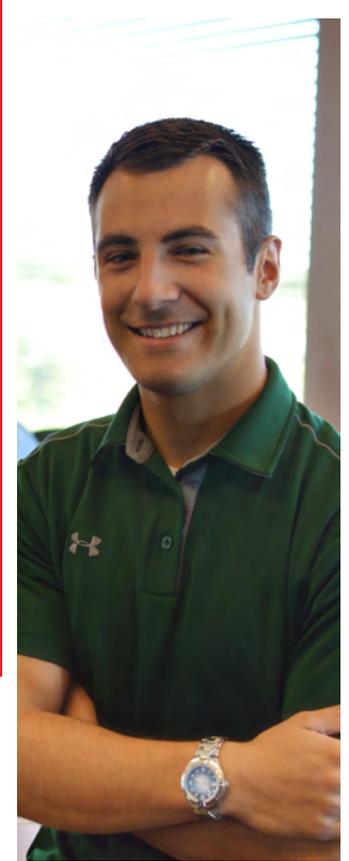




**Respect  
Teamwork  
Achievement  
Integrity  
Leadership  
Service**



**2014-2015 Annual Report**





Jack Dalrymple, Governor of North Dakota



Mike Ressler, Chief Information Officer

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 are achieving that mission.

**90%**  
agree ITD is aligned  
with its mission

**100%**  
view ITD as a  
trusted partner

**95%**  
agree that ITD's  
services meet  
their needs

**95%**  
believe ITD is  
easy to do  
business with



**90%**  
believe ITD  
provides technology  
direction

**95%**  
acknowledge that  
ITD builds strong  
relationships

**95%**  
say ITD provides  
a positive customer  
experience

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The 2014-2015 Annual Report 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.

This report provides an update on information technology progress made over the past year.

# Executive Summary

Each year, the field of information technology (IT) evolves rapidly, and with it the State of North Dakota and ITD evolve as well. The state's recent economic and population boom, a citizen expectation to see government compete with private sector service delivery, and a reliance on technology to facilitate core business functions, mean that IT in North Dakota's state government is being pushed farther and faster than ever before. Truly, states run on IT. This continued growth of and reliance on IT brings a wealth of opportunities for state government, and to fully embrace those opportunities the state must continue to invest in IT.

Nowhere is this need more evident than with cyber security. Over the past year, ITD has completed numerous initiatives designed to strengthen the state's security posture to meet an increased number, complexity, and variety of attacks. Thanks to strong support from the Governor and the Legislature, we added four security positions. We deployed Active Directory Federation Services, which better position the state to use cloud services when beneficial. In addition, we invested heavily in network security to protect K12, higher education, and government



Mike Ressler, Chief Information Officer

users. These initiatives are only part of what's needed to protect the state or utilize IT to its fullest potential. Strong partnerships are foundational to the state's success.

To that end, and to improve all of ITD's services, we strengthened relationships with state and federal partners. In the realm of security, we continued to work closely with our federal partner, the Multi-State Information Sharing and Analysis Center (MS-ISAC). To collaborate with other states, we were active in national organizations such as the National Association of State CIOs (NASCIO). Within the state, we revamped our Enterprise Architecture service and created the Information Technology Coordinators Council to improve collaboration and communication among ITD and state agencies. We dedicated a position to improving IT Service Management initiatives and started publishing recaps of key meetings to keep stakeholders better informed. It is these efforts, and others made by each of ITD's divisions, that allow us to strengthen the partnerships that are critical to making IT work in North Dakota.

Internally, ITD also experienced a number of changes. In 2014, ITD transitioned from having Bismarck area employees spread across five disparate locations to a single location. This move has increased efficiencies by decreasing travel time and facilitating better communication across ITD's divisions and workgroups. In partnership with Bismarck State College, we launched a mentorship program that allows employees to grow personally and professionally. These efforts help ITD recruit and retain talented staff, a task that has become increasingly difficult in North Dakota, particularly where specific IT skillsets are required.

As I look to the future, I am excited to see how IT is used to better position the state and serve our citizens. I commit that ITD will strive to meet the growing demand, complexity, and opportunities presented.

# Statewide Alliances

## Educational Technology (EduTech)

[EduTech](#) provides innovative information technology services and educational technology professional learning to the North Dakota PK-12 community. Services are designed to give educators access, training, and support to use technologies in their classrooms to improve teaching and student achievement statewide.

## PowerSchool

PowerSchool is a web-based student information system designed specifically for PK-12 schools. It provides students and parents the ability to access grades and attendance information, along with other features needed to provide efficient school management.

All public schools in North Dakota use PowerSchool, and the EduTech PowerSchool team provides training and support services to schools. The PowerSchool team also provides training, support, and data services for the State Longitudinal Data System (SLDS). SLDS is a data warehouse comprised of historical education and workforce training data. The objective of SLDS is to provide data on the outcomes of education and workforce training programs. The PowerSchool team hosts an annual PowerSchool Users Group for schools each year in November. This conference has proven to be a valuable service to state schools, providing training and networking opportunities.

Finally, the PowerSchool team provides training and support for North Dakota eTranscripts. eTranscripts is a sub-project of the SLDS that will allow students and counselors to send high school transcripts to registered postsecondary institutions and for review for the State Scholarship.

This past year, the PowerSchool team worked closely with schools to complete mapping school district course codes to state course codes and backfill historical grades. The PowerSchool team also finished setting up a "district school" for each district. The district school is the location for students that are home-schooled or in placement. Another milestone this year was the

entry of teacher license numbers into PowerSchool. All of these accomplishments help the state and educators better provide education to students.

## Technical and Support Services

EduTech provides centralized IT services that allow educators and administrators to use technology to improve teaching, learning, and business productivity. These services include technical support, email, Internet content filtering, web hosting, purchasing agreements, blogging, podcasts, and cloud services, as well as many other educational technology services.

In 2014, a statewide identity management system was implemented that creates and manages a statewide K12 Active Directory. One of the chief benefits of this system is universal access to Microsoft Office 365 for all North Dakota K12 school students, teachers, and staff. Office 365 includes email, calendaring, cloud storage, collaboration space, and online document creation and editing using the Office web apps. It also allows individuals to install



Rob Kaspari, Director of EduTech

the latest version of Microsoft Office onto their computer, tablet, or mobile device, regardless of operating system. At the end of 2015, SENDIT Mail, the legacy K12 email system, will be retired and replaced with Office365 email.

Internet filtering received a significant upgrade during 2014. The new system, based on iBoss content filtering, has proven to be more reliable and capable than previous generations of web filters, is IPv6-ready, and includes additional features that will be deployed during 2015. These features include filtering school laptops when they are off the state network and eventually off-network filtering for mobile devices as well.

- Maker Movement Opportunities
- Social media
- 3D Printing
- Augmented Reality
- Technology integration
- Digital citizenship
- Geographic Information Systems

In fall 2014, we launched the Positive Social Media ND Tour featuring Kat Perkins. By March 2015, EduTech had brought Ms. Perkins' positive social media message to over 20,000 North Dakota students and teachers. Kat shares her experiences about how she harnesses social media tools and lives by her coined phrase "Dream It, Do It." This opportunity for schools will continue during the 2015-2016 school year.

**E-rate consulting**

EduTech's E-rate consulting service assists school administrators complete their yearly applications for federal telecommunications discounts. The consulting services consist of face-to-face regional workshops for school districts and on-line support and consultations on a case by case basis for school administrators. IT also includes troubleshooting and E-rate filing assistance to schools and informing school districts about new programs and rule changes. In the 2015-2016 fiscal year, the E-rate program will provide about \$10 million dollars to North Dakota schools.



*Kat Perkins and EduTech partnered to create the Positive Social Media Tour, in which Kat Perkins visited schools all across the state to discuss social media with students and provide a live performance.*

**Professional Learning for Educators**

Our Professional Learning service provides customized learning experiences and resources to educators. Online, video, face-to-face, streaming, and hybrid session deliveries are available. We offer a broad range of learning opportunities, including:

- Collaborating & Communicating Utilizing Office 365

**Health Information Technology**

The North Dakota Health Information Technology Advisory Committee (HITAC), a public-private partnership of healthcare stakeholders, in collaboration with ITD, is charged with expanding the secure exchange of health information in the State of North Dakota. To meet this charge, the HITAC has established the North Dakota Health Information Network (NDHIN).

The NDHIN connects providers, through a secure online network, to share electronic health records. The goal of the NDHIN is to connect to a national network to accommodate patients everywhere, regardless of their home state, with a goal of improving healthcare.

The NDHIN helps reduce patient intake time, minimize test duplication and paperwork, provide access to the most recent health records updates, and cut costs while increasing mobility. It also creates a roadmap of data for a more thorough understanding of patients' conditions, allowing for up-to-the-minute decisions and faster diagnoses. At all times, the network ensures patient data is protected and confidential.

Current functionality of the NDHIN includes Direct Secure Messaging, known as Communicate, and query-based services. NDHIN Communicate, which utilizes a web based software and XDR messaging services, allows providers to send information amongst themselves through secure encrypted email. It allows providers to exchange unstructured documents, structured files, images, pictures, or



*Sheldon Wolf, Director of HIT*

anything else that can be attached to an email. Essentially, Communicate allows users to securely push protected health information from one provider to another provider.

The NDHIN Clinical Portal, a robust exchange of health information, includes the capability to search for patient data in order to provide quality healthcare. Patient information available through the clinical portal includes: patient demographics, encounter history, allergies, diagnosis, lab results, procedures, imaging studies with links to the actual image, and other clinical documents.

To minimize the number of places providers need to go to obtain information, clinical portal users can also query the North Dakota Immunization Information System (NDIIS) and the Prescription Drug Monitoring Program.

Other functionality currently available or in development includes subscription and notification services. This allows a provider that has a treating relationship with another provider to "subscribe" to a patient and receive "notifications" when an event is triggered. Event triggers could include an inpatient admission or discharge, abnormal lab result, panic results, new final radiology result, and emergency room admittance.

Future enhancements include adding medication information to the clinical portal, as well as partnering with more diverse health care providers, such as long-term care and behavioral health providers. Another major goal is expanding the image exchange to include more providers in the state, and creating a process to access patient information from other states and federal agencies.

The NDHIN is a statewide system that was initially funded with state and federal funds. Future funding will be through a public-private partnership of statewide stakeholders.

Additional information can be obtained at [www.ndhin.org](http://www.ndhin.org).

# Enterprise Services

The Enterprise Services Division is responsible for coordinating ITD's people, processes, and technology in a way that promotes customer-centric services. This division fosters customer relations, aligns ITD's services with customer expectations, coordinates enterprise initiatives, and assists state agencies with setting direction and maximizing the value of technology investments.

