TEAMWORK
RESPECT
ACHIEVEMENT
INTEGRITY
LEADERSHIP
SERVICE

2015-2016 Annual Report

Jack Dalrymple, Governor of North Dakota

Mike Ressler, Chief Information Officer

Dan Sipes, Deputy CIO & Director of Operations

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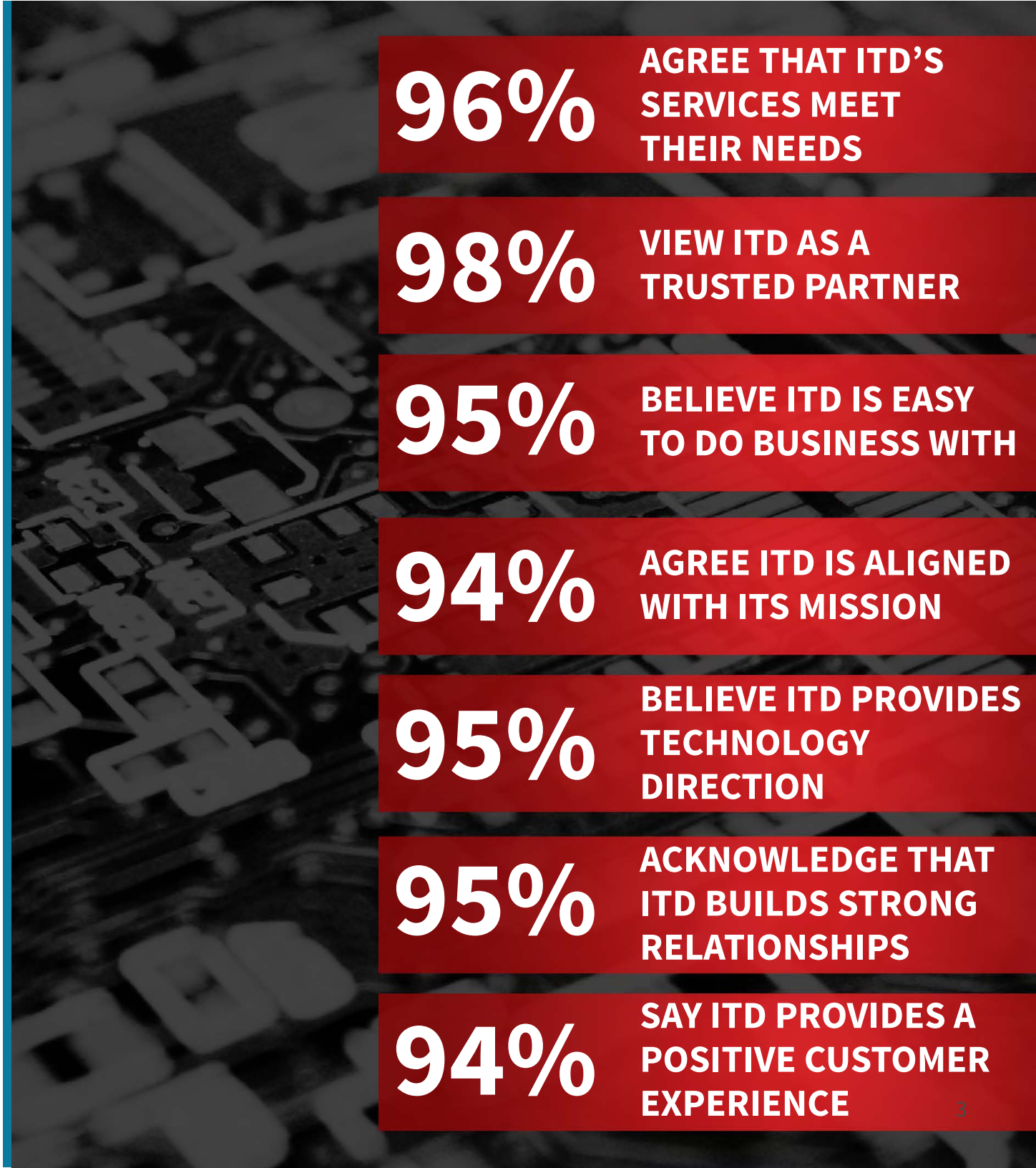
The 2015-2016 Annual Report was produced by the North Dakota Information Technology Department (ITD).

It is a response to requirements outlined in Chapter 54-59 Section 19 of the North Dakota Century Code.

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

ITD's mission is to provide leadership and knowledge assisting customers in achieving their mission with the innovative use of information technology. Through our Annual Customer Survey, our customers tell us how well we are achieving that mission.



EXECUTIVE SUMMARY

Mike Ressler, Chief Information Officer

Mike Ressler, Chief Information Officer

This past year, we've seen IT in the State of North Dakota continue to evolve to meet the business needs of state government. In some instances, this meant implementing new technology, processes, and services. In others, it meant maturing existing solutions. In all cases, we strive to create an efficient, secure environment through investments in the people, processes, and technology that make up IT in state government.

I am excited to see the progress the state is making in successfully completing large IT projects. One aspect of this is business process modeling, which helps organizations analyze, understand, and optimize business processes. We saw three agencies invest in business process modeling prior to starting development of their IT project. In these cases, it provided employees the opportunity to understand all of the processes that existed in their division as well as other divisions, and it afforded them the opportunity to change processes, making the overall system more efficient. By spending additional time in the beginning, less changes were made once the project started, which had a positive impact on both cost and schedule.

