25 terabytes (TB) of data de-duplication equipment last year and is investing in storage management tools and education.

In the coming year, ITD will implement Storage Area Network (SAN) equipment refreshes that include 8 gigabyte (GB) SAN backplanes and LTO-5 tape systems. Upcoming projects include analyzing tapeless backup environments, which will ultimately allow ITD to move to a tapeless environment. ITD will continue to increase the utilization of its secondary data center for data replication and backup to accomplish this goal.

### Virtualization, Building the Cloud
Server virtualization is the practice that is allowing ITD to create a private cloud for State entities. This private cloud currently provides state agencies and K-16 education sectors with "Software as a Service" offerings, such as ConnectND's PeopleSoft application, PowerSchool, and email.

Roughly 50 percent of the State's consolidated server farm is now virtualized. ITD's current virtualization project is reducing server hardware at a ratio of 12 physical servers to one blade server. ITD is increasing its staff training to effectively manage this complex environment just as we actively engage our vendors' engineers for design and review. ITD intends to have more than 80 percent Intel virtualization by July 2011.

**L. Dean Glatt**
**Director of Computer Systems**

Completed **17,027** Service Requests



## Server Operating Systems

|  | Physical | w/Virtualization |
|---|---|---|
| Windows | 248 | 776 |
| Linux | 67 | 166 |
| AIX/Solaris | 22 | 126 |
| MF/z-series | 2 | 5 |
| AS400/i-series | 3 | 7 |
| Totals | 342 | 1,080 |
| **69% Virtualization** | | |

## Active Directory Objects

**228,356** users
**9,486** groups
**12,835** computers

## Daily Email Activity (Averages)

Inbound Messages

**2.1 million**

Percent of Messages Removed by SPAM Filter

**95.1%**

Inbound "Clean" Messages

**86,192**
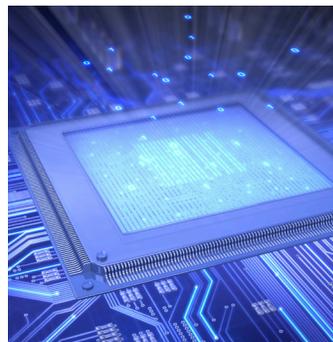
## Consolidated File & Print Support

**1,500** Printers
**1,421** Shares
**24.5** Terabytes

## Enterprise Databases

|  | Applications | Tables | GB |
|---|---|---|---|
| SQL Server | 418 | 262,361 | 4,625 |
| Oracle | 273 | 67,615 | 3,625 |
| ADABAS | 119 | 547 | 137 |
| DB2 | 398 | 8,398 | 361 |
| Totals | 1,208 | 338,921 | 8,748 |

The recent surge in mobile communications, expanding broadband services, and cloud computing architecture has created a significant shift in the direction of the State's network infrastructure. Today, many government networks exist as an internalized corporate infrastructure where users work from a private office with dedicated connections to their computing resources. While most computing resources and applications have been centralized for North Dakota government, the State's underlying network infrastructure is still one of a corporate model.

During the next year, the State of North Dakota will roll out a new statewide network which will transform it from corporate architecture to an ISP design. In addition, the State will be reengineering access methods to computing resources within the State's data center in an effort to provide secure, flexible, and scalable access to hosted applications. These changes will align the State network in a direction that supports cloud computing by providing access to State applications from any internet location across the state, public or private.

The new network architecture will connect all State offices as if connected by broadband ISPs whether or not they are connected with Fiber, ATM, Carrier Ethernet, wireless, etc. Each endpoint will employ a VPN firewall that builds a split tunnel to the State's service center. This design will permit the underlying network transport to be fluid and will permit the State to entertain many types of network transport services from one or any number of providers for all 800 customer locations.

In addition, the State of North Dakota will be renewing its contract for cellular communications in the upcoming year. This will give the State new access opportunities, not just for voice services, but for new mobile applications that continue to challenge traditional methods of delivering services. Like many organizations, North Dakota is continually addressing various business issues such as disaster recovery, pandemic planning, and the expansion of telecommuting which continue to challenge traditional government network architecture. We believe the new network architecture prepares North Dakota to continue to grow and expand in sync with the rapid change of technology.

