

Presentation to the Information Technology Committee

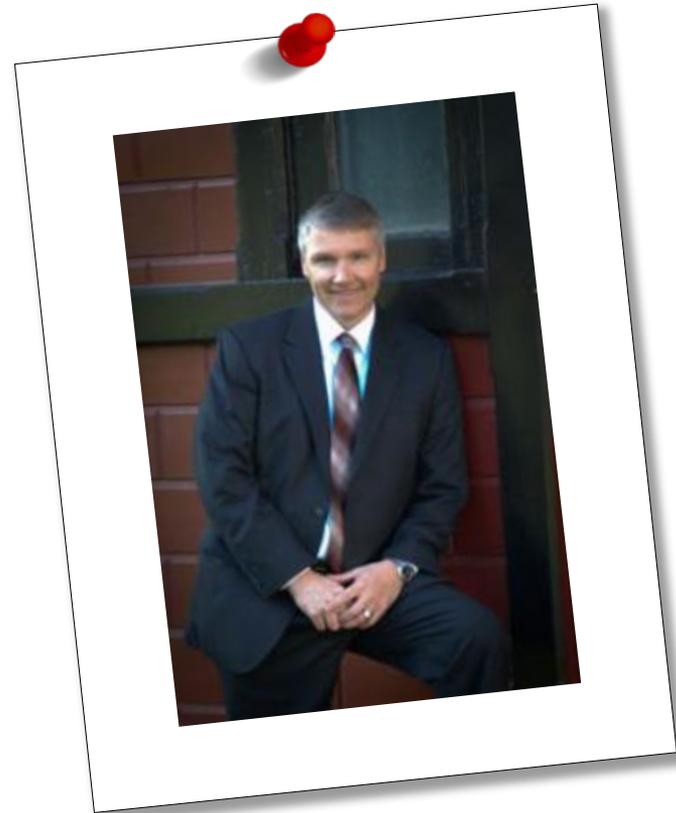
September 25, 2014

Harvest Room, State
Capitol



Mike Ressler

CIO





2013-2014

**Annual
Report**

Department
Technology
Information



- 2007-2009
- 2009-2011
- 2011-2013
- 2013-2015
- 2015-2017 Strategic Plan**
- 2017-2019
- 2019-2021
- 2021-2023
- 2023-2025

www.nd.gov/itd

Our Mission:

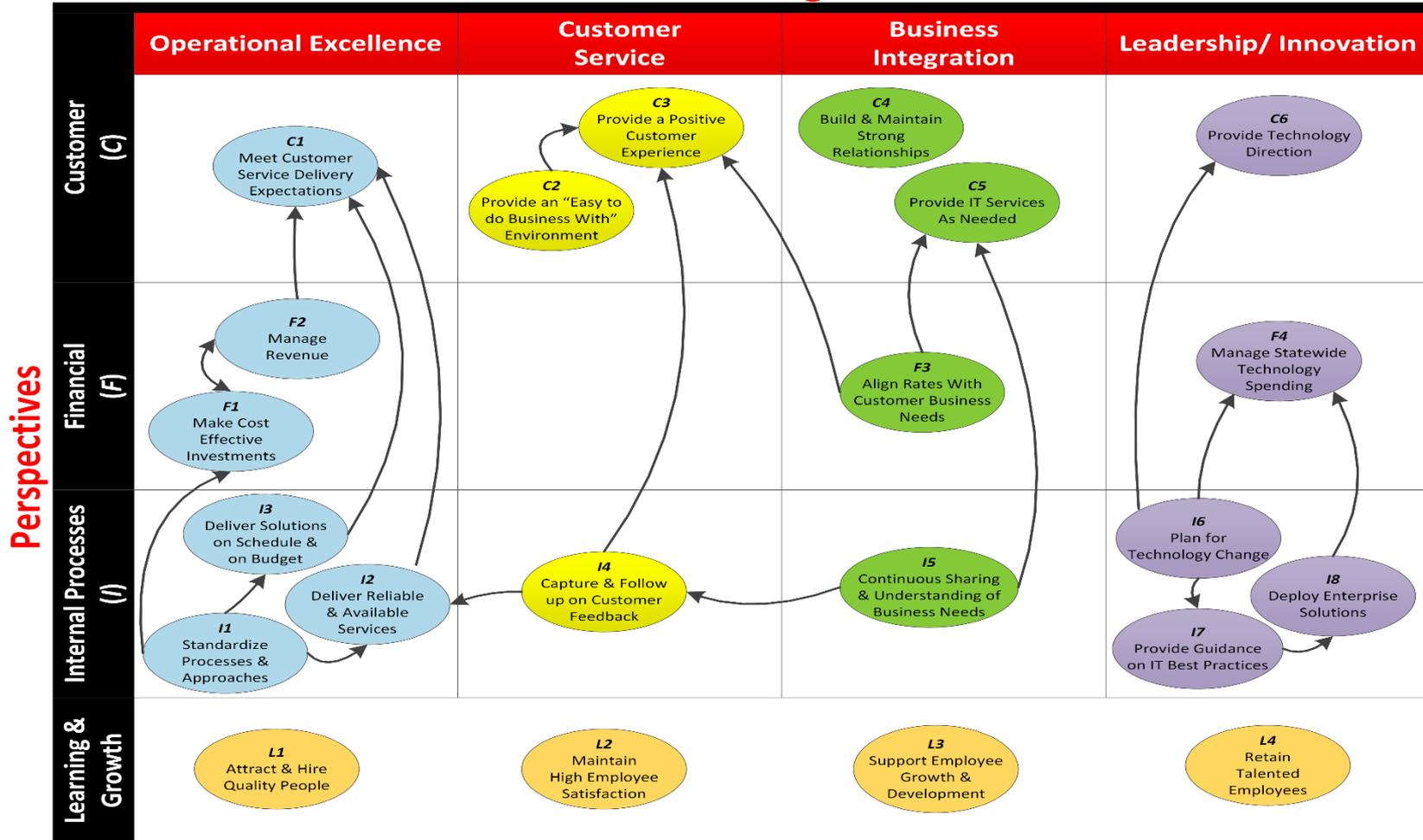
To provide leadership and knowledge to assist our customers in achieving their mission through the innovative use of information technology.





Strategy Map

Strategies





Provide an “Easy to do Business With” environment

Initiative: Deploy a new method for requesting services in a simplified fashion.

Provide IT services as needed

Initiative: Expand desktop management service based on policy decisions, client demand, and resource availability.

Provide technology direction

Initiative: Expand communication with stakeholders regarding cloud services.

Align rates with customer business needs

Initiative: Align ITD’s rate structure with the evolving cloud-based technology landscape.

Standardize processes and approaches

Initiative: Become more proactive in audit/assessment response by improving processes and documentation to benefit auditors and ITD.

Initiative: Improve data-driven decision-making by leveraging information from internal systems.

Initiative: Develop a decision-making framework to guide cloud, hybrid, and on premise architectures.

Initiative: Develop procurement practices and enterprise architecture standards for cloud services.

Deliver reliable and available services

Initiative: Advance the state’s security posture by leveraging existing security investments.

Plan for technology change

Initiative: Develop and establish ITD’s role in brokering enterprise cloud services.

Initiative: Determine network, computing, & software architecture necessary to support cloud service.

Initiative: Determine the staffing impact of cloud services.

Support employee growth & development

Initiative: Build a leadership development and mentorship program to help build our next generation of supervisors and managers.



2013-2014

Annual Report

Department
Technology
Information





Jack Dalrymple, Governor of North Dakota



Mike Ressler, Chief Information Officer

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The 2013-2014 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.

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

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.

88.5%
*agree ITD is
aligned with its
mission*

97.5%
*view ITD as a
trusted partner*

89.7%
*agree that ITD's
services meet their
needs*

89.9%
*believe ITD is
easy to do
business with*



92.4%
*say ITD provides
a positive customer
experience*

88.6%
*acknowledge that
ITD builds strong
relationships*

88.5%
*believe ITD
provides technology
direction*

Executive Summary

North Dakota has made a number of strides in the area of information technology over the past year. While this annual report details each of the advancements made, I want to highlight some of the most critical developments, including IT projects, mobile development, the cloud, and security.

The majority of state agencies have been involved in at least one project over the last year that directly improves citizens' experience when doing business with the state. Of these projects, state agencies completed twelve IT projects with an individual budget in excess of \$250,000, and a total aggregate cost of over \$19,000,000. All twelve were completed within the state allowed variance for cost and ten of the twelve were completed within the variance for schedule. However, one large project was terminated when it became apparent that the vendor could not deliver a system that would meet the agency's needs. Deploying large, multi-million dollar technology projects is a difficult task for both private and public sector organizations, and has been challenging for us, but North Dakota continues to outperform the national average as measured by the CHAOS report, an international benchmarking group.

With the saturation of mobile devices and maturation of app development in the private sector, citizens are now expecting government to provide mobile friendly services. ITD's Software Development Division has continued to design new government websites to work with all devices, from mobile phones to desktop computers. They have also put together a strategy for developing mobile apps and have begun working with agencies in developing apps.

The state also continues to make progress towards the integration of cloud computing. We are redefining our role as a broker assisting state agencies in acquiring and maintaining these services, and we continue to architect the state network to meet increasing bandwidth needs. Additionally, successful negotiations were completed with Dakota Carrier Network (DCN), enhancing the state network and allowing for additional bandwidth at an affordable price.

Security has been, and will continue to be, a major priority for the department. This past year, over 60 major retailers, hospitals, and government organizations reported large data breaches. Ensuring that citizen data is secure will always be an emphasis for the state. To this

end, ITD made a sizable investment in tools to protect and report on data traversing throughout state and local government, K-12, and higher education systems.

Many of the Statewide Alliances, such as Criminal Justice Information Systems (CJIS), Health Information Technology (HIT), and EduTech, also made significant IT advancements. For example, a 2014 report by the National Center for Health Statistics identifies North Dakota as a national leader in Health Information Network implementation.

These are just a few of the highlights you will find in the ITD 2013-2014 Annual Report. I invite you to keep reading and find out how we're positioning IT solutions to improve state government and serve the public.



Mike Ressler, Chief Information Officer

Statewide Alliances

Criminal Justice Information Sharing (CJIS)

The ND Criminal Justice Information Sharing (CJIS) program promotes public safety and empowers law enforcement to make informed decisions across statewide jurisdictional and organizational boundaries. ND CJIS provides several information systems to assist



Molly Brooks, Director of CJIS

in both the capturing of accurate and timely criminal justice information, and the sharing of criminal justice information via a centralized message broker (ND CJIS Broker) and hub (ND CJIS Portal). During the past year:

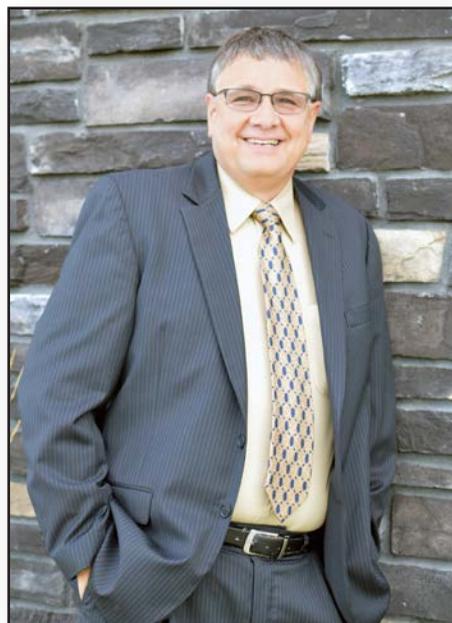
- The ND CJIS Portal grew from 2,066 registered users, to 2,310 registered users from 180 separate agencies. Major enhancements included: additional integration projects with local law enforcement agencies' records management systems, receipt of Department of Health's death records, and addition of ND DOCR Parole and Probation's parole conditions.
- The Law Enforcement Records Management System (ND CJIS LERMS), which serves 57 agencies, grew to 474 users. ND CJIS and State Radio contracted for, and made, substantial progress in implementing the LERMS-P1 upgrade, which will allow more agencies to utilize this system and further automate records.
- The number of state's attorney offices actively using the States Attorney Reporting System (ND CJIS

STARS) grew to 14. ND CJIS procured the additional software necessary for planned integration projects.