The other change that has occurred in this area is deploying large applications in an iterative approach. Instead of conducting a lengthy planning session for the whole system, the application is divided into segments that are smaller and have the potential to be deployed into production when finished. This gives the project team the ability to deploy workable functionality quicker, building project confidence, and allowing lessons learned to be deployed after each module. This methodology also allows better cost and schedule estimates to be predicted and improves the overall success of the project from a project management reporting perspective.

Progress continues to be made in enhancing IT security. The Security Team Manager position was elevated to the level of Chief Information Security Officer and a new director was hired to fill the role. Significant efforts also were put into improving the security of the state network, data center, and web applications. The Governor established a Cybersecurity Task Force consisting of executive leadership from sixteen state agencies and the ND Association of Counties. The task force has focused on addressing the current cyber environment, laws surrounding protected data and disclosure requirements, and existing practices and tools in place. The task force will publish a final report in 2016, which will include cybersecurity recommendations for the governor to consider and possibly include in his 2017-2019 budget. As cybersecurity activity grows, and attacks increase in complexity and frequency, it's critical that the state continues to work together to create a safe environment for government to realize the benefits of technology.

This past year, we've also seen an aggressive shift in the industry to offer more Software-as-a-Service (SaaS) solutions. These applications can only be hosted in the vendor's data center, eliminating the option to host the application in the state's data center. This is a change from a few years ago when almost all software could be hosted in the state data center. This shift to SaaS has both positive and negative effects on the state.

One advantage is that the vendor is responsible for both the software code and hardware configuration,

decreasing the likelihood of compatibility and performance issues. New functionality and software patches are also usually deployed quicker since one organization has control over the entire code creation and deployment process.

There are also numerous negative effects of hosting applications off-site. The state must work through unique integration complexities when off-site hosted applications need to share data with applications in the data center. Increased internet bandwidth is required to transmit data to and from vendor data centers outside the state network. And, with fewer applications running in the state data center, fewer agencies share the cost of maintaining a high-end data center.

To address these issues and ensure the state progresses in a coordinated manner, ITD has introduced an application brokering service for all SaaS applications. The service includes an inventory of all state applications, obtaining a checklist of business and technical questions answered by the agency and vendor, and an architecture analysis maintained throughout the life of the application.

The business world continues to move faster and technology is often the stimulus behind this movement. This applies to government as well as the private sector. State government's role depends on reliable, affordable technology solutions. ITD has been and will remain committed to providing solutions to meet the demands and requirements of the agencies and educational institutions of North Dakota.

STATEWIDE ALLIANCES

Jody French, Director of EduTech
Sheldon Wolf, Director of HIT

EDUCATIONAL TECHNOLOGY (EDUTECH)

EduTech provides innovative information technology services and educational technology professional learning to the North Dakota PK-12 community. Services are designed to give educators access, training, and support to use technology 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 with the ability to access grades and attendance information, along with other features needed to provide efficient school management.

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

Finally, the PowerSchool team provides training and support for North Dakota eTranscripts. eTranscripts is a subproject of the SLDS that allows students and counselors to send high school transcripts to North Dakota registered postsecondary institutions, members of the National Clearing House and to DPI for the State and CTE Scholarship.

This past year, the PowerSchool team worked closely with schools to prepare and improve standards based report cards. With more districts starting the process of associating and assessing standards linked to tasks and assignments, a method to report to parents was deemed necessary. The PowerSchool team migrated all North Dakota custom fields to extended tables, allowing ease of access to student data via reports and exports. Also, as districts utilize the SLDS, the importance of clean data is becoming more and more apparent to districts, thus the need to provide training on how to clean up student data, not only in PowerSchool but also in SLDS and STARS. All of these accomplishments help the state and educators better provide education to students.

Jody French, Director of EduTech

Technical and Support Services

EduTech delivers numerous centralized IT services that allow educators and administrators to use technology to improve teaching, learning, and business productivity. Services include email, Internet content filtering, web hosting, purchasing agreements, blogs, podcasts, and graduate credit processing for EduTech training and mass communication. Our Help Desk provides K12 with a wide variety of assistance, which include centralized technical support for all EduTech services as well as services from our K12 partners, such as the North Dakota State Assessment Project, PowerSchool, SLDS, and STAGEnet.

EduTech operates a statewide identity management system. This system allows universal access to Microsoft Office 365 for all North Dakota K12 school students, teachers, and staff. Office 365 includes email, calendaring, cloud storage, collaboration space, and online document creation and editing using the Office web apps. It also allows individuals to install the latest version of Microsoft Office onto their computer, tablet, or mobile device, regardless of operating system. At the end of 2015, SENDIT Mail, the legacy K12 email system, was retired and

replaced with Office 365 email. Each year we partner with Microsoft to host a symposium on the Microsoft Campus in Fargo where we provide hands-on experience with Office 365 tools and deliver the latest information on the Microsoft technology roadmap.

EduTech also manages Internet content filtering using the state's content filter. It is IPv6-ready, and filters properly configured school laptops when they are off the state network. EduTech also provides data and information security services for K12 schools, such as training, online resources, security awareness, vulnerability intervention, and onsite consulting.