### Creating Broadband Awareness

The State of North Dakota has been working with the National Telecommunications and Information Agency (NTIA) to help the Federal Communications Commission build the national broadband availability map. In conjunction with that effort, ITD has been gathering North Dakota provider data and collecting citizen input to produce a public map for North Dakota, scheduled for delivery this fall.

Completed 3,580 Service Requests

**Duane Schell**
**Director of Telecommunications**

### STAGEnet 2009 Education Upgrade

This project delivered a much needed equipment refresh to K-12 schools and also refreshed equipment used in Higher Education entities and the State's core network. Many endpoints used in K-12 schools were running out of capacity due to growing IT needs, primarily due to video and Voice over Internet Protocol (VoIP). Negotiations with local telecommunications providers opened up an opportunity to increase bandwidth with only a slight increase to the overall monthly cost of upgrading to an Ethernet infrastructure. This effort involved collaboration with over 18 local telecommunication companies, 175 K-12 facilities, 25 Higher Education facilities, nine State libraries, and six tribal facilities.

This equipment allows the State to significantly increase bandwidth to both K-12 and Higher Education facilities. Previously, most K-12 facilities had one T1 servicing them for a bandwidth of 1.5 Mbps. Today, most have a 10 Mbps Ethernet connection. During the 2009-10 school year, average bandwidth usage was increased by more than 200 percent. A number of schools (23) increased their usage by more than 500 percent. The old system could not have supported this growth.

# STATEWIDE
## NETWORK
### a.k.a
## STAGEnet
*(Statewide Technology Access for Government and Education Network)*

## Quick Facts

### 1,025
Network Endpoint Locations

### 100,000
Devices Supported

### 10,000
Phones Supported

### 21,000
Scheduled Video Conferences Delivered Yearly

### 10,000,000
Minutes of Long Distance

Bringing IT systems and applications to life is no daunting task, but ITD's staff is dedicated, trained, and poised to take on the challenges brought forth by the industry and North Dakota state government. ITD's team-based organizational structure helps to support our six core service areas: Enterprise Services and Customer Support, Administrative Services, Software Development, Computer Systems, Telecommunications, and Human Resources. In addition to the divisional team structure, ITD often builds cross functional teams that span divisions to enhance internal communications. Our goal is to inspire trust, knowledge, and partnerships with our employees across all divisions.

**Workforce Transformations**
In an effort to provide the best service possible, ITD restructured teams within several service areas. Based on the necessity of interactions among several divisions within ITD, a new cross functional team was designed to provide input for Business Intelligence (BI). This team consists of Business Intelligence personnel, software developers, database analysts, systems administrators, and architects.

ITD's project management and large project oversight teams were transformed to a single team within the

Software Development Division. This allows ITD to expand the resource pool for Project Management and Large Project Oversight by sharing the duties among team members with similar experience and training. It also enables a more unified project management vision and direction for our customers and staff.

ITD's Policy and Planning Division merged with its Customer Services Division to form the new Enterprise Services Division. This team consists of the Service Desk, the Business Intelligence Competency Center, and program administrators for SharePoint, Master Client Indexing, Electronic Document Management Systems, ConnectND, Geographical Information Systems, IT Procurement, IT Planning, Enterprise Architecture, and other special projects. The convergence trimmed ITD's management hierarchy and positioned product managers to effectively bridge ITD services with customer needs.

**Employee Satisfaction, an Important Measure of Success**
While creating a positive experience for ITD's customers is our goal, it is just as important for us to stay in tune with employee morale. To check the barometer on employee satisfaction, ITD surveys employees every two years to gauge the Department's health internally. Employee focus groups and action planning are core outputs of the survey, where employees provide input for change and implementation processes. Consistently, employee satisfaction remains high; and overall, employees feel they have gained respect from managerial teams and coworkers. Most feel they belong to a supportive and competent team. While the demands of an IT career can be challenging, employees continue to express they appreciate the flexible work environment ITD provides, knowing they can balance time between family and work.