- The North Dakota Statewide Automated Victim Information and Notification System (ND CJIS SAVIN) gained 10,131 new incarceration and court registrations, which is an increase of 54% over last year. It also gained 551 new protection order registrations this year, which is an increase of 64%. Enhancements included: additional counties providing photos, automatic victim registrations, and increased quality assurance practices. ND CJIS made substantial progress on an enhancement to the courts module, which will make it Global Reference Architecture (GRA) conformant and more user-friendly for registrants.
- ND CJIS successfully completed a pilot implementation using the ND CJIS Broker to facilitate information sharing between the Attorney General's Office and the Courts.
- In partnership with the Attorney General's Office and the Courts, ND CJIS populated a substantial portion of the Common Statute Table, which will provide consistent charging references across criminal justice agencies.

Health Information Technology

The state health information exchange program, branded the North Dakota Health Information Network (NDHIN),



Sheldon Wolf, Director of HIT

promotes innovative approaches to the secure exchange of health information within and across state lines. NDHIN allows providers to obtain accurate and complete patient health information, which can yield benefits such as better coordination of care, quicker diagnoses of health problems, reduced medical errors, and safer care at lower costs. NDHIN is overseen by the Health Information Technology Advisory Committee (HITAC). The HITAC consists of representatives from the Governor’s Office, Legislature, ITD, Department of Health, and Department of Human Services, as well as stakeholders appointed by the Governor, who represent providers, consumers, payors and trade associations. The HITAC’s vision is “quality healthcare for all North Dakotans anywhere, anytime.”

The HITAC has implemented the NDHIN in two phases: Direct Secure Messaging (DSM) and query-based services. DSM is a simple, secure method for participants to send encrypted health information directly to known, trusted recipients. Approximately 800 individuals have accounts set up to use Direct Secure Messaging. Some examples of information providers and payors exchange include documents, images, HL7 message strings, claims attachments, and Continuity of Care Documents.

Query-based services allow authorized individuals to use a robust bi-directional health information exchange to obtain medical information from numerous facilities with one query by securely connecting providers’ electronic medical record systems. This query provides authorized users with a complete summary of care, including information such as allergies, medical history, diagnostic results (i.e. labs, radiology), immunizations and other medical information. All of this information can be used by healthcare providers to make the right decisions for patients. Additionally, the infrastructure allows providers to automatically report immunizations, reportable conditions, and syndromic surveillance to the Department of Health.

During the last year, the NDHIN infrastructure was installed, and connections to providers and the Department of Health were established. Connections have been made with the large healthcare providers in the state, and we continue to connect over thirty other providers. Currently, the NDHIN is operating, and supporting meaningful use and health information technology requirements. The NDHIN team continues connecting, training and testing with providers on the query based infrastructure.

**“Quality healthcare
for all North
Dakotans anywhere,
anytime.”
HITAC’s vision**

EduTech

EduTech provides innovative information technology services and educational technology professional learning to the PK-12 community in North Dakota. Services are designed to give educators access, training, and support to use technologies in their classrooms to improve teaching and 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 ND education and workforce training programs. Finally, the PowerSchool team provides training and support for North Dakota eTranscripts. eTranscripts is a sub project of the K12 SLDS that will allow students and counselors the ability



Rob Kaspari, Director of EduTech

to send their high school transcripts to registered postsecondary institutions.

Technical and Support Services

EduTech provides centralized IT services that allow ND educators and administrators to use technology to improve teaching, learning, and business productivity. These services include email, Internet content filtering, web hosting, purchasing agreements, and podcasts, in addition to other services.

Coming in the fall of 2014 is a state-wide Active Directory that will give the PK-12 community access to Microsoft Office 365. Office 365 includes email, calendaring, cloud storage, collaboration space, and online document creation and editing using the Office Web apps.

Professional Learning for Educators

Professional Learning is designed to support teaching and learning by providing resources and customized learning experiences to educators. We provide a range of learning opportunities, including:

- Social media
- Technology integration
- Digital citizenship

- Augmented reality
- Geographic Information Systems
- 3D printing
- Instructional coaching by Certified Instructional Coaches

Online, video, face-to-face, and hybrid session deliveries are available.

E-rate consulting

EduTech provides E-rate consulting services to assist school administrators in completing their yearly applications for federal telecommunications discounts and the required technology planning documentation. Our consulting services consist of: face-to-face regional workshops throughout the E-rate filing season for school districts; on-line support and consultation on a case by case basis for school administrators; troubleshooting and E-rate filing assistance to North Dakota schools; and informing school districts about new programs and rule changes.



EduTech employees gathering for a meeting

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:

- 69,412 incidents
- 45,948 service requests
- 99.9% overall satisfaction rate

North Dakota Century Code requires ITD to document information related to service support and delivery, which



Gary Vetter, Director of Enterprise Services

includes formal complaints regarding dependability, responsiveness, and cost. From July 2013 through June 2014, 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:

- Two student interns were hired to improve Service Desk responsiveness.
- ITD began upgrading its FrontRange ITSM system to the more current and agile FrontRange HEAT 2014 service management platform, which will lead to future improvements in the way customers and staff members handle incidents, requests, and changes.
- ITD's administrative assistants begin utilizing the incident management system to formally track and respond to a variety of technical and non-technical issues and requests.
- The Department of Human Services began utilizing ITD's incident management system to log, process, and report upon inquiries from Medicaid providers.
- The Office of Management and Budget began utilizing ITD's incident management system to assist candidates applying online for government jobs.

Strategic Communication

ITD is committed to improving external communication with other agencies and the public, as well as internal communication with our employees. Because of this, we have:

- Began building a new website theme and Drupal v.7 base package to promote consistency among state websites and make future website development efforts more cost effective and timely.
- Improved our Annual Customer Survey to return more precise responses.

Enterprise Architecture (EA)

Enterprise Architecture (EA) refers to state-wide 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, 138 people from 25 agencies were involved in numerous activities, including:

- Introducing an Enterprise Multi Factor Authentication solution to better safeguard privacy and security
- Rewriting the Project Management Guidebook
- Reviewing and updating ITD Service Level Agreements
- Reviewing and updating the EA Governance documents and EA Model
- Reviewing nearly every EA standard
- Updating EA standards for Employee Security Awareness, Email, Web Development, Server Operating Systems, and Remote Access
- Rescinding EA standards for Document Management Workflow, Desktop Search, and Document Management Record Migration
- Denying a request for exemption from standard EGT005-04.4 Web Domain Name to the Department of Transportation for a .com domain name
- Granting a request for exemption from standard EGT005-04.4 Web Domain Name to the Department of Human Services for a .org domain name
- Granting requests for exemption from standard AST003-05.5 Public On-Line Services User Authentication to the Office of Management and Budget, the Secretary of State, the Department of Emergency Services, and the Office of the Attorney General
- Granting a request for exemption from standard ST006-04.6 Access Control to ND Parks and Recreation
- Granting a request for exemption from standard CT001-13.1 Email to the Department of Financial Institutions

69,412
Service Desk incidents resolved

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 that the state receives the best value for its technology dollars. During the past year:

- Over 125 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 update IT Procurement templates.
- ITD procurement staff collaborated with state agencies per N.D.C.C. § 54-59-32 with special procurement/contract reviews and approvals for IT projects valued at \$500,000 or higher.

IT Planning

IT Planning establishes clear objectives for IT organizations that link directly back to strategic business goals. Planning involves determining and documenting strategies, infrastructure, planned activities, and

prospective technologies. IT Plans are submitted in August of each even numbered year. In 2013, as in all odd-numbered years, no official planning activities took place, and agencies were busy implementing the projects and initiatives defined in the 13-15 planning cycle. However, in early 2014, agencies began working on their 15-17 IT plans for submission in August. Those IT plans provide input to the State IT Advisory Committee's

(SITAC) large-project ranking process and will be used with content from Higher Education and K-12 schools to produce the 2015-17 Statewide IT Plan.

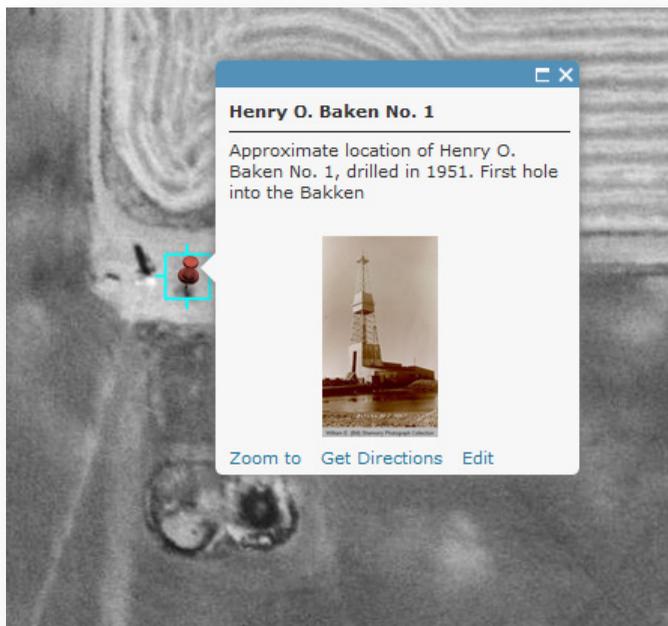
Geographic Information Systems (GIS)

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: workforce lodging locations in western North Dakota;

historical aerial photography ranging from 1957 through 1962; and regional aerial photography, such as that in the Devils Lake area, Bismarck-Mandan, and Williams County.

- In partnership with the Office of Management and Budget and ITD, the Esri Master Purchase Agreement (MPA) was completely overhauled. Esri is the dominant source of GIS software used by state agencies.
- Visual ND, a cloud-based tool that hosts and serves out data, services, maps, and applications, was launched in 2013. Visual ND is being utilized by agencies to share data, services, maps, and applications within agencies, between agencies, and with the public. It utilizes Esri's cloud-based ArcGIS Online software, which allows agencies to quickly create and share interactive maps for viewing on desktops and mobile devices. Maps on Visual ND pull data from the GIS Hub.



Late 1950's ariel photo provided by the GIS Hub

- With the ongoing success of the Department of Transportation (DOT) Traffic Safety reporting system, the 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, among others. The BI team is also creating a research environment for DHS data scientists to enable greater data exploration and predictive analytics.
- The Office of Management and Budget (OMB) enlisted the help of the BI Team to refine the North Dakota Transparency website. The website is a searchable database providing a single point of reference to view state and university system expenditures.
- The State Treasurer's Office utilized the services of the BI Team to apply and report the revenue from the Oil and Gas tax codes.

State Longitudinal Data System (SLDS)

The State Longitudinal Data System (SLDS) is a data warehouse that integrates data from Pre-K, K-12, postsecondary, workforce, and training programs. This system allows state and local entities to leverage approved data from education and workforce training programs for use in federal and state reporting, program evaluation, and studies for the purpose of improving participant outcomes of North Dakota education and workforce training programs. During the past year:

- The SLDS program focused on broadening and deepening the dimensions of data available for predictive analytics, particularly in the areas of student success. In collaboration with the Department of Public Instruction (DPI) and the North Dakota University System (NDUS), the application of inferential statistical analysis to SLDS data revealed several determinants for academic achievement between the high school and postsecondary levels. The need for remedial college coursework and the impact of advanced placement

Business Intelligence (BI)

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:

and dual credit courses were some of the areas examined using SLDS.

- As part of a national collaborative effort to develop voluntary, common data standards for a key set of education data elements, the BI Team implemented an SLDS data dictionary. The elements of the ND SLDS were aligned with the Common Education Data Standards (CEDS) to streamline the exchange, comparison, and understanding of data within and across P-20W institutions and engaged state residents.
- North Dakota eTranscripts was launched, which allows high school counselors, students, and parents to easily submit student transcripts to North Dakota institutions of higher learning as part of the college application process. The format of eTranscripts is tailored to expedite the college admission process.