Professional Learning for Educators

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

- Teacher and Student communication and collaboration of Office 365
- Maker Education
- Instructional Coaching
- Conference Services
- Augmented Reality
- Classroom Video Enrichment
- Digital Citizenship
- Geographic Information Systems

This past year, EduTech launched an initiative for teachers and students to introduce them to the Maker Movement. Regional training sessions provided hands-on experience that demonstrated how this style of teaching and learning increases student engagement and ownership of learning. EduTech has also supported Unconference (a loosely structured conference emphasizing the informal exchange of information and ideas between participants) and Tech Camp (extended days of hands-on professional development) experiences throughout the state and presented at in-state and out-of-state professional learning conferences.

E-rate Consulting

EduTech's E-rate consulting service helps school administrators complete their yearly applications for federal telecommunications discounts. The consulting service consists of face-to-face regional workshops for school districts and on-line support and consultations on a case-by-case basis for school administrators. It also includes troubleshooting and E-rate filing assistance to schools and informing school districts about new programs and rule changes. In the Fiscal Year 2016, the E-rate program provided nearly $10 million dollars to North Dakota schools and estimates indicate it will provide nearly $10 million dollars in Fiscal Year 2017.

ND educators embracing "Maker" education. Maker Education uses a wide variety of hands on activities (such as building, computer programming, and sewing) to support academic learning and the development of a mindset that values playfulness, experimentation, growth, collaboration and community.

HEALTH INFORMATION TECHNOLOGY

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

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

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

Current functionality of the NDHIN includes Direct Secure Messaging, known as Communicate, and query-based services. NDHIN Communicate, which utilizes a web based software and XDR (external data representation) messaging services, allows providers to send information amongst themselves through secure encrypted email. It allows providers to exchange unstructured documents, structured files, images, pictures, or anything else that can be attached to an email. Essentially, Communicate allows users to securely push protected health information from one provider to another provider.

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

Sheldon Wolf, Director of HIT

At the end of June 2016, over 500 users were accessing query based services and over 900 messages were sent through the NDHIN weekly. As seen in chart below, provider logins to the query based system continue to grow month over month. Additionally, as the NDHIN and electronic health record systems mature, the amount of information being shared through XDR and web-based systems continues to increase.

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

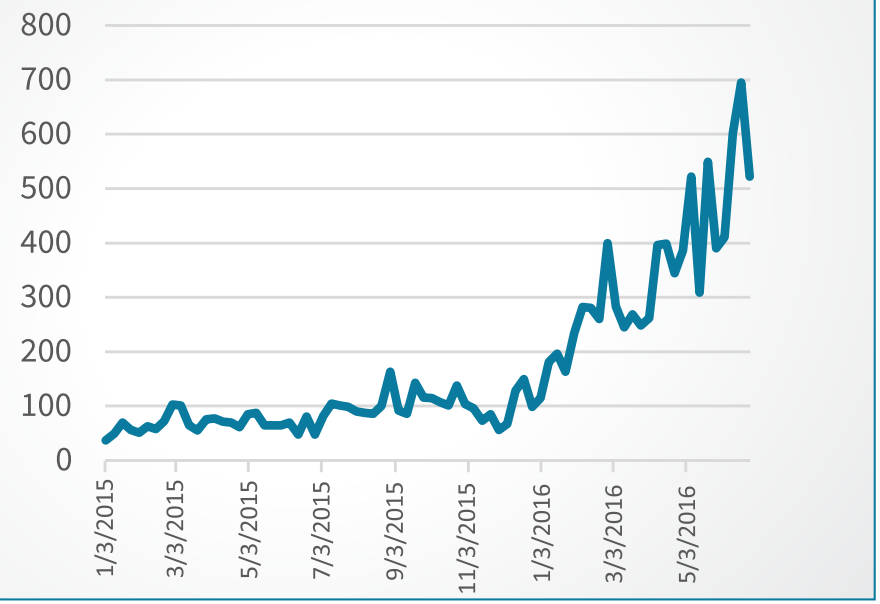
Another feature includes subscription and notification services. This allows a provider that has a treating relationship with another provider to "subscribe" to a patient and receive notifications when an event is triggered. Event triggers could include an inpatient admission or discharge, abnormal lab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

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

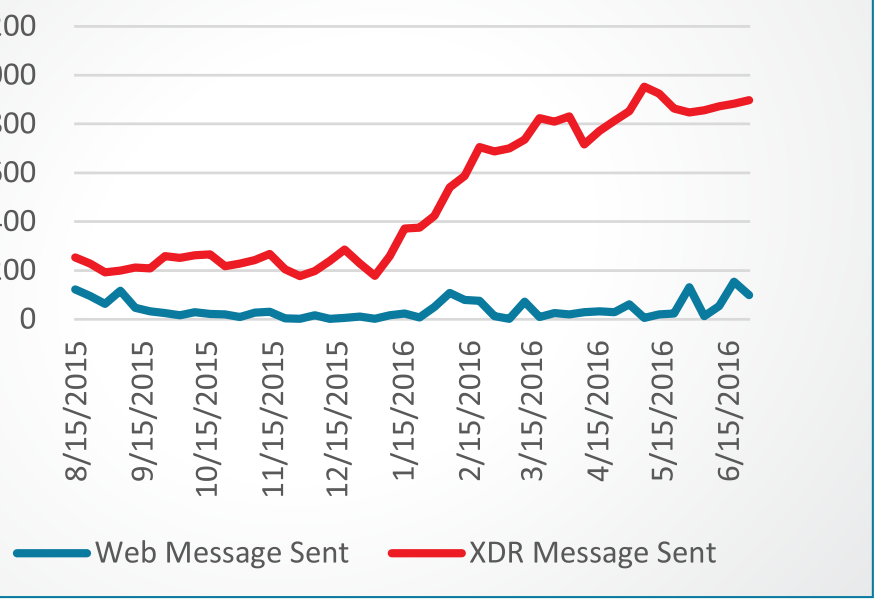
other states and federal agencies. Additionally, an advance directive repository is being constructed. The repository will allow citizens to upload an advance directive to the repository and allow other authorized users to access the advance directive stored in the repository. This should be available in the last quarter of 2016.