**Shelly Miller**
**Director of Human Resources**

### Health, Safety, & Wellness are Priority Initiatives

ITD promotes health, safety, and wellness in the workplace through many different programs, including annual training for ergonomics, safety, and security. In addition, ITD held its first Wellness Week last July inviting staff to take advantage of wellness activities offered at ITD, from its Walking Works program to making healthier lifestyle choices.

ITD utilizes Risk Management's Fund Contribution Discounts and Worker's Compensation Premium Discount Programs to monitor safety inspections, disaster recovery efforts, incident reporting, as well as the communication of safety and security guidelines and policies.

### Time, Labor, and Performance Transformations

ITD plans to implement a new time and labor tracking system that will streamline several administrative functions and assist with workload allocation. It will:
- Eliminate paper leave requests
- Create electronic approvals
- Automate FMLA tracking and reporting
- Provide real-time leave balances
- Enhance time reporting on work assigned to staff

Electronic performance evaluations will be the next wave to streamline internal management practices. This will have a number of benefits including but not limited to:
- A more consistent performance evaluation process
- Improved workflow processes
- Improved alignment between employee goals and development activities and business priorities



*ITD's HR team is committed to fostering a work environment that attracts and inspires excellence in employees. By serving as a strategic business partner within ITD, HR helps align people, strategy, and performance to ITD's mission and vision.*

**ITD Employee Count By Division**
Fiscal Year 2010



Enterprise Services - 19
EduTech - 26
Administrative Services - 28
Telecommunications - 28
Software Development - 111
Computer Systems - 64
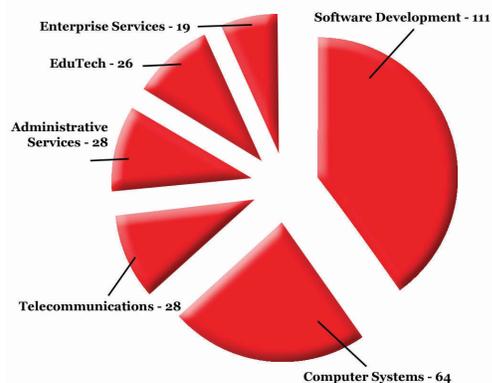
The Information Technology Department operates as an internal service fund. ITD tracks and monitors the cost and revenue of each service in cost centers to ensure that one service is not subsidizing another. The federal government does not allow state central service agencies to accumulate an excess 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.

Actual funding for IT operations and projects is 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***

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

### Hosting Services
The Information Technology Department is designated to host applications for state agencies. Additionally, we host several statewide applications which support core business functions in state agencies, such as HR & Financials (ConnectND), Email (Exchange), Active Directory (statewide authentication directory), and Electronic Document Management Systems (EDMS). We strive to provide our customers with a secure environment, reasonable data center costs, and optimal levels of uptime. ITD's data center operates 24 x 7 x 365, and currently houses more than 1,050 servers, one mainframe, and related IT equipment.

### Software Development
ITD provides a wide range of software development services. Our development projects follow the State's enterprise project management standards, which helps control projects to achieve success in terms of on-time and within budget.

### Networking Services
North Dakota's statewide network, known as STAGEnet (Statewide Technology Access for Government and Education Network), provides fast, reliable, and secure connectivity to all four corners of the state connecting state, county, and local government agencies, K-12 education, and higher education.

### Telecommunications Services
ITD provides a variety of telephony services to state agencies, including digital, analog, and Voice over Internet Protocol (VoIP). ITD provides provisioning, inventory maintenance, and billing for statewide voice services such as calling cards and other long distance products, cellular equipment and service, Interactive Voice Response (IVR), and toll free numbers.

## 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 December 2007. A copy of the SAS70 report can be found at http://www.nd.gov/auditor/reports/SAI11200_07.pdf. Additionally, a security audit was completed in December of 2009.

## 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 reports, forms inventories, and consulting.

ITD has implemented records management programs in 60 state agencies and 34 boards, commissions, and councils. Additionally, North Dakota State University worked closely with ITD throughout the year to implement a new records management program.

Last year, state agencies and local government offices disposed of 2,098 cubic feet of records to satisfy retention requirements. This savings in storage space, equipment, and related salaries resulted in a cost avoidance of $563,146.