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 that serves 24 state agencies/programs. During the past year:

- 13 agencies converted their enterprise scanning solution from Teleform to ImageSource ILINX Capture.
- FileNet was upgraded from version 4.5.2 to 5.2. The project included the development of a new web service layer to make upgrades faster and easier.

Basic Content Services (SharePoint)

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

- An upgrade from SharePoint 2010 to SharePoint 2013 was completed on the Foundation and Enterprise platforms.

Master Data Management (MDM)

Master Data Management (MDM), formerly known as Master Client Index, compares client records from disparate systems and links them together, creating a master demographic representation of each citizen receiving state services. Both the Department of Human

Services and the Department of Public Instruction's programs rely heavily on the features and abilities of MDM. During the past year:

- An upgrade from the IBM Initiate system to the more current and agile IBM InfoSphere MDM platform was substantially completed.

ConnectND

ConnectND is North Dakota's implementation of Oracle/PeopleSoft applications across state government and the University System. The ConnectND 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 celebrates the 10th anniversary of its state-wide deployment of the FSCM segment of PeopleSoft applications. FSCM consists of PeopleSoft modules that are used for a host of essential tasks across the state, these modules include: General Ledger, Accounts Payable, Accounts Receivable, Billing, Purchasing, Asset Management, Inventory Management, Benefit Administration, and Talent Acquisition.

10,497

job applicants have used the state's new online application system so far

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 the 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 the business/functional decisions and work effort.

During the past year:

- Talent Management modules were deployed to additional state agencies, which were not involved in the initial deployment. This equipped agencies to

conduct online performance appraisals, document business objectives, create profiles, build career plans, and plan for succession.

- The Enterprise Learning Management (ELM) module usage has continued to grow. This year, 88,676 enrollments were made, including the addition of 3,471 classes, which involved 8,024 distinct users of the ELM application.
- The ConnectND Applications have continued to stay on the Oracle supported roadmap for products and toolsets, including the yearly tax updates and patch cycles. Upgrades to the applications remain a larger work effort, and the HCM application was upgraded to v9.2 in November 2013. The FSCM v9.2 application upgrade is currently being worked and planned for a Fall 2014 deployment.
- Recruiting Solutions, a new initiative consisting of Candidate Gateway, Talent Acquisition Manager, and Resume Parsing modules, was started. It began in mid-May, 2013 and went live February, 2014. Since going live, 1,352 job openings have been listed, and we've received 10,497 unique applicants.

Project Management

The Project Management Office (PMO) currently employs 15 project managers, including 12 who have the Project Management Professional (PMP) credential. The team strives for consistency in project management by using uniformed templates and processes.

Accomplishments in the past year include:

- a. Updating the Standard for the Project Management of Large Information Technology Projects (STD009-05)
- b. Participating in the rewrite of the state IT Contract template

- c. Participating in the rewrite of the state IT RFP Template
- d. Establishing a Bismarck Outreach Center associated with the PMI-MN Chapter
- e. Participated in updating ITD's Software Development Lifecycle

In order to ensure consistency in project management across state entities, the PMO also performs project management oversight on projects with budgets over \$500,000. Through established project management reporting and monitoring processes, the following project statistics are available. During the past fiscal year:

- State agencies completed twelve IT projects with individual budgets in excess of \$250,000 and a total budget of \$19,406,093.
- Six of the twelve 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 +\$1,004,541 or 5.2 percent under budget.
- Six of the twelve projects were completed on or ahead of schedule, and four additional projects were completed within the 20 percent negative variance threshold. Two projects exceeded the 20% negative variance threshold.
- One project was terminated after expending \$17,133,609, when it became clear that the vendor could not deliver a system that would meet the agency's needs.
- ITD Project Managers managed, or co-managed, nine of the twelve major information technology projects, with a total budget of \$15,866,704.



ITD's Project Management Team

Software Development

The Software Development Division continues to address the many demands that are front and center for all application development organizations. Concerns about mobility, security, and the rapid delivery of software are just some of the issues that require a flexible and educated workforce. In the past year, the Software Development Division confronted great challenges and transformational change in order to better align with the way applications are consumed in our any-time-any-place culture. Additional attention on modernizing the Software Development Lifecycle processes and methodologies helped improve our service delivery model. Through it all, the Software Development Division remains dedicated and focused on providing our customers, stakeholders, and the citizens of our state with comprehensive, innovative, and affordable application development services.

Mobile Web and Application Development

With the proliferation of mobile devices, making mobile-friendly websites has become one of our top priorities. That's why Software Development is actively



Doran Eberle, Director of Software Development



incorporating responsive web design best practices into all new web based development. Responsive design means that webpages automatically resize and rearrange themselves for a fluid and intuitive user experience across a broad range of devices, including smartphones, tablets, and traditional computers. We are also continuing to research and align with industry trends by utilizing community based open-source frameworks, which provide an economical and solid foundation to build upon.

For mobile application development, we are using a hybrid approach that combines both web and native mobile technologies. This approach allows us to leverage our web development experience with the power and flexibility of tools like Apache Cordova to effectively create new mobile applications for distribution in the major consumer App stores. The new mobile applications can be easily deployed to a broad range of device types (e.g. smart phone, tablet) and platforms (e.g. iOS, Android, Windows). The applications can also leverage device-specific features, such as push notifications, location awareness, and camera imaging. By using a hybrid approach, we can develop mobile applications using a single set of device and platform independent tools and standards to reach the widest consumer base possible.

Web Application Security

We continue to make great progress with our security vulnerability discovery and remediation initiative. In the past year, we completed the application scanning and vulnerability detection for the majority of the ITD developed Java applications. Additionally, the vulnerability remediation is moving forward with early emphasis on secure coding education and mentorship of

a team of ITD application developers. Our focus for the next year includes the security vulnerability assessment of the ITD developed .NET applications, along with determining the ongoing re-assessment and remediation schedule for all ITD supported applications.

Agency Success Stories and Initiatives

Office of State Treasurer

ITD and the Office of the Treasurer teamed up to enhance the tax distribution process by providing direct distribution of funds to schools. Previously, funds were distributed to the individual counties, and the counties were required to calculate and make the payments to the schools. The new process gives schools quicker access to funding and allows the Office of State Treasurer to easily administer school construction loans. Additionally, distribution calculations are now automated, streamlining the work flow, easing the manual work required, and ultimately increasing efficiency.

Legislative Council

ITD and the Legislative Council upgraded the meeting notices and expense voucher system to a new web based application. This provides electronic automation of related expenses to meeting notices and gives more access to reporting features. As an added benefit, agenda items



Software Development Managers

from meeting notices are easily extracted and displayed in capitol monitors for public reference. The upgrade also placed the documents into a common system, reducing the storage used on the network.

CJIS and the Office the Attorney General

CJIS, the Attorney General's Office and ITD have been working to create a common statute web based application. When fully functional with current information, this service will provide criminal justice entities electronic access to state statute codes and corresponding federal criminal codes. This information is key to providing consistency and uniformity while assisting in the sharing of criminal justice information and supporting accurate reporting.

Department of Career and Technical Education

The Department of Career and Technical Education (CTE) partnered with ITD to develop an application called Budget and Reimbursement Process (BRP). BRP eliminates the existing mail exchange used when budgeting and funding technical learning institutions across the state, and brings a host of benefits to the state and CTE. For example, it organizes tasks by providing a staff-specific queue of items that each member needs to attend to, allowing budgets to follow a specific workflow. Also, the reporting through SQL Server Reporting Services speeds up the generation of aggregated financial statements from taking several days, to under a minute, allowing them to generate real-time business updates on demand. Other improvements include: less data entry for staff, increased validation on processes, electronic exchange of agency evaluations, and quicker collaboration with schools.

Office of Management and Budget

This past year, the PeopleSoft development team implemented the Recruiting Solutions module, which allows for online job posting, and accepting and screening of applicants online. However, in order to implement Recruiting Solutions, multiple upgrades to other systems were needed. With the timeline set for the implementation of Recruiting Solutions, the various upgrades were on an accelerated timeline, which proved quite challenging, yet were accomplished very successfully.

Department of Transportation

The Department of Transportation (DOT) and ITD collaborated on numerous projects over the last year, many of which are critical to the operation of the DOT and safety of the citizens of North Dakota. During the past year:

- The Driver's License Online Services (DLOS), an existing application, was given additional functionality. Additional capabilities include the ability of the public to request a new driver's license if the license is lost, stolen, damaged or a change of address has occurred. Commercial Drivers License (CDL) Medical Certificate Status Search was also added, which allows the public to enter a driver ID to verify if the driver has a valid CDL and to verify medical certificate status.
- We re-wrote the legacy Fuel File Application, which is used to maintain all of the purchase transactions (e.g. fuel, food, and fixes) for DOT's Motor Pool Division, to a new web-based solution.
- We developed the Bid Opening Project Status Reporting (PSR) Application, which is a new web application that allows users to easily search, retrieve, and organize project data. It can help pinpoint which projects are falling behind schedule and a "comments" feature can also be added to project details as a point of reference for why a project is in a certain state. Overall, the PSR application helps DOT better monitor and ultimately manage projects.

Department of Human Services

The Department of Human Services (DHS) and ITD collaborated on several initiatives over the past year.

Highlights include:



Software Developers

- 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 in the fall of this year.
- The first phase of the Eligibility Systems Modernization project is well underway, but is progressing slower than originally planned. It focuses on the core functionality of the modernized system with an emphasis on the Affordable Care Act (ACA) and system enhancements necessary to ensure compliance with ACA mandates.
- The Eligibility Services application was developed as a component of the state's Eligibility System Modernization project. This component houses shared business logic and services, which provides a backbone for eligibility focused systems. During the initial phases of the project, the Eligibility Services application hosts the seven integration services required for communication with the Federal Data Services Hub.

Workforce Safety & Insurance Developers Transition to ITD

During the 2013-2014 63rd Legislative Assembly, HB 1021 (Workforce Safety & Insurance [WSI] Budget Bill) was passed, which transferred four software developer positions from WSI to ITD. Over the past year, we have worked together to integrate the WSI developers into ITD's Software Development Division. Throughout the transition process, communication between WSI and ITD has been key and has helped make the transition a success, allowing us to provide excellent service and support to WSI.

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

Accomplishments

Security continues to be the foremost concern for our data centers. We continually work with software and hardware vendors to apply the latest design changes, and software and hardware updates. A major security advancement we made this past year was transitioning to fully encrypted tape media for backup purposes.

Additionally, we have migrated most of our disk-based systems in the data center to utilize encrypted disks. Using a world-class encryption system allows us to secure data to meet regulations and standards as defined



L. Dean Glatt, Director of Computer Systems



by the Payment Card Industry Data Security Standard (PCI DSS), Sarbanes-Oxley and the Health Insurance Portability and Accountability Act (HIPAA).

What are we working on?

As cloud services continue to improve and be positioned to help state government, we are developing a brokering strategy for on-ramping certain workloads to cloud providers. A statewide cloud brokering concept will allow us to achieve our cloud services goal in a secure and efficient manner, which is to realize efficiencies in cost and speed of system deployments.

This centralized approach will minimize the amount of security directories, terms and conditions contracts, and network and security designs needed to talk to varying cloud vendors across the world. As cloud matures and becomes the accepted industry norm, ITD will bring together architects to address the challenges associated with the implementation and maintenance of cloud systems.