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

NDHIN LOGINS - PER WEEK



NDHIN MESSAGES SENT



ENTERPRISE SERVICES

Gary Vetter, Director of Enterprise Services

Gary Vetter, Director of 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:

- 84,361 incidents
- 45,493 service requests
- 99.9% overall satisfaction rate

North Dakota Century Code requires ITD to document information related to service support and delivery, which includes formal complaints regarding dependability, responsiveness, and cost. From July 2015 through June 2016, no formal complaints were filed. However, ITD is asking for, listening to, and acting on customer feedback each and every day.

HELP DESK MANAGEMENT

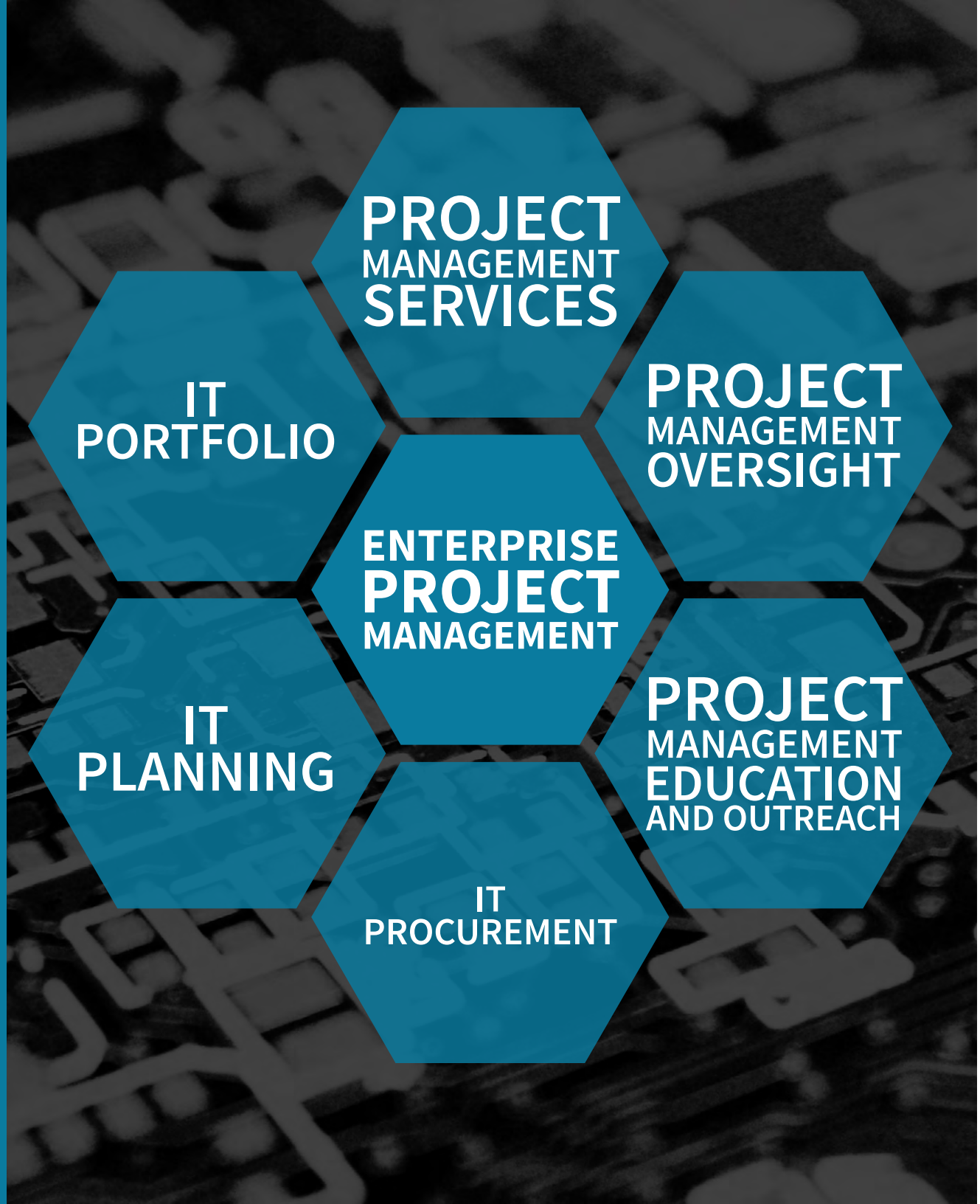
Government entities are finding that even though they provide unique services, they share commonalities when it comes to supporting customers and systems. Currently, ITD extends its support service to numerous IT and non-IT related government functions. During the past year:

- ITD partnered with the Bank of ND to pilot a Configuration Management Database (CMDB), resulting in an organizational view of relevant IT system components and the relationships between them.