## Service Desk

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

This past year included:

- 72,755 incidents
- 46,875 service requests
- 99.9% overall satisfaction rate



Gary Vetter, Director of Enterprise Services

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 2014 through June 2015, no formal complaints were filed. However, ITD is asking for, listening to, and acting on customer feedback each and every day.

## Help Desk Management

Government entities are finding that even though they provide unique services, they share commonalities when it comes to supporting customers. Currently, ITD extends its support service to numerous IT and non-IT related government functions. During the past year:

- ITD completed an upgrade from ITSM to the HEAT 2014 service management platform
- One additional Service Desk intern was hired; totaling three interns to improve Service Desk responsiveness
- The Department of Public Instruction began utilizing ITD's Service Desk and incident management system to log, process, and report on inquiries
- The ITD accounting and facilities groups, and the Health Information Technology division, started utilizing the incident management system to formally track and respond to a variety of technical and non-technical issues and requests
- ITD hired a new Enterprise Services Manager to oversee the Service Desk, administer the new HEAT system, and drive continuous improvement based on the IT Infrastructure Library (ITIL)

## Strategic Communication

Over the past year, ITD's strategic communication efforts have changed and advanced dramatically. Through a restructuring of responsibilities internally, we have launched a service to address enterprise level communication initiatives.

This service, dubbed Strategic Communication, provides agencies with access to communication resources and

training, including guidance on social media, photography, online presence management, and website analytics. We also moved management of ITD's communication, the Social Media Users Groups (SMUG), and the state portal, [www.nd.gov](http://www.nd.gov), under a single position.

A strong impetus for launching this service and reorganizing internal responsibilities was knowledge gained from the SMUG. The SMUG was started in 2012 as a part of the Enterprise Architecture service. As social media began to mature and agencies attempted to navigate a new and inherently IT related medium, agencies were on their own to navigate this new communication tool. The SMUG was established as a forum for those in agencies tasked with handling social media - a blend of public information and IT staff - to learn from each other.

As the SMUG developed, two things became apparent. First, social media should not be discussed in seclusion from other forms of Information Communication Technologies (ICTs), such as web, email, photography, and video. Social media, just like any other medium, is part of a broader communication strategy. Second, the state could benefit from an enterprise view of communication. Many of the solutions agencies were using to manage

communication could be implemented on an enterprise level, which can yield cost savings, cost sharing, improved security, and greater collaboration among agencies.

Ultimately, it is our hope that the changes we have made in this area position ITD, our customers, and the state as a whole to utilize IT to improve government operations and serve the citizens of North Dakota.

## IT Planning

IT Planning allows state government entities to establish clear objectives that link directly back to the enterprise's strategic business goals. During the past year:

- As in all even-numbered years, a structured IT planning process was used in 2014 to publish 51 [state agency IT plans](#) for the upcoming biennium. Those IT plans were combined with content from Higher Education and K-12 schools to produce the [2015-17 Statewide IT Plan](#). Projects submitted with the IT plans were reviewed by the State Information Technology Advisory Committee (SITAC) during the large-project ranking process
- After the completion of the 2015-17 Statewide IT Plan, administration of the IT planning process was

moved under the ITD Project Management Office. This change will provide an opportunity to review and improve the IT planning process, develop new and better planning tools, and produce more valuable Statewide IT Plans in the future

- The legislatively mandated review of all IT projects or initiatives of \$100,000 or more was also moved under the ITD Project Management Office, providing another opportunity to enhance the review process and better serve customers. The changes will make true portfolio man-



The Social Media Users Group (SMUG), part of ITD's Strategic Communication service, is shown here during their quarterly meeting. This meeting with live-streamed, using an iPad, to demonstrate a new video streaming social media platform called Periscope.

agement an option going forward

## IT Procurement

In order to provide guidance on procurement best practices, ITD reviews and approves the acquisition of technology by state agencies. This review process helps ensure the state receives the best value for its technology dollars. During the past year:

- Over 110 procurement and contract documents were reviewed within the five-day response time objective
- ITD collaborated with the State Procurement Office and the Office of Attorney General to pilot the updated \$500,000 and above IT Procurement RFP and Contract
- ITD procurement staff collaborated with agencies, per N.D.C.C. § 54-59-32, on 18 IT projects valued at \$500,000 or greater

## Project Management

The Project Management Office (PMO) currently employs 14 project managers, including 12 who have obtained their Project Management Professional (PMP) certification. The PMO strives for consistency in project management by using uniform templates and processes, providing support and resources for state projects, and performing oversight on projects with budgets over \$500,000. During the past year the PMO:

- Created a records retention schedule for project working documents
- Implemented standardized budget reporting tools for the Executive Steering Committee meetings
- Developed a streamlined project charter template and project plan template for IT projects under \$250,000
- Continually participated in updating the IT contract template and RFP template with lessons learned
- Created a new Microsoft Project template incorporating PMO best practices and lessons learned

Through established project management reporting and monitoring processes, the following project statistics are available. During the past year the PMO:

- Performed project oversight on 21 projects, with a combined total budget of \$246.9 million
- Managed 37 projects with a combined total budget of \$215.5 million; seven of which were completed in the past fiscal year
- Of the seven completed projects, six were within the 20% threshold for both budget and schedule

## Enterprise Architecture (EA)

Enterprise Architecture (EA) refers to statewide IT standards and solutions. Through the EA development process, agencies collaborate to set the future direction of IT in the State of North Dakota. During the past year:

- ITD restructured the EA framework for the first time since 2003, referring to the new structure as EA 2.0. EA 2.0 established four new Architecture teams, Application, Data, Security, and Technology Architecture. There is no longer a formal or approved membership for any of the four Architecture teams. Anyone from state government is welcome to attend meetings and participate in the EA process
- EA 2.0 also resulted in the creation of the Information Technology Coordinators Council (ITCC). The ITCC functions as a team within the EA framework, focusing primarily on business initiatives and standards. However, the ITCC is unique because it has a broader purpose than just EA. The ITCC acts as a representative group of all IT Coordinators across state government and addresses initiatives outside the scope of EA
- New EA processes were developed to create and manage standards and best practices and guidelines, and process requests for exceptions to standards and requests for technical analysis. Instead of utilizing voting at each team level, as was the case in the old hierarchical EA framework, in the new framework surveys are now available to all EA participants to provide the feedback needed for the CIO to approve or deny EA exception to standard requests.
- All EA architecture teams and ITCC meetings are now on the online [ITD events calendar](#) and a meeting recap is added to each event so non-participants can follow the EA process

## Geographic Information Systems (GIS)

ITD and the North Dakota Geographic Information Systems (GIS) Technical Committee operate the GIS Hub. The GIS Hub is an infrastructure comprised of geospatial data storage, data services, and application interfaces. It 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:

- State agencies, cities, and counties worked together to develop and update GIS Hub data sets, including: historical aerial photography ranging from 1957 through 1962; regional aerial photography such as the City of Fargo and Williams County; statewide data such as mile markers, railroads, watershed boundaries, trauma centers, and snowmobile trails
- Visual ND, the GIS Hub's branding for a cloud-based tool, is being utilized by agencies to share data, services, maps, and applications within agencies, among agencies, and with the public. A company from the IT Professional Services Contract Pool provided Visual ND training and mentorship to agencies, resulting in 13 new publicly available maps/applications
- GIS software was deployed to the Microsoft Azure cloud environment for a successful proof of concept test
- A new open data platform for finding and browsing data is in the early stages of deployment. This software is based on Drupal, which is already used by many state agencies.

## ConnectND

ConnectND is North Dakota's implementation of Oracle/PeopleSoft applications across state government and the University System. The ConnectND



*The IT Coordinators Council, shown here, meets once a month to discuss IT initiatives and conduct EA activity. The group serves as a way for all agencies to participate in the EA process and be involved in non-EA IT initiatives*

portfolio includes web-based applications for Financial Supply Chain Management (FSCM), Human Capital Management (HCM), Enterprise Learning Management (ELM), and Portal Management.

This year, ConnectND celebrated the 11th anniversary of its statewide deployment of the PeopleSoft applications.

ITD's Computer Systems Division hosts the FSCM and HCM applications for NDUS and state government, as well as the state's ELM and Enterprise Portal. The NDUS data center residing in Grand Forks hosts the Campus Solutions application (Student Info System). ITD also supplies Service Desk first tier support, technical development, patch/upgrade, and program management duties. OMB's Fiscal and HRMS divisions are the application owners and provide business/functional decisions and work effort.

During the past year:

- The ELM module usage continued to grow. Over 75,000 enrollments were made, including 6,400 supplemental external enrollments. Over 16,500 activities are now listed in the catalog
- Recruiting Solutions went live February 2014, con-

sisting of Candidate Gateway and Talent Acquisition Manager. This provides online job applications for state jobs. 3,500 job openings were posted and 67,900 applicant ID's have been created thus far. Also, Prepare Hire was deployed, removing double entry and streamlining payroll integration from recruiting

- Talent Management's module, ePerformance, equips agencies to conduct online performance appraisals, document business objectives, create profiles, build career plans, and plan for succession. Over 13,000 performance documents have been created. The annual acknowledgment provides policies in one location, with accountability and tracking
- ConnectND Applications continued to stay on Oracle's supported roadmap for products and toolsets, including yearly tax updates. The FSCM application was upgraded in November 2014, along with tools upgrade in May 2014. ELM is planned to be upgraded to 9.2 along with a tools upgrade allowing more mobile capabilities. An HCM toolset update is planned for November, 2015. ITD hosting efforts included server and firewall upgrades

### State Longitudinal Data System (SLDS)

The Statewide Longitudinal Data System (SLDS) is a series of secured data warehouses comprised of historical education and workforce training data. The objectives of the SLDS are to provide data on the outcomes of ND education and workforce training programs; and to provide private, data-rich reporting environments for the contributors of data, such as K-12 schools, North Dakota University System, and Job Service ND. During the past year:

- The SLDS program focused on providing additional teacher-level student dashboards and predictive analytics for high school and college readiness
- ITD worked on building a data warehouse for the

NDUS and modernizing the reporting environment for all ND institutions of higher learning

- North Dakota eTranscript was expanded to include more districts and colleges. eTranscript is now the preferred method for evaluating the ND State Scholarships and will expand to allow for online scholarship application. A student and parent portal will be initiated in the near future to provide self-service transcript access
- SLDS training for primary and secondary schools continued to build on data-driven decision making frameworks. A partnership with the University System will bring this training into teacher preparation programs
- Workforce readiness research began and continues to help answer policy questions on the college and workforce readiness of students in education and workforce training programs
- Publicly-available research results are now available on the SLDS site (slds.ndcloud.gov)