Additionally, we will collaborate with agencies on cloud best practices to address issues such as: migrating information to the cloud, cyber security, ensuring interoperability, and contract management among other issues. In

200
**new servers
have been
implemented**

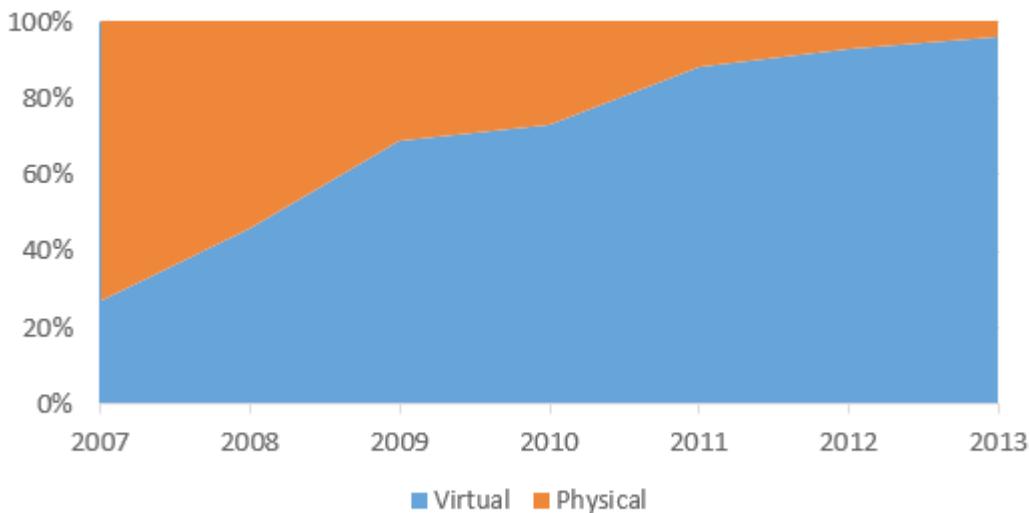
this same interest, the federal government has created a process and corresponding security controls called the Federal Risk and Authorization Management Program (FedRAMP). ITD will utilize these types of controls and seek input from agencies to create a process to move selected state systems to the cloud.

We are currently doing proof of concept projects with Microsoft’s Azure cloud application platform and will have an initial report of our findings by the end of Q1, 2015. These projects will position ITD to be ready to move state government computing into cloud solutions in a secure manner.

Enterprise Databases

	Applications	Tables	GB
SQL Server	975	322,582	6,400
Oracle	465	88,792	7,000
ADABAS	92	506	204
DB2	499	15,358	988
MySQL	71	8,744	8
Totals	2,102	435,982	14,600

Virtual vs. Physical Servers



Active Directory Objects

42,733 Groups	12,482 Users	15,081 Computers
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Consolidated File & Print Support

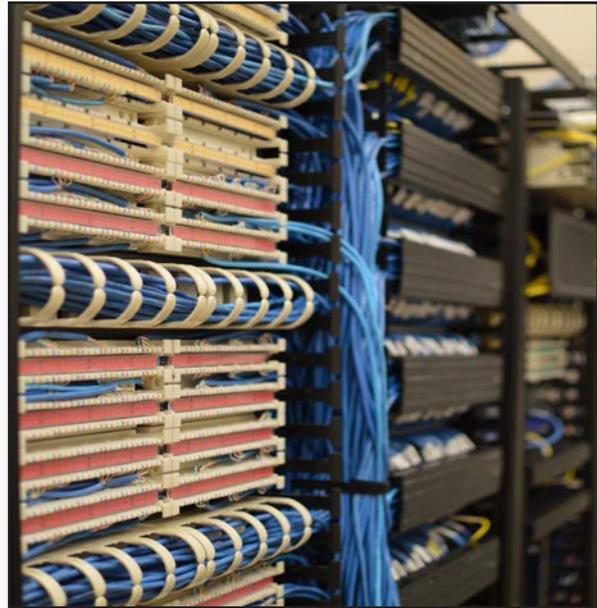
1,443 Printers	1,093 Shares	80.1 Terabytes
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Daily Email Activity (Averages)

628,000 Inbound Messages	86% Of Messages Removed by SPAM Filter	87,000 Inbound “Clean” Messages
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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 across the state. The services offered by the division provide foundational infrastructure necessary to support virtually all other technology initiatives. The converged and consolidated nature of the network is something few states have been able to achieve and has been a key enabler for a number of successful collaborative technology projects throughout its history. The current challenge for the division is to continue to ensure that STAGEnet meets or exceeds the capacity, reliability, security, and evolving business requirements of a diverse customer base.



STAGEnet – planning for the future

STAGEnet is largely comprised of leased services from the carrier community. Due to the impending expiration of existing contracts, this past year was heavily focused on

securing a procurement mechanism for future STAGEnet connectivity services. Through extensive industry research and gathering input from the STAGEnet user community, we established a new contract that includes immediate enhancements to the reliability and resiliency of the network, and provides customers with options that can improve the reliability of individual endpoints. However, the most significant outcome of this procurement exercise is the ability to meet the bandwidth growth demands of the user community in a cost effective manner. Overall, this process resulted in a feature rich and reliable network infrastructure that will meet current and future needs of the government and education communities statewide.



Duane Schell, Director of Network Services

Public Safety

STAGEnet is founded on a spirit of cooperation, and that spirit continues to remain strong, evidenced by the deployment of a new 911 call answering system. Members of the public safety community approached ITD to assist in the selection and deployment of a 911 solution that could be deployed within the core of the network and utilized in a multitenant manner by several public safety answering points (PSAP). We were extremely excited to participate in an effort that leverages the network and provides a cost effective, highly resilient solution that will improve cooperation for those PSAPs that choose to participate. As of right now, the solution has been

selected, and efforts are ongoing to bring the system online.

Safety and Security

The cyber security landscape continues to evolve in a rapid manner, with attacks increasing in volume, complexity, and persistence.

As such, we are doing our part to ensure STAGEnet remains a safe and secure environment. A significant element of these efforts is additional investments in next generation firewalls deployed throughout the network. Efforts in previous years have fortified the perimeter of the network, as well as highly sensitive areas. This past year's security effort was heavily focused on augmenting strategic core locations within the network. All of these investments provide improved visibility of network traffic, which enhances our ability to prevent externally originating malware from traversing the network and our ability to identify and prevent other malicious activity that may originate somewhere within the borders of the network.

Another key to ensuring security is the content filtering solution provided by STAGEnet. This past year, we partnered with the K12 community to select and implement a new content filtering solution that prevents users from accessing unauthorized and potentially harmful Internet content. Although this solution is available to the entire STAGEnet community, the regulatory requirements surrounding student access makes the K12 community the most significant consumer of this service. The new content filtering system provides several technical advantages over the prior solution;

however, the most significant improvement is the ability to provide protection for mobile devices that may traverse off of STAGEnet. This allows schools to extend their protection to a broader array of computing devices, ensuring students are protected regardless of the technology they choose to utilize or where they choose to use it.

800

**newly created (zero-day)
viruses blocked by the
network per month**

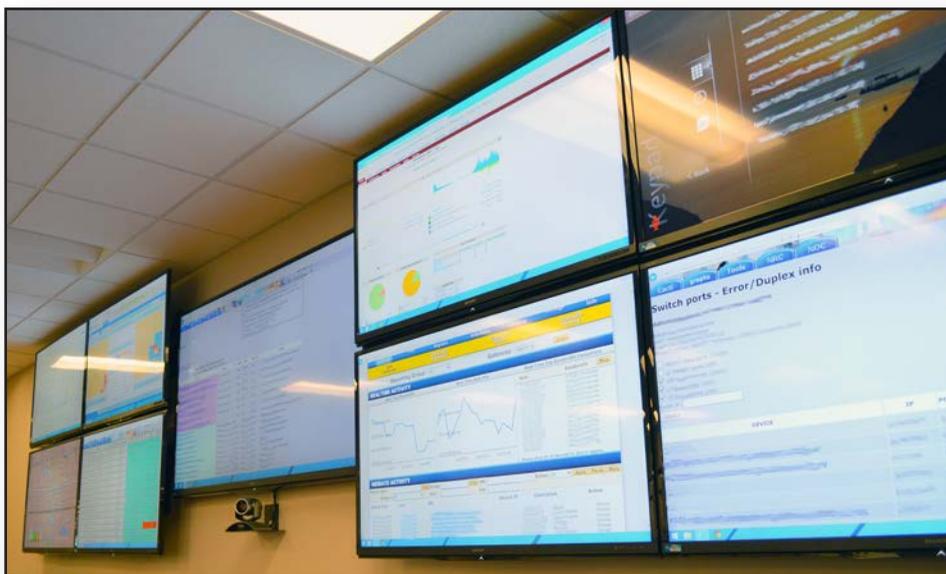
Voice and Video Communications

During the past year, our efforts around voice and video communications were less about major investments in infrastructure, and more about helping consumers leverage the capabilities of prior years' efforts. Two major efforts were made to improve user education and awareness.

First, we introduced a new service, an on-premise web collaboration solution. Although numerous web collaboration solutions exist on the market, the on-premise solution we selected allows for tighter integration with the overall communication infrastructure along with a fiscal savings for most consumers.

Second, a notable improvement was made within the video collaboration space. As video becomes an increasingly popular mode of communication, the ability for competing technologies to interface has become more complex. We augmented the infrastructure to allow a more seamless interaction with structured video events from a variety of devices, including popular mobile devices.

Next year, we will continue our efforts to ensure customers are able to maximize the investments made in this area and continue to augment technical solutions to meet the ever changing communications technology landscape.



Network Monitoring Screen-Wall

99.998%
Internet Availability

7,890
VoIP Phones Supported

10,000,000
Long Distance Minutes

708
Wireless Access Points

200
Fiber Sites

32,887
Video Events Supported

349
Ethernet Circuits

750
Video Endpoints

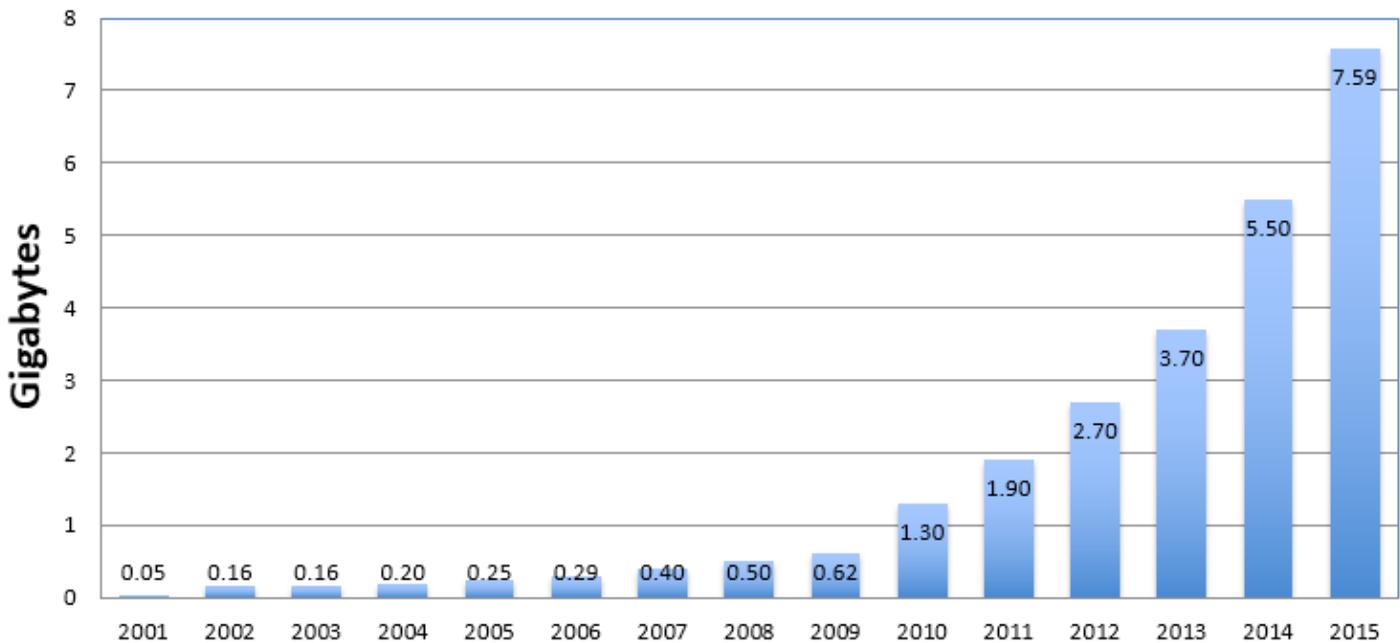
287
Broadband Connections

7 Gigabytes
Max Internet Volume

871
STAGEnet Sites

776
Government Smart Phones

Internet Data Usage



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.