ENTERPRISE COMMUNICATION

The Enterprise Communication Service provides agencies access to communication resources and training. It also manages the official State of North Dakota Portal, which provides citizens a single point of access to state government's online services. In the past year:

- The Social Media Users Group (SMUG) addressed numerous topics, including brand guides, comment policies/moderation, records management, terms of service agreements, and Google Analytics.
- A special effort was devoted to researching the viability of an enterprise digital asset management (DAM) solution. This would allow agencies to store, manage, and share photos, videos, and audio files in a coordinated manner. Ultimately, there was not enough interest among agencies to justify the implementation of an enterprise DAM at this time. As agency needs evolve, the topic may be revisited.
- A ND Portal project originated; consisting of several major components. First, a complete rewrite of the current State of North Dakota Portal (www.nd.gov) to help citizens more easily find information about state government services. Second, the development of an enterprise website development framework to efficiently and effectively create and maintain content management system (CMS) based websites. Third, the establishment of a coordinated experience across state government public facing websites.



ENTERPRISE PROJECT MANAGEMENT OFFICE (EPMO)

The Enterprise Project Management Office (EPMO) is charged with optimizing the value and success of IT projects throughout state government. The EPMO achieves this in many ways, such as by providing project guidance, oversight and management, as well as procurement, strategic planning, and other business services.

The EPMO began the 2015-2016 year having just assumed procurement, planning, and portfolio management responsibilities. That said, this year was one of process improvement, of finding new ways to collaborate to increase business value, and of providing our traditional consulting and oversight services. The following are key accomplishments within the EPMO's service areas.

Project Management Services

- Managed 63 projects with a combined total budget of $82.7 million.
- Seven of those projects have been completed, six finishing within the 20% threshold for both budget and schedule variance.

Project Management Oversight

- Performed project oversight on 18 projects with a total combined budget of $272.8 million.
- Four of those projects have been completed, three finishing within the 20% threshold for both budget and schedule variance.
- Matured the oversight program by revising the qualifications for project managers overseeing major projects, creating a Large Project Oversight Directional Statement, and developing an iterative reporting process.

Project Management Education and Outreach

- Partnered with the Project Management Institute's (PMI) Minnesota chapter to organize three outreach events, which featured educational lectures and roundtable discussions.

IT Procurement

- Developed a new template for contracting Software-as-a-Service (SaaS), in collaboration with the State Procurement Office and the Office of the Attorney General.
- Reviewed over 109 procurement and contract documents within the five-day response time objective.
- Collaborated with agencies, per N.D.C.C. § 54-59-32, on 19 IT projects valued at $500,000 or greater.

IT Planning

- Reworked the approach and toolset used in the biennial statewide IT planning process.
- Assisted 53 state agencies in creation of their operations plans and new project worksheets.
- Facilitated the development of ITD's 2017-2019 Strategic Plan.

IT Portfolio

- Established a portfolio of state IT projects.
- Provided 11 recommendations to agencies using the re-engineered $100,000 IT project review process, now called "Project Exploration."

ENTERPRISE ARCHITECTURE

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

- The new EA 2.0 framework resulted in three rescinded standards, eight updated standards, one updated best-practice, and four requests for exemption. Sixteen surveys were used to gather feedback from EA participants and provide recommendations to the CIO. Several standards were updated as the result of improvements made to ITD's service level agreements.
- EA initiatives that were started and are expected to produce deliverables include 1) the creation of guidance for agencies around Data Classification and Data Sharing Agreement and 2) the drafting of standards to address Public Access Control and Application Support.
- ITD has expanded the use of meeting recaps to include most ITD events and meetings, and the EA meeting recaps now include more information. The monthly IT Coordinators Council (ITCC) Meeting recap has essentially become ITD's monthly electronic newsletter.

GEOGRAPHIC INFORMATION SYSTEMS

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 aerial photography, city boundaries, earthquakes, state/federal roads, mile markers, railroads, ambulance service locations, and wind turbine locations.

- The GIS Technical Committee organized educational events, including unmanned aircraft systems and cloud-based GIS workshops, the ND GIS Users Conference, and on-site training classes. Since their inception in 2002, the classes have saved state agencies over $94,000 in training costs alone.
- The GIS website has been updated and is now hosted within ITD's Drupal site, resulting in a significant upfront and ongoing cost savings.
- Visual ND has been fully released. Visual ND is used by agencies to share data, services, maps, and applications within agencies, among agencies, and with the public.
- A new Drupal-based open data platform for finding and browsing GIS data is nearing completion.

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, Human Capital Management, Enterprise Learning Management, and Portal Management.

ITD provides hosting, first tier support, technical development, patch/upgrade, and program management duties for ConnectND. OMB's (Office of Management and Budget) Fiscal and HRMS (Human Resource Management Services) divisions are the application owners and provide business/functional decisions and work effort. During the past year:

- Over 94,000 enrollments were made and 2,800 online classes were built within ConnectND. An application/toolset upgrade is also being planned.
- Over 3,900 jobs were posted and 55,000 applications were received.
- Over 5,800 performance documents were created.
- ConnectND applications continued to stay on Oracle's supported roadmap for products and toolsets, including yearly tax updates and applying Affordable Care Act changes.
- ITD hosting efforts included server updates and the deployment of enhanced application security products.