### Business Intelligence

Business Intelligence (BI) covers a broad range of applications, infrastructure, tools, technologies, and best practices. The results transform raw data, often from multiple sources, into historical, current, and predictive information. Providing access to an organization's

information through the use of BI tools, such as Cognos and Microsoft BI Suite, creates strategic, tactical, and operational insights and enables data-driven decision making. During the past year:

- The Department of Transportation (DOT) worked closely with the BI Team on a Contractor Performance Monitoring System. This system is now integrating data from several distinct information systems and presenting multiple views to DOT executive managers to ensure projects remain on schedule and within budget
- The BI Team continued to support several Department of Human Services (DHS) programs with

up-to-date information to help provide services to North Dakota residents, as well as support federal reporting requirements. The programs include Child Protective Services, National Youth in the Transition Database, Child Welfare, National Child Abuse and Neglect Data System, and Medicaid

- The Office of Management and Budget (OMB) continues to expand on their BI data warehouse encompassing PeopleSoft HR, FIN, Purchase Card, and publically-searchable transparency website
- The continues to utilize the services of the BI Team to apply and report the revenue from the Oil and Gas tax codes with biennial updates to meet the changing ND Century Code

### Master Data Management

Master Data Management (MDM), formerly known as Master Client Index, links together and compares client records from disparate systems, creating a master demographic representation of each citizen receiving state services. Both Department of Human Services and Department of Public Instruction programs rely heavily on the features and abilities of MDM. During the past year:

- An upgrade from version 8 to version 10.1 was completed, which affords increased matching capabilities resulting in greater accuracy across systems
- The BI Team reviewed adding the new DHS Eligibility System and other DHS departmental data to the MDM

### Basic Content Services (SharePoint)

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

- The Department of Public Instruction implemented an Enterprise SharePoint intranet site
- The Enterprise farm was scaled out for a more robust search service, which required an additional server
- Progress was made on building additional test farms for the Statewide Longitudinal Data System to test new application functions and PowerPivot data refresh across the domain

**75.3 Million records managed using FileNet**

### Enterprise Document Management Systems (EDMS)

Enterprise Document Management Systems (EDMS) is a collection of technologies for imaging, document management, forms processing, report management, and workflow. EDMS started with the Tax Department 15 years ago and has grown to include 24 state agencies/programs and 3,200 users. During the past year, we introduced a new FileNet user interface, called Content Navigator, which allows agencies to customize their user experience.

**3,500+ Transcripts sent so far using eTranscript**

# Software Development

Each year brings new challenges and opportunities for the Software Development Division. A major focus over the last year was on application and data security, which has allowed us to ensure the applications we develop are secure and the information provided by the citizens is protected.

Mobility has also been a driving factor for us. Through our partnerships with several state agencies, we are providing mobile solutions that allow agency business leaders to meet the growing citizen expectation to have government services available anytime, anywhere.

## Mobile Development

As the demand for mobile services continues to rise, we have focused our efforts over the past year in establishing a solid foundation to our approach for delivering mobile ready services and applications. Through the successful launch of mobile apps for customers, we have demonstrated the effectiveness of creating hybrid mobile applications that combine both native mobile and web technologies



Doran Eberle, Director of Software Development

into a single solution. By leveraging a hybrid approach, we are able to deliver mobile solutions that are cost effective, provide access to native device functionality, and permit distribution via major mobile app stores.

Beyond mobile apps, we have incorporated responsive design practices into all new website and web-based application development. This allows websites and web-based applications to work well on the broadest range of devices, from desktops to mobile phones.

## Web Application Security

Discovery and remediation of security vulnerabilities on ITD supported applications with the highest assessed risk, is nearing completion. Utilizing specialty software and ethical hacking procedures, ITD continues to work together with agencies to improve the security posture of ITD supported applications and to educate staff on secure coding practices.

Over the next year, ITD will reassess additional applications in the ITD managed inventory to prioritize future discovery and remediation efforts. Additionally, ITD will establish a rescan schedule for each high-risk application. This schedule is important for the discovery and remediation efforts required due to ever-evolving security threats.

## Quality Assurance

ITD continues to provide state agencies with support services centered on quality assurance and quality control. Quality Assurance staff from the division have been focusing on functional and performance testing activities for many agency applications. The team's largest initiatives included functional testing for the ITD HEAT Service Management project and the Department of Human Services' Eligibility Systems Modernization project. We continue to enhance and mature all of our quality assurance services and continue to see a growing demand from agencies for assistance with application testing and requirements validation.

## Software Development Lifecycle

As part of ITD's emphasis on continuous process improvement, we established a systematic governance model to review and update the Software Development Lifecycle (SDLC). We worked to clearly define project team roles and responsibilities, and document the processes, artifacts, and deliverables of the lifecycle. This has produced many benefits, most importantly, consistency for our staff and customers. With a strong and functioning governance process, our staff now has a method to quickly adapt and change internal processes to align with specific project demands and industry best practices.

## Web Content Management – Drupal

ITD has chosen Drupal as its web content management solution (CMS) and has developed a pre-configured template to use as a starting point for all new Drupal website projects. Some benefits of this approach include:

- Consistent presentation among state websites
- Consistent underlining configuration, integration, and security controls
- Quick initial set up, allowing for reduced costs and shortened project timeliness
- Ability to easily maintain and update content

We have experienced terrific customer response to this initiative. We believe the investments we have made in the pre-configured template have provided a highly cost effective option for agencies, boards, and commissions, where funds are often limited.

## Agency Success Stories

Over the past year, we have worked on software development projects with many agencies, boards, and commissions. Below are some of those projects.

### Department of Transportation

The Department of Transportation (DOT) and ITD collaborated on numerous projects over the past year. Highlights include:

- The Motor Vehicle Online Renewals (NDRenewals)

application is now available as a mobile application for Android and iOS mobile devices. The application has been available to the public since April 2015

- The Construction Automated Records System (CARS) was enhanced for claims processing. The enhancements allow project staff to record key dates, amounts, and decisions that document the life of the claim filing and provide management reporting capabilities. The enhancements empower Construction Services Division staff to better track, manage, and analyze DOT's claim processing efforts
- The Law Enforcement Web Reporting (LEWR) application, used by law enforcement agencies to record data gathered from DUI and seat belt enforcement activities, has been expanded to include enforcement activities for underage drinking and distracted driving

### ND Highway Patrol

The ND Highway Patrol (NDHP) and ITD are working together to rewrite their Case Management System into a web-based technology. The new system will manage multiple NDHP business activities, including the issuance of citations and warnings, tracking officer activities and criminal incidents, and streamlining case file workflow. It will be compliant with federal incident based reporting standards (NIBRS/UCR) and will allow qualified criminal incidents to be reported to the Bureau of Criminal Investigation (BCI) via electronic media. The project is currently in the design phase.

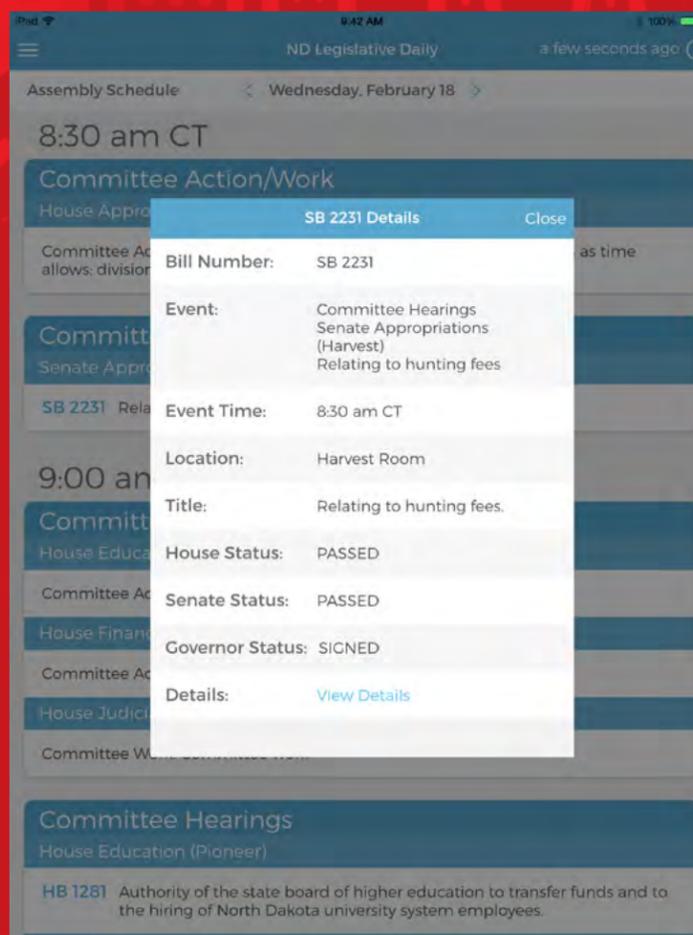
### Legislative Council

ITD collaborated with the North Dakota Legislative Council to develop the North Dakota Legislative Daily mobile application. Legislators utilized this mobile application during the last session. Currently, the application provides three main values to legislators:

- A daily view of legislative meetings comprised of Committee Hearings, Conference Committees, and Chamber Floor Sessions
- Views and indicators of meeting information for bills a legislator sponsors or co-sponsors, or are a committee member or carrier of, and bills tracked in the legislative tracking application.

- Quick access to bill status, the current and past versions of bills, related fiscal notes, and amendments on the day's schedule.

Future plans for the app include enhancing functionality with a process that will notify legislators of upcoming meetings during session, as well as interim committee meetings. Plans also include the release of a public version of the application to the Apple and Google app stores, allowing public users to view schedule information for bills or committees.



The Legislative Daily app, developed by ITD for North Dakota Legislative Council, provides legislators with a host of information, including their daily schedule, bill status, and past versions of bills.

### Information Technology Department

Software Development has been working diligently on rewriting the ITD Billing applications from legacy technologies into a web-based technology. The goals of

this project are to gain internal process efficiency and provide ITD customers better access to billing information. The new application will be in production August 2015.

Software Development is also working with the ITD Records Management team to rewrite the Records Management System. This application will process Record Series, State Form Inventory, and Records Disposal. Phase 1 of this project involved moving the application to a web-based technology. Phase 2 of the project is currently in the development stage and will allow for automation of the review process for the Record Series Description form along with the Records Disposal Certification process.