Shelly Miller, Director of Human Resources

Recruitment

This area has been extremely busy with the implementation of PeopleSoft's Recruiting Solutions, which has automated the state's recruitment process. State agencies now utilize a web-based process through which applicants apply online, and recruiters manage the application process from beginning to end. This is a significant improvement over the previous paper-based/manual process, and is especially significant for an IT organization. Over the last year, ITD has had 39 positions to fill with 361 applicants, of which 190 met the minimum qualifications. Many of the requisitions were due to internal promotions or retirements of long-term staff in addition to normal attrition.

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.

We are particularly excited to see how the transition to a single location will influence collaboration and 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 existing technologies. Thus, we put forth a significant amount of effort into training and development. For example, this past year multiple ITD employees took 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. In the coming

year, HR will implement a leadership development and mentorship program. This program will help further the skills of our current leaders and provide an opportunity for employees in non-leadership positions to develop the skills they need to advance in the organization.

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 whenever a salary survey is conducted.

Employee Relations

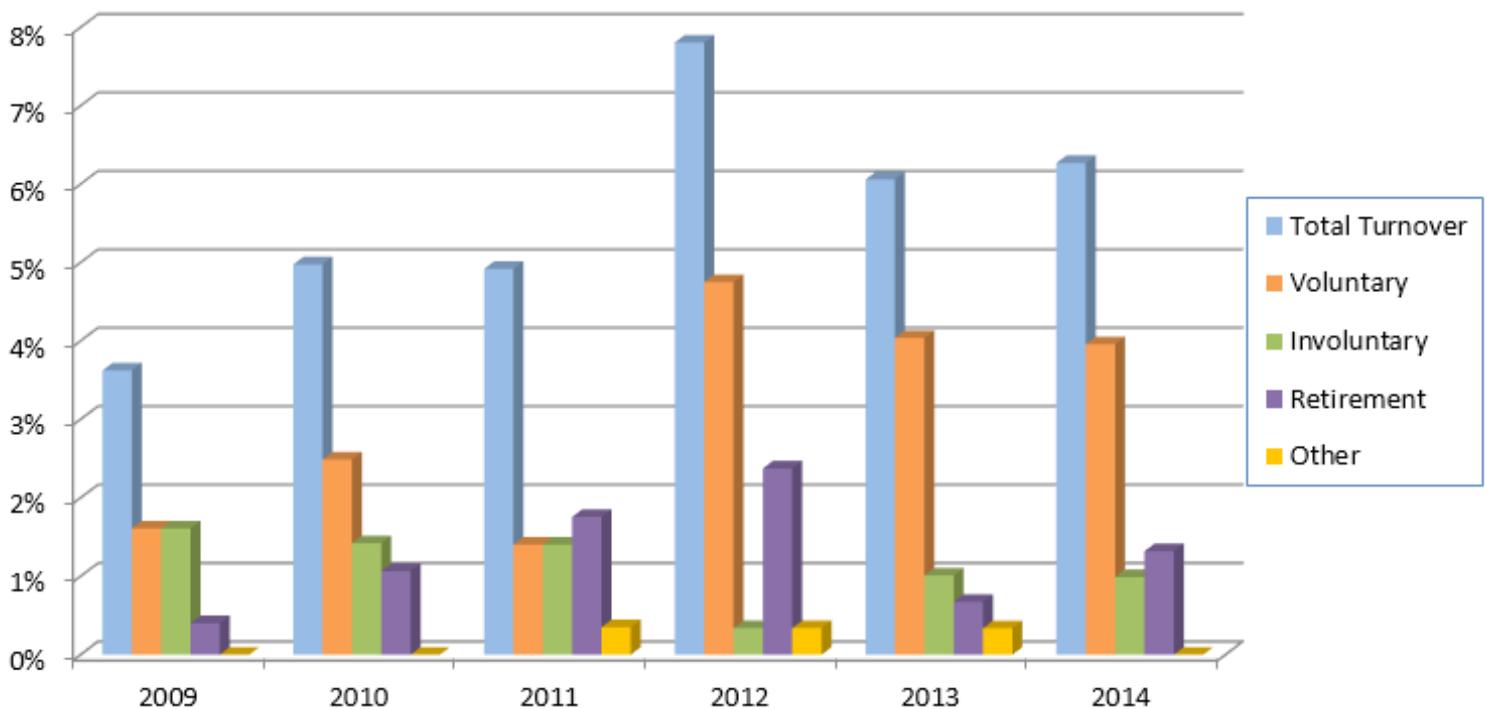
Diligent efforts are put forth in a variety of areas dealing with employee relations. Some of these areas include employee wellness and safety, the bi-annual employee satisfaction survey, monthly lunch meetings with ITD Managers, annual ‘Meet and Greets’ with each work unit within ITD, as well as cultural improvement activities. Leasing space in one building will allow our employee committees to focus more on events/activities that foster a positive culture/work atmosphere within ITD.

As we look forward to the upcoming year, we must continue to develop and refine our HR practices in order 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 own goals. Ultimately, these efforts will help us understand the future of our most important asset—our employees.

2014 ITD Position Statistics

30	Different requisitions/positions	33	Acceptances
132	Interviews	13.79	Average size of applicant pool
45	Offers	59.25%	Average amount of qualified applicants

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 implementing system-wide patches, setting standards, and upgrading infrastructure, keeping North Dakota's IT systems and data secure requires a partnership among all agencies and at every level. It's this partnership, in combination with the continued efforts of ITD's security section, that has allowed North Dakota to maintain secure IT systems.

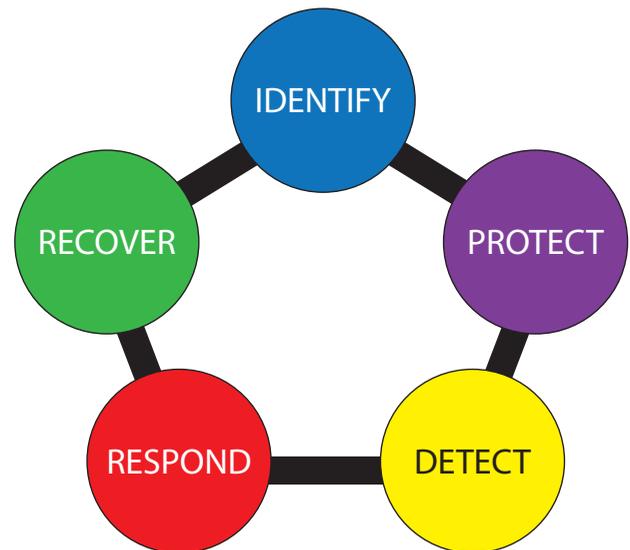
Continued Advancements

Raising the security posture of the state network and state computing resources has been a focus for ITD. Over the past year, we:

- Expanded the deployment of intrusion prevention and detection systems within STAGEnet.
- Continued our proactive security scans of critical web applications.



Dan Sipes, Deputy CIO & Director of Operations



The 5 Parts of ITD's Cybersecurity Framework

- Implemented multi-factor authentication for systems that require advanced authentication and now offer it as a service to agencies. This implementation was preceded by a pilot test in 2012-2013.
- Expanded encryption solutions for agencies who require encryption of critical data.

Cybersecurity Framework

Over the past year, ITD developed and implemented a new Cybersecurity Framework. The purpose of the Cybersecurity 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 will evolve 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.

Independent Security Audits

ITD works closely with federal, state, local and private industry partners to collect and analyze information on

cyber threats and vulnerabilities. Over the past year, we have participated in six independent security audits.

Additionally, The Office of the State Auditor conducts a biennial SAS70 audit. This audit provides assurance to our customers and their stakeholders that ITD has appropriate controls in place. The latest SAS70 audit was completed in January 2011, a copy of which can be found at: http://www.nd.gov/auditor/reports/SAI112_10.pdf. The SAS70 audit has now been replaced by the Service Organization Control type 2 (SOC 2) report based on the AICPA Statement of Standards for Attestation Engagements SSAE) No. 16, which is scheduled to start in September of 2014.

Contingency Planning

All state entities are required to develop a business continuity (A.K.A. disaster recovery) plan to ensure the continuity of state government and government services in the event of a man-made or natural disaster. In order to assist agencies in complying with this directive, ITD

operates a primary and a secondary data center. The secondary data center is designed to minimize data loss and bring critical systems back online quickly in the event of a disaster.

With the increased virtualization of our data center and a growing contingency planning awareness in state agencies, ITD is coordinating with more agencies on their Continuum of Government/Continuum of Operations posture related to disaster scenarios.

Over the last year, we have continued to make improvements to the recovery time for enterprise services. We have also worked in partnership with several agencies to make additional investments to improve the recovery time for critical business functions and perform related disaster recovery testing.

Who's Responsible for Security?

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 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. User should follow set security procedures, report security problems, and attend required security awareness and functional training.

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 agencies and higher education.

How ITD funding works

ITD operates as an internal service fund. This means that funding for IT operations and projects is appropriated to state agencies, which in turn pay ITD for hosting and/or development services. General-funded IT projects are reviewed by the State Information Technology Advisory Committee (SITAC), a group of senior-level executives. SITAC prioritizes 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.

Rates are established based on a number of criteria, including federal regulations.



Greg Hoffman, Director of Administrative Services

For example, the federal government does not allow state central service agencies to accumulate an excess fund balance. We also work to keep rates competitive with similar services offered by the state IT agencies in South Dakota, Montana, and Minnesota. A rate comparison table can be found on the following pages.

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

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

ITD is currently working on a Billing Systems rewrite to move Data Processing and Telecommunications billing off legacy mainframe systems. The new Billing System will improve the end user experience by added searching and reporting features not available in the legacy system. ITD will have the ability to send invoices electronically, rather than having to pay postage.

Records Management

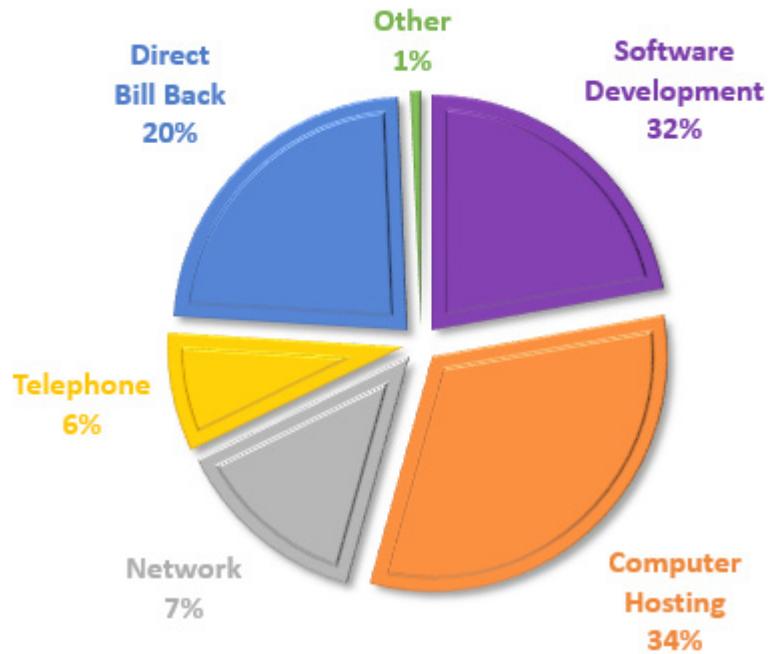
North Dakota Century Code (NDCC) 54-46-11 requires ITD to report on records management practices and programs in state government. This program includes records retention schedules, annual disposal of records, forms management, records management education and consulting.