**ITD Revenue By Service**
Fiscal Year 2010
Total Billing: $49,550,216

- Other 2%
- Software Development 22%
- Direct Bill Back 21%
- Telephone 8%
- Network 14%
- Computer Hosting 33%
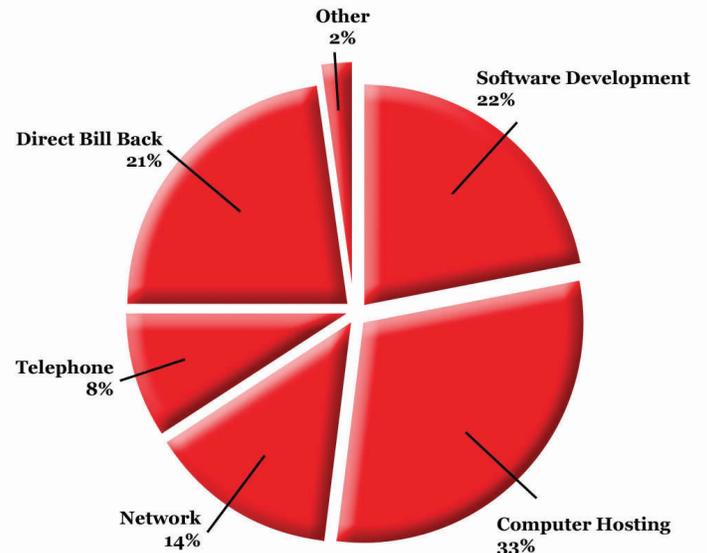
**ITD Revenue By Department**
Fiscal Year 2010
Total Billing: $49,550,216

- WSI 2%
- Bank of ND 5%
- Health Department 1%
- Education 11%
- OMB 4%
- DOT 8%
- Secretary of State 2%
- All Others 27%
- Job Service 2%
- Human Services 38%
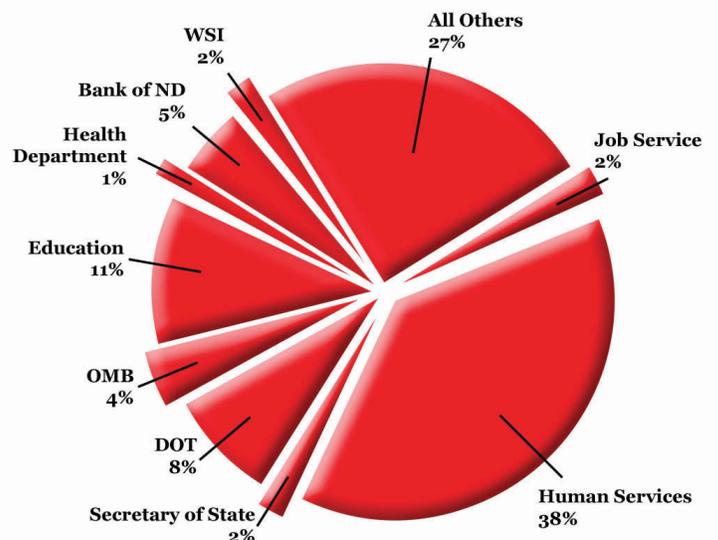
# Rate Comparisons & Trends

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 rates are the result of higher labor rates along with the need to upgrade old equipment to deploy new technologies.

## CPU Rates
(*based per second*)

|  | North Dakota | South Dakota | Montana | Minnesota |
|---|---|---|---|---|
|  | ITD | BIT | ITSD | OET |
| Batch CPU | $ 1.07 | $ 1.59 | $ 2.96 | n/a |
| CICS CPU | $ 1.07 | $ 1.59 | $ .84 | n/a |
| ADABAS CPU | $ 1.17 | $ 1.59 | $ 1.73 | n/a |
| TSO CPU | $ 1.07 | $ 1.59 | $ 3.17 | n/a |

*SD operates an IBM zSeries 800 2066-OC1 mainframe - approx. 3x slower-published rate is $.53/CPU second. SD also charges $.06/1,000 I/Os. MT operates an IBM zSeries z9 - approx. 43% slower. MT rate is adjusted above. MN uses service units to bill rather than CPU seconds. This is because they run three different processors.*