94,000 ENROLLMENTS
WERE MADE THROUGH CONNECTND

STATEWIDE LONGITUDINAL DATA SYSTEM

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

- North Dakota eTranscript functionality continued expanding, including incorporation of online applications for the ND State Scholarships.
- ITD Research Analysts conducted statistical analysis to evaluate the impact of teacher professional development delivered by North Dakota Regional Education Associations.
- ITD created the AdvancED reports for schools and districts along with an interactive, visual Data Explorer application for state educational data.
- The SLDS program focused on providing additional teacher-level student dashboards and predictive analytics for high school and college readiness; it also provided data flow from PowerSchool to STARS for state reporting of student academic achievement.
- ITD is expanding the data warehouse for the NDUS and modernizing the reporting environment for all ND institutions of higher learning.
- SLDS training for primary and secondary schools continued to build on data-driven decision making frameworks. A partnership with the NDUS will bring this training into teacher preparation programs.

- Collaborating closely with Job Service ND, workforce readiness research continued helping answer policy questions on the students, college and workforce training programs.
- Publicly-available research results are now available on the SLDS website.

BUSINESS INTELLIGENCE

Business Intelligence (BI) covers a broad range of applications, infrastructure, tools, technologies, and best practices. The results transform raw data, often from multiple sources, into historical, current, and predictive information. Providing access to an organization's information through the use of BI tools, such as Cognos and Microsoft BI Suite, creates strategic, tactical, and operational insights and enables data-driven decision making. During the past year:

- The Department of Transportation (DOT), Office of Management and Budget (OMB), and Office of State Tax Commissioner, continued to leverage BI services.
- ITD 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.
- New data sources were added to the Master Data Management (MDM) system to uniquely identify users of DHS services. A more flexible search facility is also available. The MDM is preparing for an upgrade and expanded use.

ENTERPRISE DOCUMENT MANAGEMENT SYSTEMS

Enterprise Document Management Systems (EDMS) is a collection of technologies for imaging, document management, forms processing, report management, and workflow utilized by 21 state agencies/programs and 3,100 users. During the past year we:

- Evaluated form development tools and selected Adobe AEM for paper and online data collection.
- Upgraded ILINX Capture, LiquidOffice, and Filenet.
- Facilitated four EDMS User Group Meetings.

21 STATE AGENCIES
UTILIZED ENTERPRISE DOCUMENT MANAGEMENT SYSTEMS (EDMS)

BASIC CONTENT SERVICES (SHAREPOINT)

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

- Central management tools were evaluated.
- Digital Loss Prevention was implemented for an agency.
- Microsoft's Risk Assessment Program scored well against the shared production environment.
- Planning began to migrate SharePoint Foundation sites to a different platform prior to their end-of-life.
- Testing began of SharePoint Online viability and functionality.

SOFTWARE DEVELOPMENT

Doran Eberle, Director of Software Development

Doran Eberle, Director of Software Development

The Software Development Division offers a wide range of professional services related to the development and maintenance of software applications. Whether developing a custom application or assisting with the procurement and configuration of a COTS (commercial off-the-shelf) solution, the knowledgeable staff of the Software Development Division are motivated to deliver solid results and a positive customer experience.

The staff of the division had another demanding yet effective year. Several significant development projects concluded with successful results that met agency requirements while promoting a more effective and efficient way to do business. In addition, many of the projects offered an intuitive public interface, providing citizens an improved experience when utilizing government services.

Over the past year, we worked with several new customers that historically have not used ITD's software development services. We found these partnerships to be highly successful and look forward to future projects. Many of these new interactions began with ITD's business analysis service, in which we provided a thorough analysis of the customer's business functions and workflow. These successes have resulted in an increased demand for the business analysis service, which we plan to meet by expanding both our personnel and internal processes in this area.

Our architects and developers are regularly challenged to adapt to the ever-changing application development processes, procedures, and tools. Over the next year, the division's strategic attention will focus on several key initiatives, including agile development, DevOps, and application lifecycle management.

APPLICATION SECURITY

Application security centers on protecting sensitive information from unauthorized access through software vulnerabilities. This continued to be a main focus for the division. We aggressively refined and adapted our security vulnerability assessment, discovery, and remediation efforts. Through these efforts, great progress was made on improving the security profile for ITD developed applications. Over the next year, we will shift our security focus to align and assist with several initiatives driven by the Governor's Cybersecurity Task Force.

EVOLVING DEVELOPMENT AND DELIVERY STRATEGY

To adapt to a rapidly changing technology landscape and to enhance our ability to deliver high-quality, innovative applications to our customers faster, ITD will continue to incorporate proven industry best practices into our software development and delivery lifecycle. Stemming from our continuous process improvement efforts, we have and will continue to refine and streamline our existing development methodology.

We will be implementing an alternative development model for solutions that could benefit from an agile approach. To support these efforts, we incorporated Microsoft's Team Foundation Server (TFS) as our unified application lifecycle management (ALM) solution. TFS provides a single, flexible repository

for the management of requirements, test cases, defects, source code, and other development related activities. It also provides a powerful set of automation tools to facilitate the continuous integration, testing, and deployment of applications. Projects, such as our new Drupal 8 platform, will benefit from these tooling enhancements by leveraging the automation capabilities. By automating and making the build process repeatable, the ongoing cost and complexity of deploying future upgrades and security patches is substantially reduced.