ITD has implemented records management programs in 95 state and local government agencies, higher education institutions, boards and commissions. Last year, state agencies, local government offices, and higher education institutions disposed of 8,366 cubic feet of records that satisfied their retention requirements. This savings in storage space, equipment, and related salaries resulted in a cost avoidance of \$2,433,860. For the entities reporting a volume of electronic records, 11,660 GB were disposed for a cost avoidance of \$7,579.

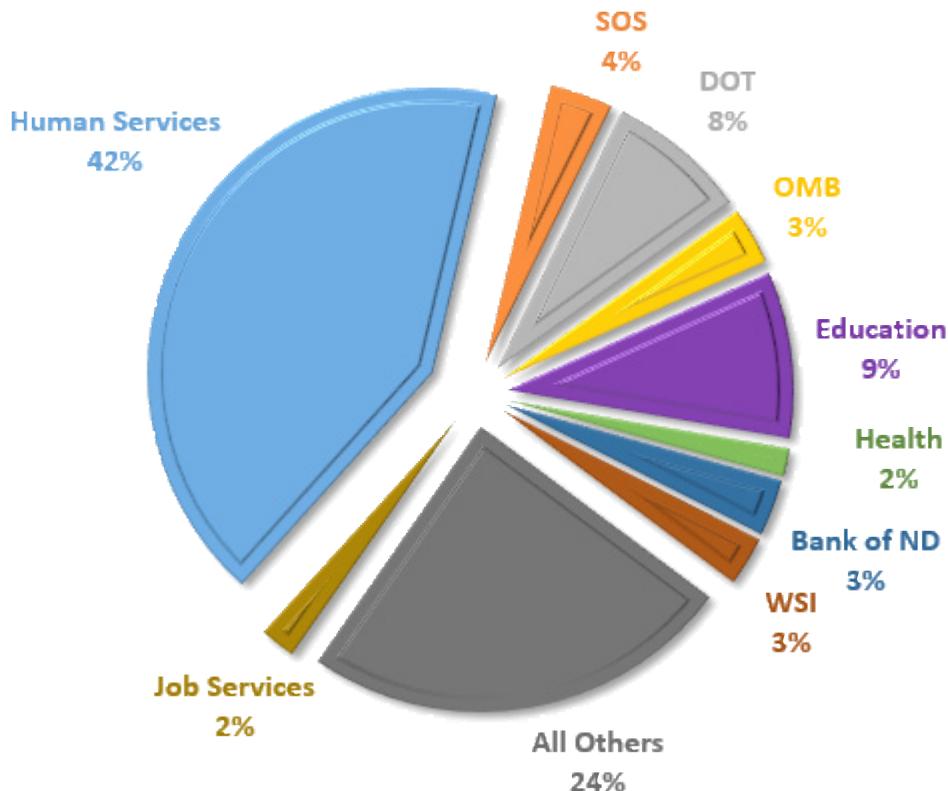
ITD also consults with agencies on a regular basis to review their records management program and practices and offers recommendations to enhance their processes and provide guidance on records management best practices.

A major event in Records Management was the completion of the Digital Archive Study. ITD, along with State Historical Society, participated in a Digital Archive Study completed by Tournesol Consulting. The goal of this study was to identify data governance and funding strategies, as well as recommend acceptable file formats and storage media for long-term storage and access. This study will help the state create and implement a robust preservation solution for digital media. The complete study can be located at: <http://www.nd.gov/itd/publications/2014-digital-archives-study>.

**ITD REVENUE BY SERVICE
FISCAL YEAR 2014
TOTAL BILLING: \$61,948,535**



**ITD REVENUE BY DEPARTMENT
FISCAL YEAR 2014
TOTAL BILLING: \$61,948,535**



Rates and Trends

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 OET
Batch CPU	\$.58	\$.69	\$ 1.36	n/a
CICS CPU	\$.58	\$.69	\$ 1.11	n/a
ADABAS CPU	\$.58	\$.69	\$.97	n/a
TSO CPU	\$.58	\$.69	\$ 2.45	n/a

SD also charges \$.04 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 OET
Technology Fee	\$ 49.50	\$ 54.00	\$51.15	\$ 50.00
LAN Administrative Fee	n/a	Included	\$ 111.07 per hour	\$ 105.00
Access/Information/Enterprise Mgt. Fee	Included	\$ 60.25	n/a	\$ 85.00
DSL Service	Cost + \$175/5mb	Actual Cost	Actual Cost	Cost + 15%
ETS-5 (5mbps bandwidth)	\$ 765.00	Actual Cost	Actual Cost	\$220 + circuit

Telephone Fees

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
Telephone Line	\$ 20.00 - VoIP	\$ 20.00 - Analog	\$ 26.96 - VoIP	\$ 35.00 - VoIP
Speaker/Display	\$ 3.00	Actual Cost	Included	Actual Cost
Voice Mail (unlimited)	\$ 5.00	\$ 6.00	n/a	\$ 5.00
3-minute limit	n/a	n/a	\$ 5.20	n/a
Additional Minutes	n/a	n/a	\$ 2.52	n/a

Long Distance

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
In-State	\$.06	\$.05	\$.073	\$.049
Out-of-State	\$.06	\$.06	\$.073	\$.065
800 Service	\$.07	\$.06	\$.102	\$.080

Software Development Rate Comparison

Entity	Location	Billing Rate/Hour of Service
Information Technology Department	State of North Dakota	\$ 69 - \$ 99
Applied Engineering	Bismarck, ND	\$ 88 - \$ 102
Nexus Innovations	Bismarck, ND	\$ 94 - \$ 140
Eide Bailly	Bismarck, ND	\$ 90 - \$ 165
Agency Mabu	Bismarck, ND	\$ 75 - \$ 80
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
Enterprise Solutions	Bismarck, ND	\$ 90 - \$ 130
TEK Systems	Atlanta, GA	\$ 88 - \$ 103

ITD Service Rate Trends**Software Developer**

Service Rates	July 2014	July 2013	July 2012	July 2011
Software Developer	\$ 69 - \$ 94	\$ 69 - \$ 94	\$ 67 - \$ 86	\$ 67 - \$ 86

Central Computer CPU

Service Rates	July 2014	July 2013	July 2012	July 2011
Batch CPU	\$.58	\$.64	\$.62	\$.74
CICS CPU	\$.58	\$.64	\$.62	\$.74
ADABAS CPU	\$.58	\$.64	\$.62	\$.84
TSO CPU	\$.58	\$.64	\$.62	\$.74

Network Fees

Service Rates	July 2014	July 2013	July 2012	July 2011
Technology Fee	\$ 49.50	\$ 49.50	\$ 49.00	\$ 49.00
ETS-5	\$ 765.00	\$ 765.00	\$ 765.00	\$ 890.00

Telephone Fees

Service Rates	July 2014	July 2013	July 2012	July 2011
Telephone Line	\$ 24.00	\$ 24.00	\$ 24.00	\$ 24.00
Speaker/Display	\$ 3.00	\$ 5.00	\$ 5.00	\$ 5.00
Voice Mail (Unlimited)	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00

Long Distance

Service Rates	July 2014	July 2013	July 2012	July 2011
In-State	\$.06	\$.07	\$.07	\$.07
Out-of-State	\$.06	\$.07	\$.07	\$.07
800 Service	\$.07	\$.07	\$.07	\$.07

Strategic Planning & Performance Measures

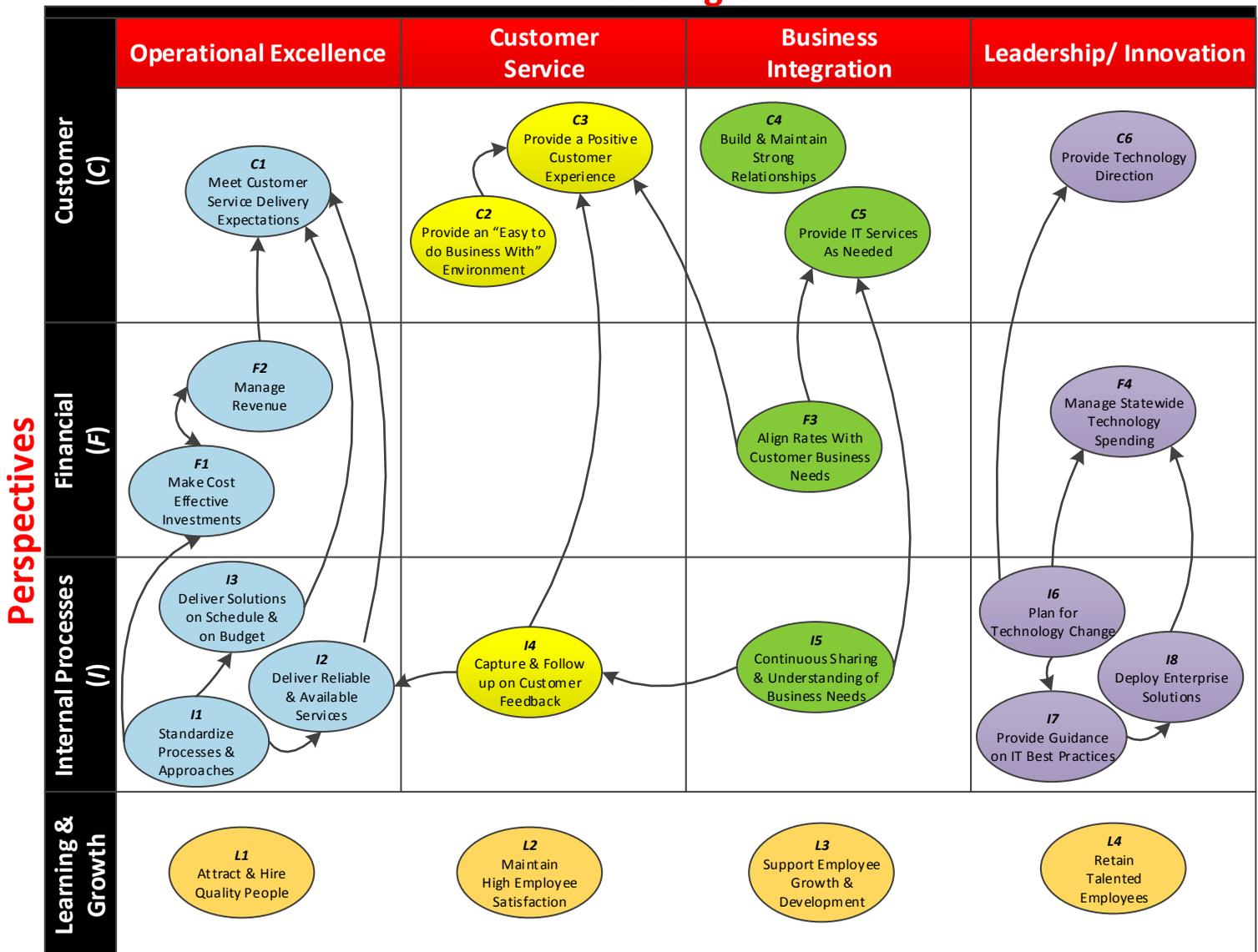
The following three pages detail our progress towards our strategic goals.

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>.

Strategies



Strategic Planning & Performance Measures

Measurement	Baseline (Previous Years)	Current (June 2014)	Target
Acceptable Level of Total Net Assets	2011 – 1.7 2012 – 2.1 2013 – 2.1	2014– 2.5	≤ 2.0

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

Measurement	Baseline (Previous Years)	Current (June 2014)	Target
Percentage of ITD Rates Reported in Annual Report That Are Competitive	2011 – 100% 2012 – 100% 2013 – 100%	2014 – 100%	100%

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

Total Number Of Service Requests And Incidents Completed	2012	2013	2014	Target
Service Requests	40,949	43,131	45,948	MONITOR
Incidents	67,598	66,463	69,412	

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 96,447 of the requests/incidents. 93 respondents were dissatisfied with the overall experience, creating an overall satisfaction rate of 99.9%.”