## NETWORK FEES

|  | North Dakota | South Dakota | Montana | Minnesota |
|---|---|---|---|---|
|  | ITD | BIT | ITSD | OET |
| Technology Fee | $ 43.50 | $ 57.00 | $ 117.63 | $ 45.50 |
| DSL Service | Actual ($ 40 - $ 199) | n/a | $ 297.67 | Cost + 15% |
| ETS-5 (5mbps bandwidth) | $ 890.00 | n/a | $1,989.25 | Cost + $ 140 (access) $ 150/mbps (bandwidth) |
| Access/Information/ Enterprise Mgt. Fee | n/a | $ 53.00 | n/a | $ 99.00 |

## TELEPHONE FEES

|  | North Dakota | South Dakota | Montana | Minnesota |
|---|---|---|---|---|
|  | ITD | BIT | ITSD | OET |
| Telephone Line | $ 24.00 - VoIP | $ 13.00 | $ 55.93 - VoIP | $ 54.00 - VoIP |
| Speaker | $ 3.00 | Actual Cost | Included | Actual Cost |
| Speaker/Display | $ 5.00 | Actual Cost | Included | Actual Cost |
| Voice Mail (unlimited) | $ 5.00 | $ 6.00 |  | $ 6.00 |
| 3-minute limit | n/a | n/a | $ 7.04 | n/a |
| Additional Minutes | n/a | n/a | $ 8.87 | n/a |

## LONG DISTANCE

|  | North Dakota (ITD) | South Dakota (BIT) | Montana (ITSD) | Minnesota (OET) |
|---|---|---|---|---|
| In-State | $ .07 | $ .09 | $ .06 | $ .049 |
| Out-of-State | $ .07 | $ .10 | $ .06 | $ .07 |
| 800 Service | $ .07 | $ .10 | $ .08 | $ .13 |

## SOFTWARE DEVELOPMENT RATE COMPARISON

| ENTITY | LOCATION | BILLING RATE/HOUR OF SERVICE |
|---|---|---|
| Information Technology Department | State of North Dakota | $ 63 - $ 79 |
| Applied Engineering | Bismarck, ND | $ 75 - $ 92 |
| Eide Bailly | Bismarck, ND | $ 95 - $ 190 |
| Enterprise Solutions | Bismarck, ND | $ 95 - $ 140 |
| Nexus Innovations | Bismarck, ND | $ 95 - $ 125 |
| Vision Technology | Bismarck, ND | $ 70 - $ 75 |
| Everest Consultants | Beaverton, OR | $ 63 - $ 99 |
| Ciber | Vancouver, WA | $ 55 - $ 180 |
| Compuware | Plymouth, MN | $ 80 - $ 151 |
| Maximus | Rancho Cordova, CA | $ 145 - $ 190 |

# ITD SERVICE RATE TRENDS

| SERVICE RATES | July 2010 | July 2009 | July 2008 | July 2007 |
|---|---|---|---|---|
| Software Developer | $ 63 - $ 79 | $ 63 - $ 79 | $ 58 - $ 63 | $ 58 - $ 63 |

## CENTRAL COMPUTER CPU

| | July 2010 | July 2009 | July 2008 | July 2007 |
|---|---|---|---|---|
| Batch CPU | $ 1.07 | $ 1.17 | $ 1.17 | $ 1.17 |
| CICS CPU | $ 1.07 | $ 1.17 | $ 1.17 | $ 1.17 |
| ADABAS CPU | $ 1.17 | $ 1.23 | $ 1.23 | $ 1.23 |
| TSO CPU | $ 1.07 | $ 1.17 | $ 1.17 | $ 1.17 |

**CPU rates for July 2007 through July 2008 were adjusted to be comparable to the faster computer purchased in 2009.**

## NETWORK FEES

| | July 2010 | July 2009 | July 2008 | July 2007 |
|---|---|---|---|---|
| Technology Fee | $ 43.50 | $ 43.50 | $ 41.27 | $ 41.27 |
| ATM T-1 | $ 890.00 | $ 890.00 | $ 890.00 | $ 890.00 |