AGENCY SUCCESS STORIES

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

DEPARTMENT OF TRANSPORTATION

State Titling and Registration System (STARS)

The Department of Transportation (DOT) and ITD worked in partnership with FAST Enterprises to replace DOT's current Vehicle Registration and Titling System (VRTS) with the FastVS product. ITD assisted FAST with the conversion of data from VRTS into the new system, as well as, handled the required enhancements to the external interfaces requesting vehicle registration information. This project was implemented in June 2016.

Construction Automated Records System (CARS)

DOT and ITD have been working together on several enhancements to the CARS application. The first project was implemented in early 2016 and enabled the automation of the field books approval process. A second project, currently in development, will automate the pay quantities certification process. Two additional projects, scheduled for implementation in 2016, include the addition of a new fuel cost estimate worksheet and functionality to allow document signatures for approval processes.

ND HIGHWAY PATROL

The ND Highway Patrol (NDHP) and ITD collaborated on rewriting their Case Management System to a web-based system. ARIES manages multiple NDHP business activities, including the issuance of citations and warnings, tracking officer activities and criminal incidents, and streamlining case file workflow. The new application is compliant with federal incident based reporting standards (NIBRS/UCR) and allows qualified criminal incidents to be reported to the Bureau of Criminal Investigation (BCI) monthly via electronic media. The application was implemented in June 2016.

GAME AND FISH

The Game and Fish Department (GNF) and ITD teamed up to complete the first two phases of the GNF Portal project. The third and final phase will be implemented in third quarter 2016 and focuses on providing a more customer friendly interface. Returning customers will be able to easily login and view a history of their interactions through a "My GNF" portal.

INFORMATION TECHNOLOGY DEPARTMENT

BILLIT

ITD successfully implemented BILLIT, a new web-based billing application, in the fall of 2015. Since implementation, ITD continues to make modifications and enhancements to provide customers better access to their billing information. Key enhancements include web-based access to all billing information, detailed and customizable reports, and the ability to view detailed information for particular bill codes.

Records Management

ITD implemented a new web-based Records Management System. The initial phase, implemented in 2015, provided a basic solution for viewing and editing record series and state forms. Phase two of the project will automate the review process for record series information and records disposal certification.

DEPARTMENT OF CORRECTIONS

The Department of Corrections (DOCR) and ITD are working together to rewrite their current legacy Subject Tracking and Reporting System (DOCSTARS) application into a web-based architecture. This application helps DOCR manage over 7,000 active offenders under their supervision. This project is currently in the testing phase and is scheduled for an early 2017 implementation.

The DOCR and ITD are also rewriting their legacy system for managing Victims of Crimes Act (VOCA) and Crime Victims Account (CVA) grants. The new system will be web-based and provide a more adaptable online solution for all phases of the grant management process. This project is currently in the design phase and is scheduled for a 2016 implementation.

NORTH DAKOTA LEGISLATIVE COUNCIL

The North Dakota Legislative Council partnered with ITD to rewrite their Budget Status application from a client-server based technology into a web-based solution. This application allows users to enter and maintain fiscal information related to revenue and appropriations for bills and amendments. In addition, several comparison and summary reports

The Kool Kats team is one of many development teams in ITD's Software Development Division. They are responsible for the maintenance of PeopleSoft Financials, Human Resources, and Payroll modules for the Office of Management and Budget. Other areas of responsibility include maintenance of the EDMS and Filenet applications.

will be available to better monitor and manage the status of the budget during the legislative session. The updated application will be available for the 2017 legislative session.

OFFICE OF MANAGEMENT AND BUDGET

Website

The Office of Management and Budget (OMB) partnered with ITD to rewrite their public facing website. ITD developed the website in Drupal, which allows OMB to manage their own website content. The site went live in January 2016 and is a model for future ITD website development projects.

PeopleSoft

OMB and ITD continue to work together in supporting the enterprise resource planning (ERP) solution, PeopleSoft. Project highlights this past year include: PeopleSoft Enhanced Application Security (EAS), upgrades for ELM and Portal, implementation of the Real Estate Module, new workflow processes for Financials, Human Resources tax updates and ACA changes.

FIREFIGHTERS ASSOCIATION

The North Dakota Firefighters Association (NDFA) partnered with ITD to develop a training application/database to track official records of students, events, certifications, and other historical data. Prior to the project, ITD completed a comprehensive business analysis of all NDFA process workflows. The analysis documented current and future state business processes and provided recommendations for process improvement and automation opportunities. The training database project is currently in the development phase and is scheduled for implementation in 2016.

DEPARTMENT OF HUMAN SERVICES

Eligibility System Modernization

ITD is working closely with the Department of Human Services (DHS) and Deloitte Consulting on the department's Eligibility System Modernization project. Release 1 of the SPACES application went live in February 2016 with the scope focusing on Medicaid eligibility determination under the new Affordable Care Act (ACA) rules. The next release of the project is scheduled to go live in late 2017 and will include eligibility determination for the remaining Medicaid programs as well as SNAP, TANF, Child Care, and LIHEAP.

Software Development staff from ITD are working in a variety of roles and responsibilities on the project including:

- **Co-development and Knowledge Transfer:** Working directly with Deloitte to properly prepare for post-production support duties.
- **Interfaces:** Leading the development efforts of several interfaces between the SPACES application and DHS legacy systems.
- **Conversion:** Assisting Deloitte in both the real-time conversion of legacy data into the SPACES application as well as the population of data into the Deloitte data warehouse.
- **User Acceptance Testing (UAT) support:** Continuing to support DHS in the user acceptance of the SPACES application, such as planning, preparing, and executing testing activities.