Customer Satisfaction Indexes	% Satisfied / Very Satisfied			Target
	2012	2013	2014	
Value	84.6%	83.1%	87.3	≥ 92%
Timeliness	79.1%	83.6%	91.1	≥ 97%
Quality	89.6%	88.3%	92.4	≥ 97%
Knowledge	92.5%	93.3%	93.7	≥ 98%
Professionalism & Courtesy	97.0%	98.4%	93.7	≥ 100%

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, 79 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 2014)	Target
Employee Satisfaction Index	2012/2013 – 2.20	Not Available	≥ 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)	Current (June 2014)	Target
Total Employee Turnover	2012 – 7.81% 2013 – 6.06%	2014 – 6.27%	< 6%

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

Measurement	Baseline (Previous Years)	Current (June 2014)	Target
Percentage of Service Levels Met	2013 – TBD	2014 – TBD	100%

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

Measurement	Baseline (Previous Years)	Current (June 2014)	Target
Percent of Strategic Business Plan Objectives Completed or On Schedule	2012 – 49% 2013 – 39%	2014 – 61%	≥ 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, 2013 & 2012

	FY 2013	FY 2012
ASSETS		
CURRENT ASSETS:		
Cash Deposits at BND	8,030,063	7,680,592
Intergovernmental Receivables	135,832	122,223
Accounts Receivable	98,751	192,346
Due From Other Funds	5,801,237	4,966,963
Prepaid Items	1,375,517	1,416,493
Deferred Bond Issuance Costs	<u>6,681</u>	<u>19,948</u>
TOTAL CURRENT ASSETS	15,448,081	14,398,565
NON-CURRENT ASSETS:		
Capital Assets:		
Building & Equipment - Net	<u>10,790,687</u>	<u>10,954,318</u>
Total Non-current Assets	<u>10,790,686</u>	<u>10,954,318</u>
TOTAL ASSETS	<u>26,238,767</u>	<u>25,352,883</u>
LIABILITIES		
CURRENT LIABILITIES:		
Accrued Payroll	2,029,392	1,891,261
Accounts Payable	1,682,794	1,230,540
Intergovernmental Payable	0	696
Due to Other Funds	31,545	25,474
TOTAL CURRENT LIABILITIES	3,743,731	3,147,971
NON-CURRENT LIABILITIES:		
Compensated Absences Payable	1,981,013	1,811,191
Bonds Payable	<u>736,932</u>	<u>1,530,222</u>
TOTAL NON-CURRENT LIABILITIES	<u>2,717,945</u>	<u>3,341,413</u>
TOTAL LIABILITIES	6,461,676	6,489,384
NET ASSETS		
Invested in Capital Assets, Net of Related Debt	10,790,687	10,954,318
Unrestricted	<u>8,986,405</u>	<u>7,909,181</u>
TOTAL NET ASSETS	<u>19,777,091</u>	<u>18,863,499</u>
TOTAL LIABILITIES & NET ASSETS	<u>26,238,767</u>	<u>25,352,883</u>

Financial Statements

Statement of Revenues, Expenses and Changes in Fund Net Assets for years ending June 30, 2013 & 2012

	FY 2013	FY 2012
OPERATING REVENUE:		
Sales and Services	58,427,069	53,268,446
OPERATING EXPENSES:		
Salaries and Benefits	23,902,008	22,029,781
Operating	29,127,271	25,270,564
Depreciation	<u>4,514,446</u>	<u>4,900,782</u>
TOTAL OPERATING EXPENSES	<u>57,543,725</u>	<u>52,201,127</u>
OPERATING INCOME (LOSS)	883,344	1,067,319
NON-OPERATING REVENUES (EXPENSES):		
Interest Expense	(43,055)	(89,028)
Loss on Sale of Capital Assets		
Other	<u>73,304</u>	<u>16,108</u>
TOTAL NON-OPERATING REVENUE (EXPENSES)	<u>30,249</u>	<u>(72,920)</u>
INCOME (LOSS) BEFORE CONTRIBUTIONS AND TRANSFERS	913,593	994,400
TOTAL NET ASSETS - BEGINNING OF YEAR	<u>18,863,498</u>	<u>17,869,099</u>
TOTAL NET ASSETS - END OF YEAR	<u>19,777,091</u>	<u>18,863,498</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

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

An electronic copy of this annual report can be viewed by visiting
www.nd.gov/itd/publications

2007-2009

2009-2011

2011-2013

2013-2015

2015-2017 Strategic Plan

2017-2019

2019-2021

2021-2023

2023-2025

www.nd.gov/itd

Our Mission:

To provide leadership and knowledge to assist our customers in achieving their mission through the innovative use of information technology.



Executive Summary



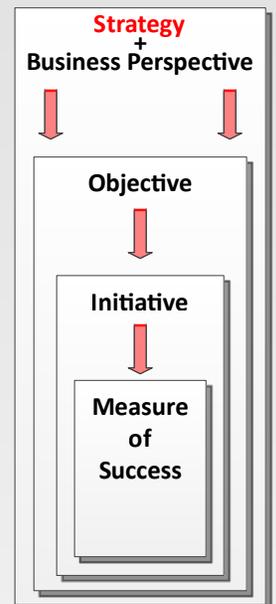
The ITD Strategic Plan serves two primary purposes. First, it outlines our major initiatives planned for the coming biennium. Second, it allows us to revisit and realign ourselves with our high-level strategic goals.

Security will remain a primary focus for 2015-17. With the global increase of security breaches occurring in both the government and private sectors, robust computer security is vital for protecting the confidentiality, integrity, and availability of computer systems, resources, and data. Without a well thought out security plan, confidential information can and will be stolen, and system integrity and availability will be compromised. Our customers and the citizens of ND are counting on us to perform the necessary processes to keep their

data safe and systems available, and we will continue vigilantly working to meet that expectation.

Our second main focus will be the “cloud.” As cloud services have increased in popularity, at times our customers choose to utilize, or are required to utilize, external vendors to provide cloud services. In response, we will extend our infrastructure, when appropriate, to integrate with external cloud solutions, and continue to offer our internal government cloud. This will allow us to continue to be the value added provider of information technology our customers expect. In this interest, of the thirteen initiatives we have identified to address over the next two years, seven will be centered on preparing us to transition to the cloud when and where it makes sense.

In this ever changing technology environment, ITD will continue to provide guidance and lead the transition into the next era. We are confident of our success because of the abilities and strong performance record of ITD employees.

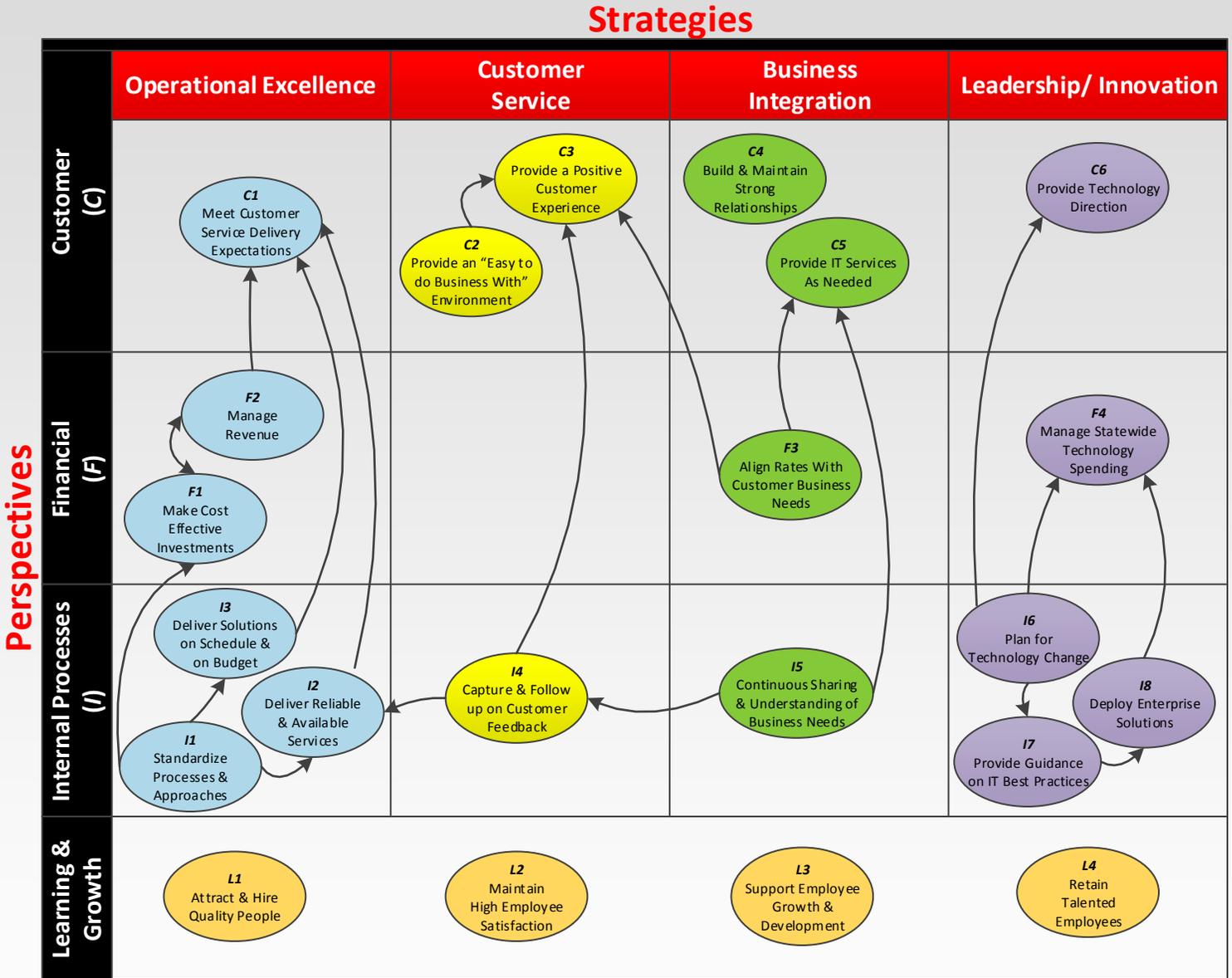


ITD Executive Management Team

ITD Strategy Map

The following map gives ITD direction by allowing us to drill down from high-level strategies to specific, measurable objectives and initiatives. The rest of this document explains in detail what each part of the map means.

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. Note that initiatives and measures are not shown on the map, but are detailed on the following pages.



Mission: ITD's mission is to provide leadership and knowledge to assist our customers in achieving their mission through the innovative use of information technology.

Vision: We see ITD as a leader and trusted business partner for strategic IT services within government and education.

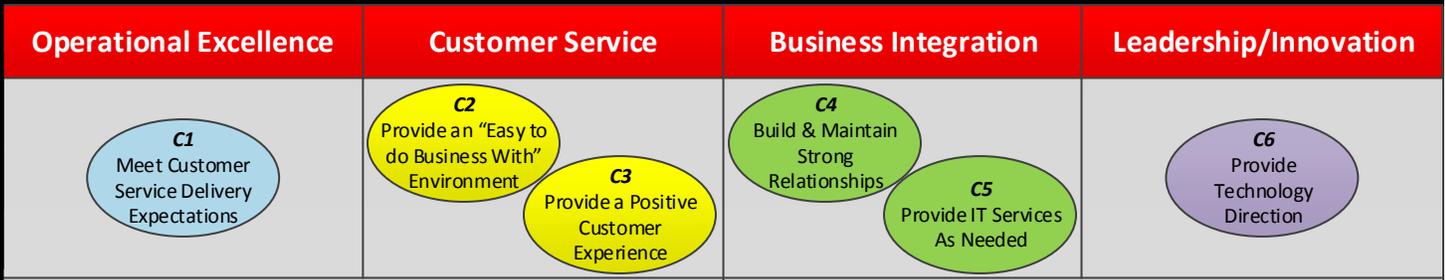
Guiding Principles/Values: These provide the foundation for our organization and are standards for employee mentality.