### Department of Health

The Department of Health (DoH) and ITD worked together to convert all of the Vital Records information into a central Oracle database accessible via the DoH EVERS application. The data was previously saved on outdated storage media and contained Vital Records dating back to the 1870's. The conversion effort resulted in the conversion of: 1,616,000 birth records; 584,500 death records; 16,000 fetal death records; 351,000 marriage records and 105,000 divorce records. Completion of this effort has resulted in the elimination of the legacy Cobol/Natural Vital Records application and the VRBuilder PowerBuilder application.

### Office of Management and Budget

Through our partnership with the Office of Management and Budget, we continue to provide technical support for most of OMB's software applications, the PeopleSoft implementation being the largest and most complex. Some highlights include completing the Financials 9.2 upgrade, implementing Recruiting Solutions, and enhancements to ePerformance and ELM.

### North Dakota Racing Commission

North Dakota Racing Commission selected ITD to redesign and convert their current website to a content management system. We developed the website in Drupal, and it was the first website to utilize ITD's custom Drupal template. The redesign gave the North Dakota Racing Commission the ability to update and

maintain their website while providing their customers with a modern and mobile friendly website interface.

### Department of Human Services

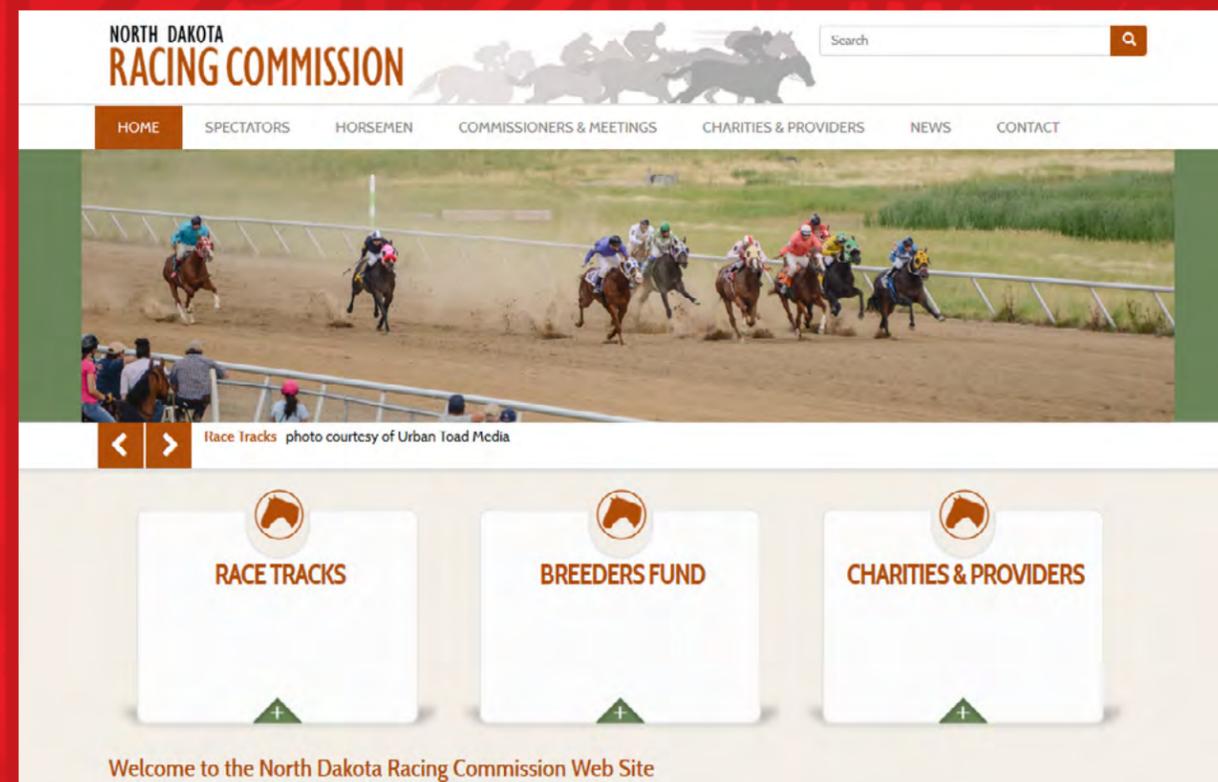
The Department of Human Services (DHS) and ITD continue to collaborate on several projects, with ITD supporting many applications that are critical to DHS and the citizens they serve.

Highlights include:

- The Medicaid Systems Project, which replaces the state's legacy Medicaid Management Information System (MMIS) and Pharmacy Point-of-Sale (POS) systems, continues to progress and is currently scheduled to go live fall 2015
- The first phase of the Eligibility Systems Modernization project is well underway, with an emphasis on the Affordable Care Act (ACA) intake and eligibility determination functionality necessary

to ensure compliance with federal mandates. The implementation approach is a vendor transfer from another state with customization to meet specific NDDHS policy requirements. ITD is working with DHS and the project vendor to ensure appropriate technical knowledge transfer in preparation for future development and maintenance of the application

- The Field Services Electronic Health Record Information System Replacement project will implement a certified electronic health record application for the DHS Field Services Division. The first phase of this project has begun, focusing on the procurement of a product that meets the requirements for inpatient, residential, and outpatient settings. An ITD business analyst will support DHS on this project



The new North Dakota Racing Commission website was developed using ITD's pre-configured Drupal template as a starting point. It is fully responsive, so it works well on mobile devices. Additionally, the website utilizes a content management system (CMS) that allows agency staff to easily update content without the assistance of a web developer.

# Computer Systems

The Computer Systems Division provides centralized computing systems for mainframe, Windows, Linux and midrange Unix/AIX systems for state government. The division provides technical design oversight and support for enterprise computing, which allows multiple agencies to share common storage, database, and computer hosting.

## Cloud Proof of Concept Projects

There is a strong drive in the industry to move applications to a Software as a Service (SaaS) model and an infrastructure as a Service (IaaS) model. Determining the viability of these models within state government, and their effects on security and data management, is a primary focus for Computer Systems.

To this end, we completed a Microsoft Azure proof of

concept (POC) project and are starting an Amazon Web Services proof of concept project. So far, our tests have focused on core technologies, such as Drupal, SQL Server Identity Management, storage offerings, and GIS. We strive to create a consistent testbed for applications to understand how they will behave in different cloud vendor spaces.

The goal of our cloud proof of concept projects is to help us understand the underlying technology required to present cloud services to state government. These POC projects will help us determine how to overcome the issues cloud services present in terms of security, licensing, contract terms and conditions, disaster recovery practices, and costing models to name a few.

The promotion of the cloud is as exciting as it is complex, and in this coming biennium we will continue to educate and train ourselves in deeper cloud understanding. We are eager to move state government into these environments in order to take advantage of the efficiencies that can come with it.

## Security

In the area of security, we deployed a multifactor authentication (MFA) system for all system administrators. MFA enhances security by requiring users to enter in additional information when logging into a system. For example, in order to log into a system a user may have to enter a password plus a time-sensitive code. That code is generated at the time of login and can only be accessed by a device the user has, such as a mobile phone. This provides a second level of security authentication for our most privileged system programmers.

Additionally, we extended Active Directory Federation Services (ADFS) to integrate with cloud services, which allows us to have our state issued accounts meet requirements on external security systems. For end users, this means they have fewer passwords to remember.

## Office 365

Microsoft Office 365 is now production ready for state government. This suite consists of a number of products and services. Currently, some of Office 365's components are already being managed through ITD's Desktop Support team. The initial deployment included Microsoft Office centralized licensing, mobile software and the Onedrive service. This technology offering is managed as a centralized service so that any agency desiring the Office 365 will be able to move into the service in an expedient manner. Centralization of this service provides state government with a consistent product and security practice across all agencies.



ITD's Desktop Support team continually tests major software releases to ensure they work well on computers and other devices. Testing Windows 10, shown on the computer here, has been an important effort for ITD over the past year and will continue to be going forward.



L. Dean Glatt, Director of Computer Systems

**45,226**  
Spam emails removed  
daily by filters

**1,240**  
Networked  
printers

**70,000**  
Active Directory  
Objects

**2.14**  
Raw petabytes  
of disk space

# Network Services

The Network Services Division is responsible for the North Dakota Statewide Technology Access for Government and Education Network, known as STAGEnet. STAGEnet provides data, voice, and video services for state government, higher education, K12 education, political subdivisions, public safety entities, public health units, and libraries.

The infrastructure and services supported by the division are foundational in nature, enabling virtually all other technology initiatives throughout the state, including Internet access, email, instant messaging, and telephone.

The success of STAGEnet is predicated on a strong partnership among STAGEnet partners and the vendor community that support our efforts. It is through this strong partnership that North Dakota has been able to build a service offering that is rather unique across the country and continues to be envy of many states. The challenge for the division is to ensure that STAGEnet continues to meet or exceed the capacity, reliability, security, and evolving business requirements of a diverse customer base.



Duane Schell, Director of Network Services

## STAGEnet – Managing Growth

STAGEnet offers a variety of connectivity options, including traditional broadband, carrier ethernet, and dark fiber solutions. This variety of solutions allows us to meet the diverse business and technical needs of users. A consistent requirement for a vast majority of members is an ever-increasing need for capacity. Historically, bandwidth consumption has increased 38% annually, a trend that's expected to continue for the foreseeable future. The need for additional bandwidth is driven by a variety of business requirements, including the increased utilization of rich video for communication and educational purposes, the ongoing consolidation of application infrastructure and adoption of cloud services, and the increase in data consumption to support business and constituent needs. Through partnerships with the carrier community, STAGEnet continues to offer the bandwidth necessary to meet or exceed these needs in an affordable manner. This past year, like most years, included a strong push to ensure the bandwidth needs continue to be met.

## Safety and Security

ITD has a number of strategic goals in regards to STAGEnet. One critical goal is to ensure that STAGEnet is a safe and secure place for members. As the cyber security landscape continues to rapidly evolve in terms of both volume and complexity, STAGEnet must also evolve. Security has always been a key focus; however, this past year a concerted effort was placed on strengthening the security posture by maximizing the capabilities of prior investments in infrastructure. Efforts were focused throughout the network, including core, edge, and data center infrastructure that serve to protect a significant amount of data for government and education. Through the implementation of more stringent firewall configurations and introduction of stronger intrusion prevention policies, we have reduced the risk exposure for government and education. Additionally, stronger intrusion detection configurations now allow technical experts to be rapidly notified of suspicious activities

99.999%  
Internet  
availability

10 Million  
long distance  
minutes

34,786  
Video events

7,890  
VoIP phones  
supported

occurring on the network, enabling quick response. By continuing to evolve the network and following industry best practices, STAGEnet continues to be a safe and secure place for government and education to fulfill their missions.