**Device fees for July 2007 through July 2008 were adjusted to be comparable to the new technology fee method used in 2009.**

## TELEPHONE FEES

| | July 2010 | July 2009 | July 2008 | July 2007 |
|---|---|---|---|---|
| Telephone Line | $ 24.00 | $ 24.00 | $ 24.00 | $ 24.00 |
| Speaker | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 |
| Speaker/Display | $ 5.00 | $ 5.00 | $ 5.00 | $ 5.00 |
| Voice Mail (Unlimited) | $ 5.00 | $ 5.00 | $ 5.00 | $ 5.00 |

# LONG DISTANCE

| | July 2010 | July 2009 | July 2008 | July 2007 |
|---|---|---|---|---|
| In-State | $ .07 | $ .075 | $ .075 | $ .09 |
| Out-of-State | $ .07 | $ .075 | $ .075 | $ .09 |
| 800 Service | $ .07 | $ .07 | $ .07 | $ .07 |

# Financial Statements

*Statement of Net Assets June 30, 2009 & 2008*

|  | FY 2009 | | FY 2008 | |
|---|---|---|---|---|
| **ASSETS** | | | | |
| **CURRENT ASSETS:** | | | | |
| Cash Deposits at BND | 4,204,336 | | 3,182,256 | |
| Restricted Cash | 191,977 | | 8,294,424 | |
| Intergovernmental Receivables | 155,547 | | 152,226 | |
| Accounts Receivable | 235,146 | | 106,341 | |
| Due From Other Funds | 4,805,759 | | 3,639,730 | |
| Prepaid Items | 1,524,408 | | 2,252,705 | |
| **TOTAL CURRENT ASSETS** | | 11,117,173 | | 17,627,682 |
| **NON-CURRENT ASSETS:** | | | | |
| Unamortized Bond Issuance Costs | 39,897 | | 46,546 | |
| Capital Assets: | | | | |
| Building & Equipment - Net | 13,623,626 | | 12,248,796 | |
| Total Non-current Assets | | 13,663,523 | | 12,295,342 |
| **TOTAL ASSETS** | | 24,780,696 | | 29,923,024 |
| **LIABILITIES** | | | | |
| **CURRENT LIABILITIES:** | | | | |
| Accrued Payroll | 1,573,932 | | 1,433,655 | |
| Accounts Payable | 920,261 | | 665,988 | |
| Interest Payable | 302,959 | | 520,793 | |
| Intergovernmental Payable | 35 | | 4,809 | |
| Due to Other Funds | 18,062 | | 28,441 | |
| Compensated Absences Payable | 79,768 | | 76,548 | |
| Notes Payable | 1,049,917 | | 0 | |
| Bonds Payable | 654,108 | | 629,458 | |
| **TOTAL CURRENT LIABILITIES** | | 4,599,042 | | 3,359,692 |
| **NON-CURRENT LIABILITIES:** | | | | |
| Compensated Absences Payable | 1,386,551 | | 1,330,576 | |
| Notes Payable | 4,950,083 | | 12,000,000 | |
| Bonds Payable | 2,922,538 | | 3,576,645 | |
| **TOTAL NON-CURRENT LIABILITIES** | | 9,259,172 | | 16,907,221 |
| **TOTAL LIABILITIES** | | 13,858,214 | | 20,266,913 |
| **NET ASSETS** | | | | |
| Invested in Capital Assets, Net of Related Debt | 7,623,626 | | 6,248,796 | |
| Unrestricted | 3,298,856 | | 3,407,315 | |
| TOTAL NET ASSETS | | 10,922,482 | | 9,656,111 |
| **TOTAL LIABILITIES & NET ASSETS** | | 24,780,696 | | 29,923,024 |