Respect – Teamwork – Achievement – Integrity – Leadership – Service

The (C)ustomer Perspective

Who are our customers, and what must we do well to satisfy them?

Customer
(C)



(C1) Meet customer service delivery expectations: Core to the customer perspective is our ability to understand and meet customer expectations, such as timely and professional service.

- ♦ Measure of success: Our goal is that 90% of all incidents and requests are completed to the satisfaction of customers.

(C2) Provide an "Easy to do Business With" environment: Customers should feel that working with ITD is a fluid and enjoyable process.

- ♦ **Initiative:** Deploy a new method for requesting services in a simplified fashion.
- ♦ Measure of success: Our goal is that 90% of customers agree ITD is easy to do business with.

(C3) Provide a positive customer experience: All of the Customer Perspective objectives culminate in providing a positive customer experience. If we can achieve this, we have a good indication that the other objects are being met.

- ♦ Measure of success: Our goal is that 90% of customers agree ITD provides a positive customer experience.

(C4) Build and maintain strong relationships: We know our success and the success of our customers is based upon relationships, which is why we work to foster new and maintain existing relationships with agencies.

- ♦ Measure of success: Our goal is that 90% of customers agree ITD is a trusted partner.

(C5) Provide IT services as needed: As our customers' technology needs change, we must adjust our service offerings to meet those needs.

- ♦ **Initiative:** Expand desktop management service based on policy decisions, client demand, and resource availability.
- ♦ Measure of success: Our goal is that 90% customers agree ITD delivers IT services that meet business needs.

(C6) Provide technology direction: As new technologies emerge, ITD needs to support agency and statewide decision-making processes with documented strategies.

- ♦ **Initiative:** Expand communication with stakeholders regarding cloud services.
- ♦ Measure of success: Our goal is that 90% of customers agree that ITD provides technology direction.

The (F)inancial Perspective

What is most critical to our financial success?

Financial
(F)

Operational Excellence	Customer Service	Business Integration	Leadership/Innovation
<p>F1 Make Cost Effective Investments</p> <p>F2 Manage Revenue</p>		<p>F3 Align Rates With Customer Business Needs</p>	<p>F4 Manage Statewide Technology Spending</p>

(F1) Make cost effective investments: Our first financial strategy challenges us to balance infrastructure solutions with cost in order to keep our rates competitive.

- ♦ Measure of success: ITD's goal is that rates for comparable services will be equal to or lower than private and public sector offerings.

(F2) Manage revenue: ITD monitors revenue closely to comply with federal regulations and to ensure rates accurately recover the cost of services.

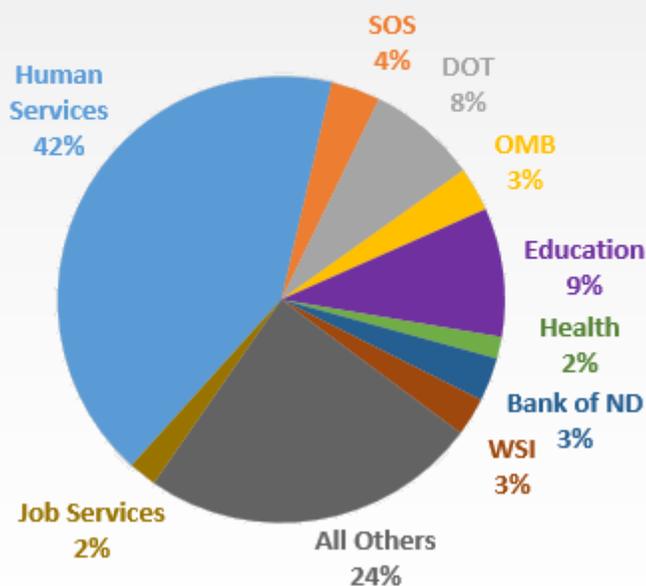
- ♦ Measure of success: ITD's total net assets need to follow Federal guidelines.

(F3) Align rates with customer business needs: We know that agencies often struggle to balance available funding with business needs, which is why we work to align rates with customer needs.

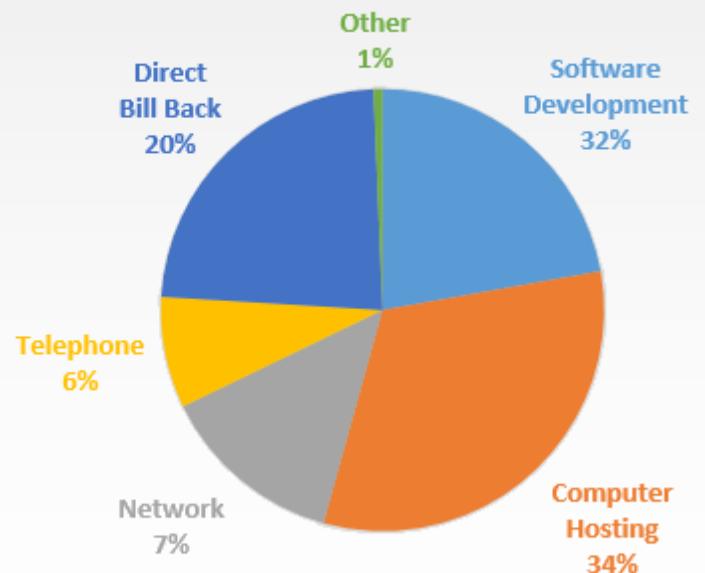
- ♦ **Initiative:** Align ITD's rate structure with the evolving cloud-based technology landscape.

(F4) Monitor statewide technology spending: By monitoring statewide spending, ITD can help unify IT efforts across agencies, leverage the unified spending power of the state, mitigate risk, and provide more seamless integration of enterprise solutions.

ITD REVENUE BY DEPARTMENT
FISCAL YEAR 2014
TOTAL BILLING: \$61,948,535



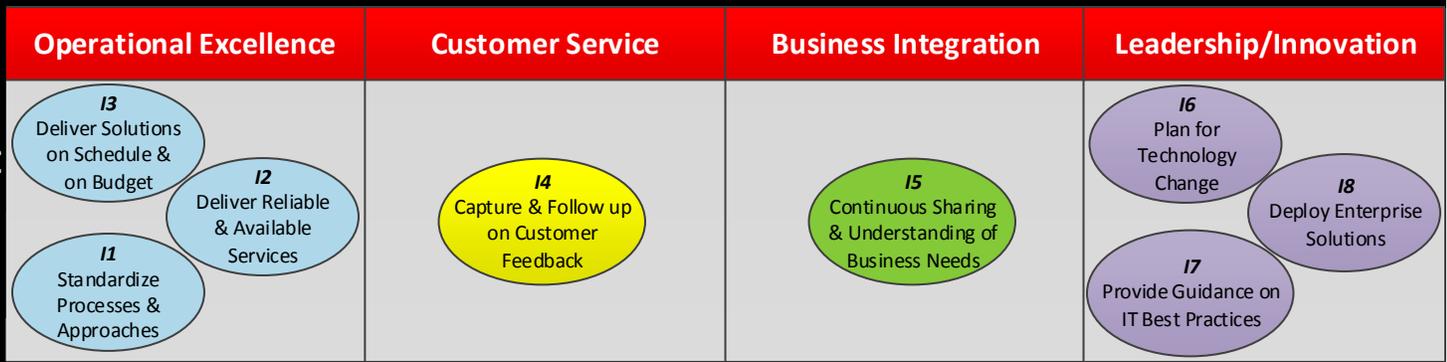
ITD REVENUE BY SERVICE
FISCAL YEAR 2014
TOTAL BILLING: \$61,948,535



The (I)nternal Processes Perspective

Which processes must we excel at to meet customer needs?

Internal Processes
(I)



(I1) Standardize processes and approaches: ITD leverages industry best-practices to ensure the efficient and effective delivery and support of IT services.

- ♦ **Initiative:** Become more proactive in audit/assessment response by improving processes and documentation to benefit auditors and ITD.
- ♦ **Initiative:** Improve data-driven decision-making by more effectively leveraging information from internal systems.
- ♦ **Initiative:** Develop a decision-making framework to guide cloud, hybrid, and on premise architectures.
- ♦ **Initiative:** Develop procurement practices and enterprise architecture standards for cloud services.

(I2) Deliver reliable and available services: In order to be an IT leader, we must first attain operational excellence by providing secure and reliable services.

- ♦ **Initiative:** Advance the state's security posture by leveraging existing security investments.
- ♦ **Measure of success:** ITD will deliver services in accordance with the parameters outlined within Service Level Agreements.

(I3) Deliver solutions on schedule and within budget: Our processes allow us to monitor and control projects to ensure solutions are delivered within estimations.

- ♦ **Measure of success:** Our goal is that 90% of all incidents and requests are completed within the estimated time and budget.
- ♦ **Measure of success:** ITD's goal is that large projects will exceed The Standish Group's CHAOS benchmarks for percentage of projects completed on-time and on-budget.

(I4) Capture and follow up on customer feedback: We believe that better service starts with listening to our customers, which is why we routinely gather and monitor feedback to identify opportunities for improvement.

(I5) Provide continuous sharing and understanding of business needs: We strive to understand the business needs and mission of our customers and to share IT knowledge that helps them achieve their goals.

(I6) Plan for technology change: Rather than reactively responding to change, ITD invests in research and development to ensure we are prepared for changes in the technology landscape.

- ♦ **Initiative:** Develop and establish ITD's role in brokering enterprise cloud services.
- ♦ **Initiative:** Determine the network, computing, and software architecture necessary to support cloud services.
- ♦ **Initiative:** Determine the staffing impact of cloud services.

(I7) Provide guidance on IT best practices: ITD is uniquely positioned within state government to provide guidance when needed and help customers realize the full potential of IT solutions.

(I8) Deploy enterprise solutions: Combined with our objective to monitor statewide technology spending (F4), ITD's deployment of enterprise solutions optimizes investments, reduces complexities, and facilitates information sharing across agencies.

The (L)earning and Growth Perspective

Do we have the culture and do our employees have the tools for success?



(L1) Attract and hire quality people: ITD recognizes the value of finding skilled people that are the right fit for the job.

(L2) Maintain high employee satisfaction: We know that employee satisfaction is critical to building successful teams and maintaining high-levels of customer satisfaction. To help achieve this objective, ITD performs a bi-annual employee survey and develops action plans based on employee responses.

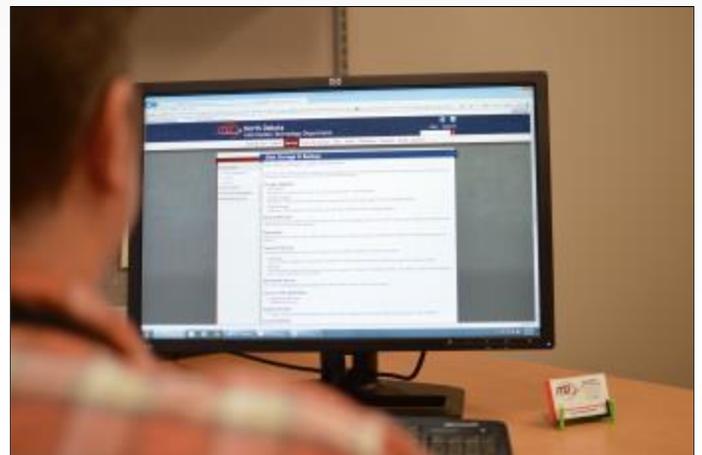
- ♦ Measure of success: Our target is a mean employee satisfaction score of 2 or higher, based on a scale of 0 (strongly dissatisfied) to 3 (strongly satisfied).

(L3) Support employee growth & development: We want employees to see ITD as a place they can grow, build new skills, and advance their career.

- ♦ **Initiative:** Build a leadership development and mentorship program to help build our next generation of supervisors and managers.

(L4) Retain talented employees: We recognize that much of our and our client's past success is thanks to the commitment of long term employees, and we work to cultivate an environment where employees want to remain.

- ♦ Measure of success: Our goal is to limit controllable employee turnover to less than 6 percent (ND state government average = 10.3%).



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