## Public Safety

The public safety community provides a high quality and critical function for the citizens of the state. We are fortunate to work with the public safety community and assist in meeting their technology needs. This past year, we assisted the Bismarck-Burleigh Combined Communications Center in deploying a new 911 phone system. This system was purchased, designed, and implemented as a partnership between ITD and the 911 community. We leveraged existing investments in network infrastructure and positioned the solution to be used by multiple 911 centers. As a result of this project, we have received commitments from several 911 centers to join the solution in the upcoming year, along with several more strongly considering participation. This project is a classic example of partnership and collaboration resulting in a cost effective, feature rich, and reliable technology solution for the members of STAGEnet.

Radio communications is another technology that continues to be the primary vehicle for mission critical communications within the public safety community. ITD has been and continues to be an active member of the Statewide Interoperability Executive Committee (SIEC) that is charged with overseeing radio communications across the state. This past year, we coordinated a project, sponsored by the SIEC, which reviewed the existing radio infrastructure across the state, gathered requirements from the user community, and provided recommendations for the future of radio communications. This project produced important information to support a conversation in the most recent legislative session regarding the future of radio communications in the state. Ultimately, the legislature supported furthering the planning process. ITD will continue to work closely with the SIEC in those efforts.

## Broadband Planning

The Broadband ND program, managed by ITD, is focused on ensuring North Dakota's citizens and public safety agencies have the best possible broadband service. To do so, Broadband ND works with the federal government, private industry, public safety agencies, and directly with our state's residents to collect broadband availability data and user requirements. The information gathered in this program is used to help residents and businesses find available broadband service, assist providers in finding new areas to serve, and help our state's public safety agencies utilize new technologies to enhance their effectiveness. This past year the federal government concluded their funding of this project and ITD finalized all activities associated with that effort. Although the formal project is concluded from a federal government perspective, ITD continues to have a rich data set of broadband capabilities across the state and tools that

can continue to be used by stakeholders to further the efforts of the program. This project will continue to be a resource for documenting the growth and capabilities of broadband within the state, for stakeholders to secure broadband, and to promote the ongoing development of broadband capabilities statewide.

### Voice and Video Communications

ITD continues to provide support for voice and video technologies. Both technologies are instrumental in facilitating communication among government and education and with the constituents they serve. The technologies have continued to evolve with new or enhance features designed to improve the communication or collaboration experience. Many of the new or improved features are targeted at empowering and enhancing the mobile workforce and the mobile experience. ITD is committed to an ongoing effort of ensuring these services remain current and provide a robust, stable, and feature rich environment for the user community.



*A network that can support growing data usage and provide a consistent and reliable connection continues to be a foundational technology necessary for virtually all other technology projects.*

# Human Resources

Historically, human resource departments have been concerned mostly with administrative tasks, such as benefits, compensation, and employee orientation. More recently, however, the field of human resources has expanded and evolved to be a key part of any successful businesses' strategic plan. Activities that are vital to business development, such as workplace culture, employee recruitment, and training and development, fall under the umbrella of human resources. With a mature and innovative human resources division, an organization's employees thrive, which means the organization and its customers can thrive. This is especially true for ITD, where the quality of our services directly hinges on the knowledge and passion of our staff. Over the past year, the Human Resources Division has made a number of advancements so we, as an organization, can retain high caliber employees and provide high quality services. Particular effort was exerted in the areas of recruitment, retention, training and development, compensation and benefits, and employee relations.

### Recruitment

ITD is in the second year of utilizing PeopleSoft's Recruiting Solutions, which has automated the state's recruitment process. Over the last year, ITD has had 38 positions to fill with 376 applicants, of which 169 met the minimum qualifications. Many of the requisitions were due to internal promotions or retirements of long-term staff in addition to normal attrition. As the IT market continues to tighten and the local economy remains strong, we have to continually focus on our recruitment strategies. To such end, we have increased our utilization of radio advertising in order to attract the more passive job seeker, as well as other online channels, such as LinkedIn.

### Retention

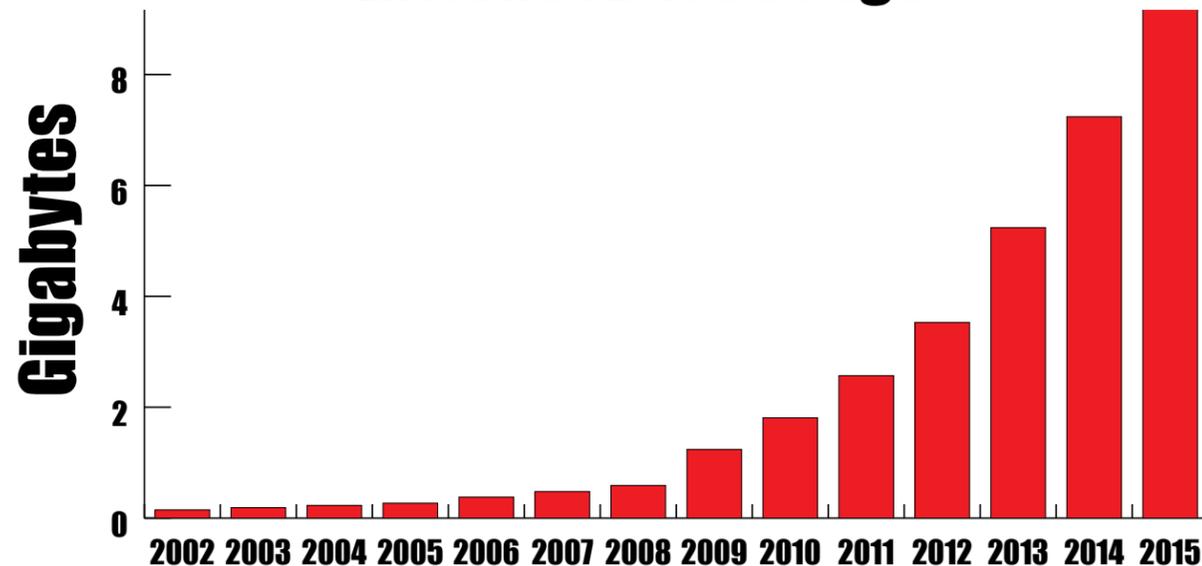
There are many different ideas about the best ways to retain employees. ITD subscribes to a holistic approach to employee retention, understanding that retention relies on more than just compensation. Tangible and intangible benefits, recognition, challenging work, cultural improvement events, and a professional yet employee friendly atmosphere are part of our broad employee retention strategy.

Now that we've transitioned to a single location, our employee survey affirms that we have positively influenced collaboration in many areas in addition to workplace culture. Previously, ITD employees in Bismarck were spread out among five different locations, which reduced the amount of face-to-face and team building time employees had. We will still have some divisions outside this location, such as EduTech and the Center for Distance Education, which are located in Fargo, but we hope that these divisions also benefit from having a single ITD location in Bismarck.

### Training & Development

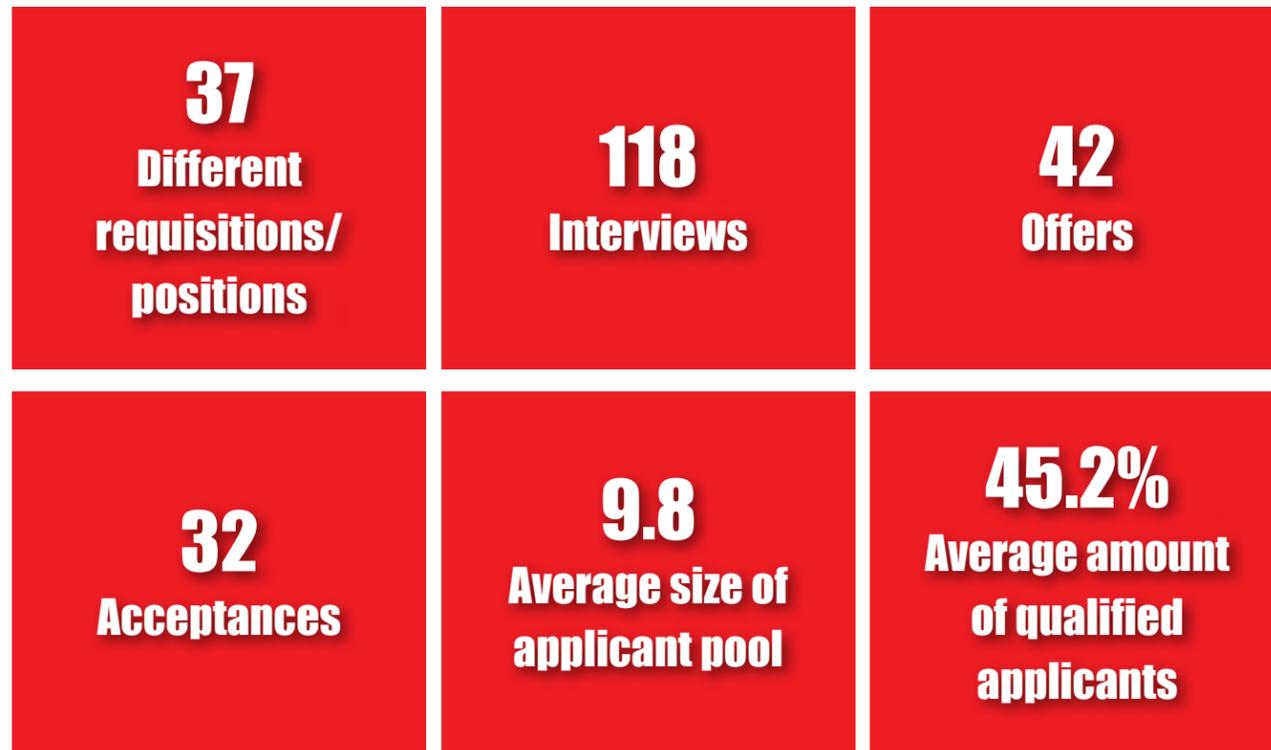
More than any other field, organizations in the IT field must continually train employees to ensure they have the skills and knowledge needed to work with new and

## Internet Data Usage



*Shelly Miller, Director of Human Resources*

## 2015 ITD Position Statistics



existing technologies. Thus, we put forth significant effort into training and development. Multiple ITD employees continue to take advantage of our tuition assistance and reimbursement program to finish bachelor's degrees. This not only helps employees advance their careers, it improves the credibility of the entire organization.

Developing a leadership program is one of the initiatives on ITD's 2015-2017 Strategic Plan. We want employees to see ITD as a place they can grow, build new skills, and advance their career. ITD has taken the next step towards this initiative by partnering with BSC on their Excellence through Leadership program for our employees. We are calling this annual mentoring program AMPLIFY. It is designed to allow participants to grow personally and professionally, enhancing career development by gaining knowledge and developing skills through their participation in the mentoring relationship. The program also encourages learning, collaboration, and knowledge sharing.