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# Financial Statements

*Statement of revenues, expenses, and changes in fund net assets for years ending June 30, 2009 & 2008*

| | FY 2009 | FY 2008 |
|---|---|---|
| **OPERATING REVENUE:** | | |
| Sales and Services | 44,992,103 | 40,592,466 |
| | | |
| **OPERATING EXPENSES:** | | |
| Salaries and Benefits | 18,154,771 | 16,499,257 |
| Operating | 20,881,523 | 22,229,584 |
| Depreciation | 4,206,325 | 2,956,238 |
| **TOTAL OPERATING EXPENSES** | 43,242,619 | 41,685,079 |
| **OPERATING INCOME (LOSS)** | 1,749,484 | (1,092,613) |
| | | |
| **NON-OPERATING REVENUES (EXPENSES):** | | |
| Interest and Investment Income | 233,038 | 114,424 |
| Interest Expense | (717,817) | (192,203) |
| Loss on Sale of Capital Assets | (14,442) | (33,112) |
| Other | 16,108 | 16,107 |
| | | |
| **TOTAL NON-OPERATING REVENUE (EXPENSES)** | (483,113) | (97,784) |
| **INCOME (LOSS) BEFORE CONTRIBUTIONS AND TRANSFERS** | 1,266,371 | 1,187,397 |
| **TOTAL NET ASSETS-BEGINNING OF YEAR** | 9,656,111 | 10,843,508 |
| **TOTAL NET ASSETS-END OF YEAR** | 10,922,482 | 9,656,111 |

*Financing Agreements: ITD has a note for $6,000,000 from SunTrust Leasing at 3.469% for the Dept. of Human Services (DHS) Medicaid Systems Project. DHS will obtain federal & general funds in the 2009-11 & 2011-13 bienniums to reimburse ITD to pay off note in November 2012. ITD also borrowed $4,950,000 from Midwest Leasing at 3.9% for the State telephone & network upgrade. ITD will collect funds to pay off note from its service billings with final payment in June 2014*

# Strategic Planning & Performance Measures

| Measurement | Baseline (Previous Years) | | Current (June 2010) | Target |
|---|---|---|---|---|
| ACCEPTABLE LEVEL OF TOTAL NET ASSETS | 2007 – 1.7 2008 – 1.4 2009 – 1.7 | | 2010 – 2.4 | < 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 | | Current | Target |
|---|---|---|---|---|
| PERCENTAGE OF ITD RATES REPORTED IN ANNUAL REPORT THAT ARE COMPETITIVE | 2007 – 100% 2008 – 100% 2009 – 100% | | 2010 – 100% | 100% |

*SCORECARD PERSPECTIVE: FINANCIAL. Based on 22 service rates representing 75% 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 | 2008 | 2009 | 2010 | |
|---|---|---|---|---|
| SERVICE REQUESTS | 32,105 | 33,243 | 34,247 | MONITOR |
| INCIDENTS | 53,738 | 55,421 | 60,835 | |

*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 | |
|---|---|---|---|---|
| | 2008 | 2009 | 2010 | |
| Value | 86.9% | 83.9% | 87.0% | 92% |
| Timeliness | 86.9% | 92.2% | 91.6% | 97% |
| Quality | 93.0% | 95.3% | 95.7% | 97% |
| Knowledge | 97.0% | 96.8% | 95.8% | 98% |
| Professionalism & Courtesy | 99.0% | 100% | 98.9% | 100% |

*SCORECARD PERSPECTIVE: CUSTOMER. Customer Surveys are collected annually. This year, executives and business professionals were invited to join IT coordinators in completing ITD's Annual Customer Survey. As a result, 98 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 2010) | Target |
|---|---|---|---|
| EMPLOYEE SATISFACTION INDEX | 2006 & 2007 – 2.13 2008 & 2009 – 2.14 | 2010 – 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 | Current | Target |
|---|---|---|---|
| **CONTROLLABLE EMPLOYEE TURNOVER** | 2008 – 6.8% 2009 – 3.6% | 2010 – 5.0% | 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 | Current | Target |
|---|---|---|---|
| **PERCENTAGE OF SERVICE LEVELS MET** | 2009 – 100% | 2010 – 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 | Current | Target |
|---|---|---|---|
| **PERCENT OF STRATEGIC BUSINESS PLAN OBJECTIVES COMPLETED OR ON SCHEDULE** | 2008 – 43% 2009 – 61% | 2010 – 47% | 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.*

# 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.

# Websites & Additional Information

**North Dakota State Portal**
www.nd.gov

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

For more information or to request additional copies of this report, please contact the Service Desk at servicedesk@nd.gov

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