### Compensation & Benefits

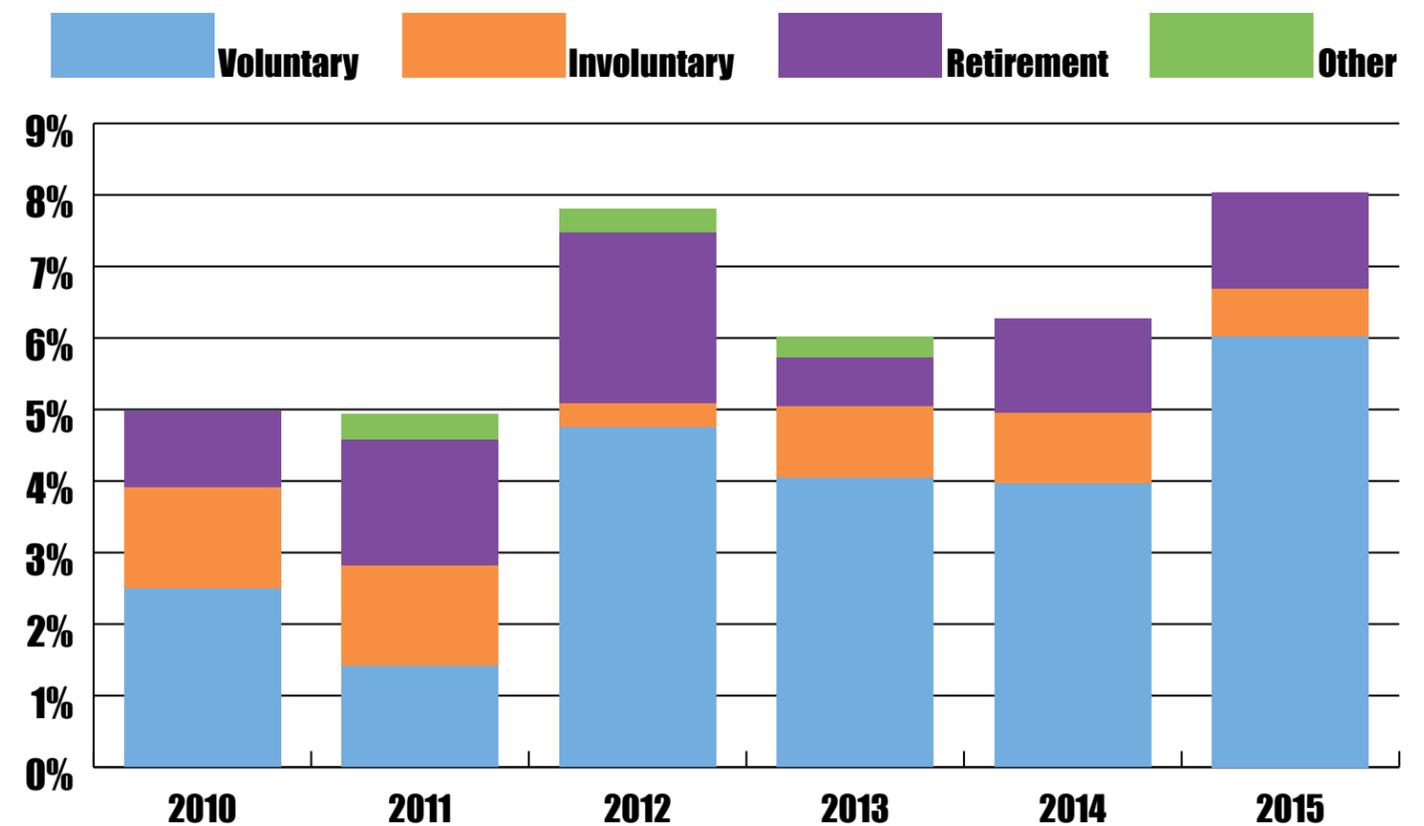
With an ever evolving IT field and North Dakota's strong economy, remaining competitive with IT salaries is vital to securing a skilled workforce. As such, we conduct research into industry and local trends to make informed decisions when determining proper compensation and benefits packages. We analyze data from various sources, including the salary information applicants share about their current jobs during the application process, the number of applicants that decline a job offer due to the salary, and salary survey data acquired by the state. To make accurate comparisons, we must have our job descriptions up to date. Thus, we are continuing to work with each division to ensure our Job Description Questionnaires are current and reclassifying employees when needed.

### Employee Relations

Diligent efforts are put forth in a variety of areas dealing with employee relations. Some of these areas include employee wellness and safety, the bi-annual employee satisfaction survey, monthly lunch meetings with management, annual Meet and Greet with each work unit, as well as cultural improvement activities. Now that our Bismarck employees are in one location, our employee-run recognition committee has been able to increase efficiencies and thus, hold more cultural improvement events for our employees. Our committee has also streamlined our Manager's Toolkit, thus enabling the committee to track participation and provide encouragement where needed to utilize the recognition tools available to our managers.

As we look forward to the upcoming year, we must continue to develop and refine our HR practices to promote and attain the behaviors, culture, and competencies needed to achieve organizational goals. We must continue working on strategies and initiatives to retain our talented employees, as well as attract new talent in an increasingly tight IT market. We must also continue collaborating with the goals of ITD's other divisions, enabling each division to meet its goals. Ultimately, these efforts will help us understand the future of our most important asset—our employees.

## ITD Turnover Trends



# Security

ITD's security section is responsible for the governance and management of information security across state IT systems. This responsibility, however, is shared with all state technology users. While ITD leads the charge in securing the state systems and setting security standards, keeping North Dakota's IT systems and data secure requires a partnership among all agencies at every level.

2015 has been a crisis year for cyber crime and the State of North Dakota has been among those affected. Cyber criminals continue to improve their techniques and threats continue to evolve across a broad range of attack vectors. Globally, the number of breaches exposing sensitive information has created an atmosphere which is almost mind numbing. At ITD, we have made significant investments in our security posture and partnerships. Security has been and continues to be one of our major operational and strategic focuses.

## ITD's Cybersecurity Framework

Addressing the cybersecurity challenge requires prioritizing assets, understanding threats, directing resources to critical areas, and increasing security awareness for both



Dan Sipes, Deputy CIO & Director of Operations

senior level leaders and employees. The foundation of our efforts in this arena is ITD's Cybersecurity Framework.

The purpose of the Framework is to clearly identify ITD's security objectives, and the security processes surrounding North Dakota's information and information technology assets. The Framework relies on existing standards, guidance, and best practices to achieve outcomes that will assist in managing the state's cybersecurity risk. By relying on practices developed, managed, and updated by the industry, the Framework evolves with technological advances and business requirements. The Framework consists of five core functions – Identify, Protect, Detect, Respond and Recover, which are focused on four core security areas – network, host, application, and user security.

As noted earlier, effective cybersecurity is a partnership among all those involved in using and administering information systems. To that end, the Framework defines the roles and responsibilities involved in this partnership:

### Information Security Management

The CIO, Deputy CIO, and ITD Security Section set the security direction for the state and direct ITD's day-to-day management of information security.

### Information/Application Owners

ITD does not own the information hosted on the infrastructure we operate. The information/application owners are the state agencies or political subdivisions that utilize ITD's services. Agency directors, IT coordinators, and IT security staff are responsible for coordinating with ITD on the security of their applications and data.

### Technology Providers

Project managers, developers, architects, and network/system administrators are responsible for following security best practices when planning, designing, and implementing IT solutions.

### Supporting Functions

IT Security relies on a broad range of supporting individuals and functions. For example, auditors,

physical security staff, training staff, and facilities management all have a role to play. From making sure the power stays on, to ensuring doors are locked and new employees are aware of best practices, security requires collaboration among many parties.

### Users

Users are any individuals who directly use information systems, which includes all state employees. Users should follow set security procedures, report security problems, and attend required security awareness and functional training.

## Accomplishments

An important goal of the Cybersecurity Framework is to ensure a continuous improvement process related to our cybersecurity posture. During the past year we made progress in a number of areas, some of which is detailed below.

### Partnerships

We worked 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.

An essential partnership we have continued to strengthen is with the Multi-State Information Sharing & Analysis Center (MS-ISAC). The MS-ISAC is affiliated with the federal Department of Homeland Security and we collaborate with them on proactive network monitoring, information sharing, and cybersecurity forensics.

### Expanded Efforts

We worked with the Governor and Legislature to add a dedicated ITD security analyst at the State and Local Intelligence Center to assist in analyzing cybersecurity threats affecting State of North Dakota critical infrastructure and key resources. Our security initiatives also included a security analyst in our EduTech division to improve security awareness and best practices in the K-12 community. Additional staffing was also added to work on cybersecurity initiatives for STAGEnet and the state data center.

Our work in scanning critical web applications was expanded. This allows us to proactively identify and remediate potential security vulnerabilities.

Adoption of our multi-factor authentication solution increased over the last year. Multi-factor authentication strengthens the security posture for critical systems and users with privileged access.

### Audits

Independent assessments of ITD's security policies and processes include a biennial SOC2 audit conducted by the Office of the State Auditor with additional security testing conducted by an external security consultant. These audits provide assurance to our customers and their auditors that ITD has appropriate controls in place. The latest SOC2 audit was completed in May 2015. A copy of the SOC2 report can be found at [http://www.nd.gov/auditor/reports/i112\\_15.pdf](http://www.nd.gov/auditor/reports/i112_15.pdf). The latest audit by the external security consultant was completed in February of 2014.

### Disaster Recovery

All state entities are required to develop a business continuity plan to ensure the continuity of government services in the event of a disaster. To assist agencies with this directive, ITD operates a second data center with a focus on minimizing data loss and providing recovery options to customers in the event of a disaster.

Minimizing data loss 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 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 RPOs, ITD continues to work 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.

We continue make improvements to the RTO and RPO for enterprise services. ITD has seen an increase in agencies looking to partner with ITD to improve the RTO for critical business functions and perform related disaster recovery testing.

# Administration

The Administrative Services Division is responsible for ITD's accounting functions, which include rate development, billing, and contract administration. We are also responsible for records management and retention policies for government and higher education.

## How ITD funding works

ITD operates as an internal service fund. ITD tracks and monitors the expense of each service in cost centers to ensure that one service is not subsidizing another. When needed, ITD adjusts rates accordingly. 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.

Actual funding for IT operations and projects are appropriated to each agency, which in turn pay ITD for services. General-funded IT projects are reviewed by the State Information Technology Advisory Committee

(SITAC). This group of senior-level executives prioritizes IT projects to assist the Legislature and other budget stakeholders as they address budget requests during legislative session. North Dakota has historically been a conservative state in regards to funding IT projects and requires a projection of ongoing operating costs for any new IT projects before approval is granted.

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

ITD is in the final testing phase of BILLIT, the billing system that will replace similar functionality from the legacy mainframe as well as the retired DELA environment. BILLIT will utilize electronic notification of invoices, saving ITD the cost of paper and postage for approximately 300 invoices per month. Customers will have report functionality of historical costs and usage that was not available on the mainframe. July 2015 will be the first billing cycle to utilize BILLIT.

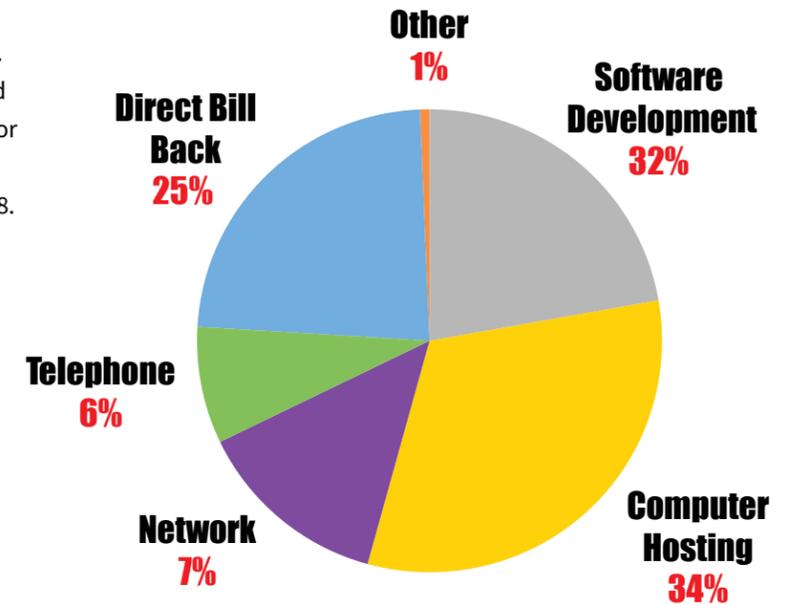
## Records Management

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, and forms management. ITD also consults with agencies on a regular basis to review their records management

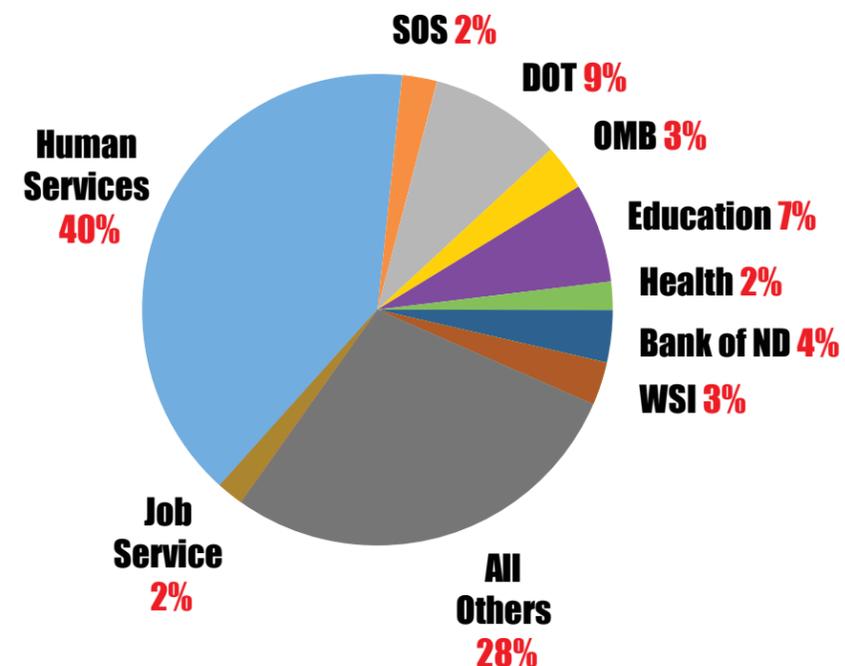
program and practices, and offer recommendations to enhance their current processes and provide guidance on records management best practices.

ITD has implemented records management programs in 95 state and local government agencies, higher education institutions, and boards and commissions. Last year, state agencies, local government offices, and higher education institutions disposed of 14,117 cubic feet of records that satisfied their retention requirements. This savings in storage space, equipment, and related salaries resulted in a cost avoidance of \$5,174,550. For the entities reporting a volume of electronic records, 4,889 GB were disposed for a cost avoidance of \$3,178.

## ITD REVENUE BY SERVICE



## ITD REVENUE BY DEPARTMENT



Greg Hoffman, Director of Administrative Services

# Rates Comparison

The Information Technology Department (ITD) generates revenues by providing 114 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.

## Central Computer CPU Rates (per second)

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota MNIT
<b>Batch CPU</b>	<b>\$.64</b>	\$.62	\$ 2.71	n/a
<b>CICS CPU</b>	<b>\$.64</b>	\$.62	\$ 1.68	n/a
<b>ADABAS CPU</b>	<b>\$.64</b>	\$.62	\$ 1.19	n/a
<b>TSO CPU</b>	<b>\$.64</b>	\$.62	\$ 1.89	n/a

SD also charges \$.08 per 1000 I/Os. MN uses service units to bill rather than CPU seconds because they run three different processors.

## Network Fees

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota MNIT
<b>Technology Fee</b>	<b>\$ 59.00</b>	\$ 70.50	\$71.41	\$ 66.95
<b>Desktop Support (per domain account)</b>	<b>\$ 100/PC/Mo.</b>	Included	\$ 101.25/Hour	\$78.00
<b>Access/Information/Enterprise Mgt. Fee</b>	<b>Included</b>	\$ 45.00	n/a	n/a
<b>DSL Service</b>	<b>Cost + \$175</b>	Actual Cost	Actual Cost	Cost + 15%
<b>ETS-10</b>	<b>\$ 850.00</b>	Actual Cost	Actual Cost	Varies

## Telephone Fees

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota MNIT
<b>Telephone Line</b>	<b>\$ 20.00 - VoIP</b>	\$ 19.00 - Analog	\$ 24.04 - VoIP	\$ 35.00 - VoIP
<b>Speaker/Display</b>	<b>\$ 3.00</b>	Actual Cost	Included	Actual Cost
<b>Voicemail (unlimited)</b>	<b>\$ 5.00</b>	\$ 6.00	n/a	\$ 5.45
<b>3-minute limit</b>	<b>n/a</b>	n/a	\$ 3.77	n/a
<b>Additional Minutes</b>	<b>n/a</b>	n/a	\$ 2.23	n/a

## Long Distance

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota MNIT
<b>In-State</b>	<b>\$.05</b>	\$.06	\$.06	\$.053
<b>Out-of-State</b>	<b>\$.05</b>	\$.07	\$.06	\$.065
<b>800 Service</b>	<b>\$.05</b>	\$.07	\$.67	\$.085

# Software Development Rate Comparison

Entity	Location	Billing Rate/Hour of Service
<b>Information Technology Department</b>	<b>State of North Dakota</b>	<b>\$ 81- \$ 122</b>
Applied Engineering	Bismarck, ND	\$ 88 - \$ 102
Agency Mabu	Bismarck, ND	\$ 75 - \$ 80
Eide Bailly	Bismarck, ND	\$ 90 - \$ 165
Enterprise Solutions	Bismarck, ND	\$ 90 - \$ 130
Nexus Innovations	Bismarck, ND	\$ 94 - \$ 140
Connvertex	Sandy, UT	\$ 100 - \$ 130
Bpro, Inc	Pierre, SD	\$ 55 - \$ 75
Integration Architects	Minneapolis, MN	\$ 90 - \$ 125
QA Technologies	Omaha, NE	\$ 88 - \$ 95
Seven Seas Technologies	Chesterfield, MO	\$ 88 - \$ 103
TEK Systems	Atlanta, GA	\$ 88 - \$ 103

# ITD Service Rate Trends

## Software Developer

Service Rates	July 2015	July 2014	July 2013	July 2012
<b>Software Developer</b>	\$ 81- \$ 122	\$ 69 - \$ 99	\$ 69 - \$ 94	\$ 67 - \$ 86

## Central Computer CPU Rates (per second)

Service Rates	July 2015	July 2014	July 2014	July 2013
<b>Batch CPU</b>	<b>\$.64</b>	\$.58	\$.64	\$.62
<b>CICS CPU</b>	<b>\$.64</b>	\$.58	\$.64	\$.62
<b>ADABAS CPU</b>	<b>\$.64</b>	\$.58	\$.64	\$.62
<b>TSO CPU</b>	<b>\$.64</b>	\$.58	\$.64	\$.62

## Network Fees

Service Rates	July 2015	July 2014	July 2013	July 2012
<b>Technology Fee</b>	<b>\$ 59.00</b>	\$ 49.50	\$ 49.50	\$ 49.00
<b>ETS-10</b>	<b>\$ 850.00</b>	\$ 1,350.00	\$ 1,350.00	\$ 1,780.00

## Telephone Fees

Service Rates	July 2015	July 2014	July 2013	July 2012
<b>Telephone Line</b>	<b>\$ 20.00 - VoIP</b>	\$ 24.00	\$ 24.00	\$ 24.00
<b>Speaker/Display</b>	<b>\$ 3.00</b>	\$ 3.00	\$ 5.00	\$ 5.00
<b>Voicemail (Unlimited)</b>	<b>\$ 5.00</b>	\$ 5.00	\$ 5.00	\$ 5.00

## Long Distance

Service Rates	July 2015	July 2014	July 2013	July 2012
<b>In-State</b>	<b>\$.05</b>	\$.06	\$.07	\$.07
<b>Out-of-State</b>	<b>\$.05</b>	\$.06	\$.07	\$.07
<b>800 Service</b>	<b>\$.05</b>	\$.07	\$.07	\$.07

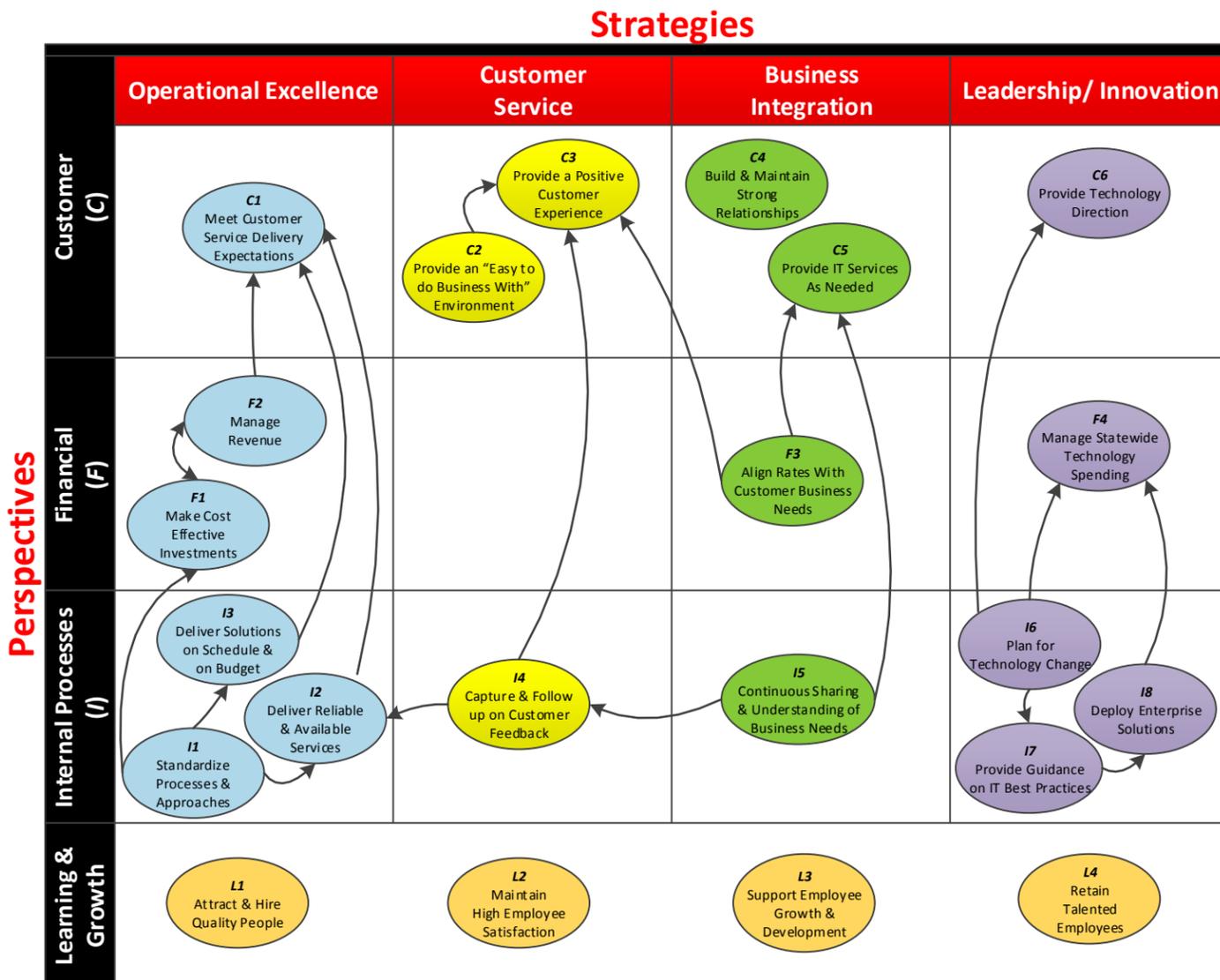
# Strategic Planning & Performance Measures

The following three pages detail our progress towards our strategic goals.

The map below is ITD's Strategy Map. The map is based on Kaplan and Norton's Balanced Scorecard approach and gives ITD direction by allowing us to drill down from high-level strategies to specific, measurable objectives and initiatives.

The map is organized by perspectives on the left column and strategies along the top. Perspectives are simply categories of objectives (the bubbles in the middle), and strategies are broad organizational priorities. While an objective can stand alone, some also include initiatives and measures of success. Initiatives are specific tasks or projects we plan to undertake in the 2015-2017 biennium. Measures of success are ways to gauge how well we are achieving objectives.

A detailed explanation of our entire strategic plan is available at: <http://www.nd.gov/itd/publications>.



## Strategic Planning & Performance Measures

Measurement	Target	June 2015	Baseline (Previous Years)
<b>Acceptable Level of Total Net Assets</b>	≤ 2.0	1.3	2012 – 2.1 2013 – 2.1 2014 – 2.5

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	Target	June 2015	Baseline (Previous Years)
<b>Percentage of ITD Rates Reported in Annual Report That Are Competitive</b>	100%	100%	2012 – 100% 2013 – 100% 2014 – 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	Target	June 2015	June 2014	June 2013
<b>Service Requests</b>	MONITOR	46,875	45,948	43,131
<b>Incidents</b>		72,755	69,412	66,463

SCORECARD PERSPECTIVE: CUSTOMER. 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. Customers were encouraged to provide feedback on 91,343 of the requests/incidents. 81 respondents were dissatisfied with the overall experience, creating an overall satisfaction rate of 99.9%."

Customer Satisfaction Indexes	Target	% Satisfied		
		June 2015	June 2014	June 2013
<b>Value</b>	≥ 92%	93%	87.3%	83.1%
<b>Timeliness</b>	≥ 97%	95.3%	91.1%	83.6%
<b>Quality</b>	≥ 97%	95.3%	92.4%	88.3%
<b>Knowledge</b>	≥ 98%	95.3%	93.7%	93.3%
<b>Professionalism &amp; Courtesy</b>	≥ 100%	100%	93.7%	98.4%

SCORECARD PERSPECTIVE: CUSTOMER. Each year, executives and business professionals were invited to join IT coordinators in completing ITD's Annual Customer Survey. As a result, 43 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)	2014/2015	Target
Employee Satisfaction Index	2012/2013 – 2.20	2.17	≥ 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 last survey process.

Measurement	Baseline (Previous Years)	June 2015	Target
Total Employee Turnover	2013 – 6.06% 2014 - 6.27%	8.03%	< 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)	June 2015	Target
Percentage of Service Levels Met	2014 – TBD	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)	June 2015	Target
Percent of Strategic Business Plan Objectives Completed or On Schedule	2013 – 39% 2014 – 61%	54%	≥ 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. This measure assesses management's ability to plan effectively and put business strategy into action.

# Financial Statements

Statement of Net Assets June 30, 2014 & 2013

	FY 2014	FY 2013
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash Deposits at BND	\$9,877,837	\$8,030,063
Intergovernmental Receivables	137,358	135,832
Accounts Receivable	128,295	98,751
Due From Other Funds	4,925,891	5,801,237
Prepaid Items	1,579,505	1,375,517
Deferred Bond Issuance Costs	<u>0</u>	<u>6,681</u>
<b>TOTAL CURRENT ASSETS</b>	\$16,648,866	\$15,448,081
<b>NON-CURRENT ASSETS:</b>		
Capital Assets:		
Building & Equipment - Net	<u>10,258,013</u>	<u>10,790,687</u>
Total Non-current Assets	<u>10,258,013</u>	<u>10,790,686</u>
<b>TOTAL ASSETS</b>	<u>\$26,906,899</u>	<u>\$26,238,767</u>
<b>LIABILITIES</b>		
<b>CURRENT LIABILITIES:</b>		
Accrued Payroll	\$2,059,636	\$2,029,392
Accounts Payable	705,283	1,682,794
Due to Other Funds	7,981	31,545
<b>TOTAL CURRENT LIABILITIES</b>	\$2,772,900	\$3,743,731
<b>NON-CURRENT LIABILITIES:</b>		
Compensated Absences Payable	2,015,194	1,981,013
Bonds Payable	<u>0</u>	<u>736,932</u>
<b>TOTAL NON-CURRENT LIABILITIES</b>	<u>2,015,194</u>	<u>2,717,945</u>
<b>TOTAL LIABILITIES</b>	4,788,094	6,461,676
<b>NET ASSETS</b>		
Invested in Capital Assets, Net of Related Debt	10,258,013	10,790,687
Unrestricted	<u>11,860,792</u>	<u>8,986,405</u>
<b>TOTAL NET ASSETS</b>	<u>22,118,805</u>	<u>19,777,091</u>
<b>TOTAL LIABILITIES &amp; NET ASSETS</b>	<u>\$26,906,899</u>	<u>\$26,238,767</u>

# Financial Statements

Statement of Revenues, Expenses and Changes in Fund Net Assets for years ending June 30, 2014 & 2013

	FY 2014	FY 2013
<b>OPERATING REVENUE:</b>		
Sales and Services	\$60,619,327	\$58,427,069
<b>OPERATING EXPENSES:</b>		
Salaries and Benefits	\$24,644,621	\$23,902,008
Operating	29,287,294	29,127,271
Depreciation	<u>4,343,898</u>	<u>4,514,446</u>
<b>TOTAL OPERATING EXPENSES</b>	<u>58,275,813</u>	<u>57,543,725</u>
<b>OPERATING INCOME (LOSS)</b>	2,343,514	883,344
<b>NON-OPERATING REVENUES (EXPENSES):</b>		
Interest Expense	(14,239)	(43,055)
Loss on Sale of Capital Assets	(12,543)	
Other	<u>24,982</u>	<u>73,304</u>
<b>TOTAL NON-OPERATING REVENUE (EXPENSES)</b>	<u>(1,800)</u>	<u>30,249</u>
INCOME (LOSS) BEFORE CONTRIBUTIONS AND TRANSFERS	2,341,714	913,593
<b>TOTAL NET ASSETS - BEGINNING OF YEAR</b>	<u>19,777,091</u>	<u>18,863,498</u>
<b>TOTAL NET ASSETS - END OF YEAR</b>	<u>\$22,118,805</u>	<u>\$19,777,091</u>

## Guiding Principles

### Respect

We believe respect for yourself and others is a foundational quality that builds trust within our relationships, so we will treat everyone with dignity and respect.

### Teamwork

We believe success depends on the synergy created through the combination of individual talents and diverse ideas, so we will actively engage with coworkers and customers.

### Achievement

We believe in results that best address the needs of the state of North Dakota, so we will deliver quality solutions and strive to exceed customer expectations.

### Integrity

We believe in doing the right thing, always, so we will hold ourselves to the highest moral, ethical, and professional standards.

### Leadership

We believe everyone has the responsibility to make a difference, so we encourage initiative and creativity and are committed to investing in knowledge and expertise.

### Service

We believe customers are our business, so we hold ourselves accountable for a positive and professional customer experience.

# Website & Additional Information

**North Dakota State Portal**

[www.nd.gov](http://www.nd.gov)

**State of North Dakota Information Technology Department**

[www.nd.gov/itd](http://www.nd.gov/itd)

**An electronic copy of this annual report can be viewed by visiting**

[www.nd.gov/itd/publications](http://www.nd.gov/itd/publications)