Medicaid Management Information System

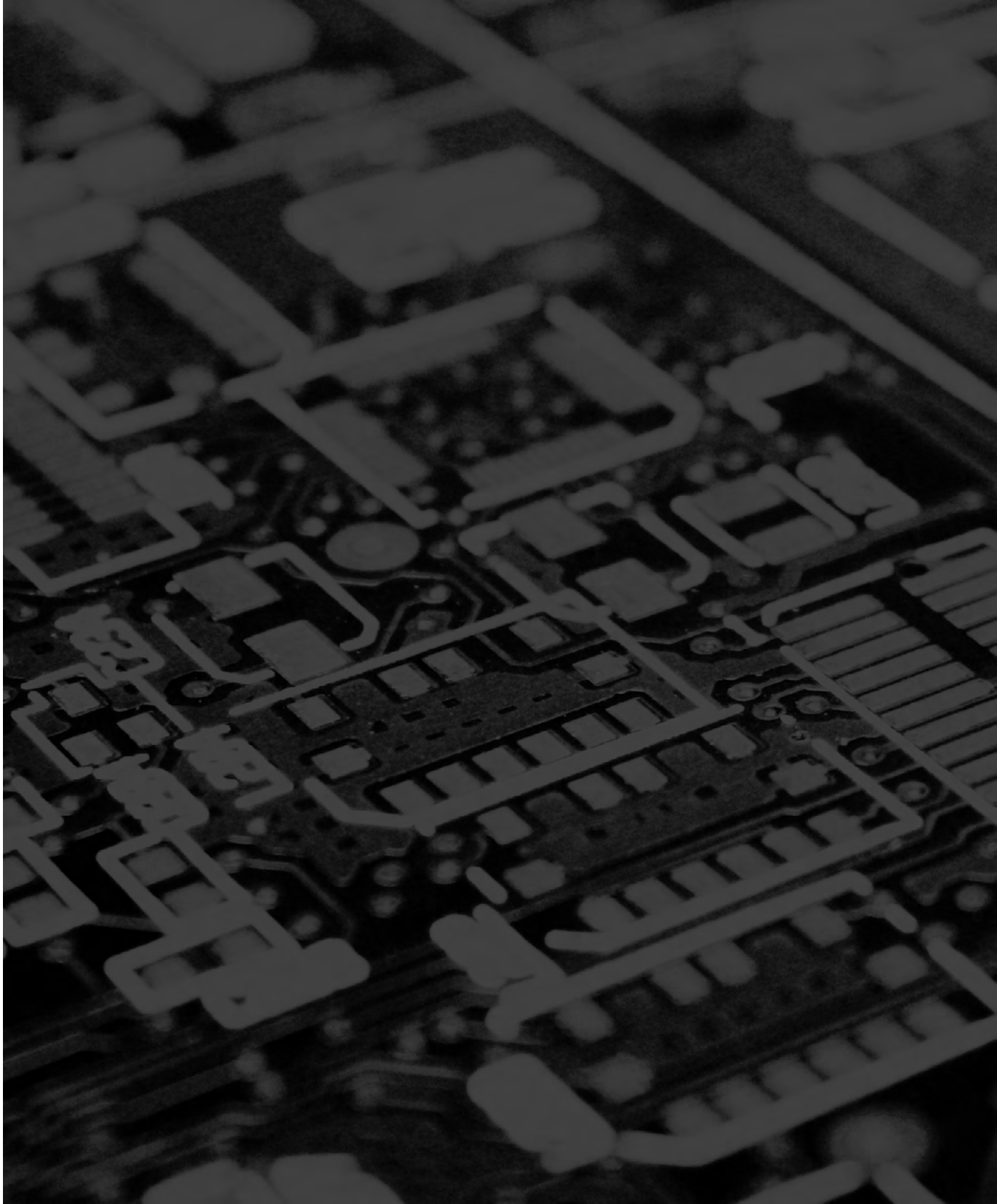
The Medicaid Management Information System (MMIS) replacement system, known as ND Health Enterprise MMIS, went live in October 2015. ITD continues to support DHS and the application vendor, Xerox, with the maintenance and operations of the application. ITD is also providing assistance on the first major enhancement to the application, which will allow DHS to comply with federal standards regarding the processing of HIPAA transactions as a result of the Patient Protection and Affordable Care Act (ACA). This project officially kicked off in June 2016 with ITD providing business analysis services to assist DHS and the development vendor, Xerox.

Electronic Health Records

ITD continues to provide business analysis services to DHS for the implementation of their Field Services EHR project. The EHR solution will replace two behavioral health electronic health record systems and is currently in the analysis phase.

Substance Use North Dakota Epidemiology Website

ITD worked with DHS to develop a Substance Use North Dakota (SUND) website that went live in April 2016. This site enables the public to view epidemiology data visually in a graph, map, or table. Additional filters by substance, location, and demographics provide detailed views and navigation of the data.



COMPUTER SYSTEMS

L. Dean Glatt, Director of Computer Systems

L. Dean Glatt, Director of Computer Systems

The Computer Systems Division is responsible for the architecture, maintenance and operation of computer hardware and software, including the state data center. The division supports all consolidated and dedicated computing platforms for database, storage and server technologies.

Every agency mission is critical; therefore, our goal is to deliver computer applications that are highly reliable and perform to meet our service level agreements. The division is deeply rooted in the architectural and security design and support of the technologies in all ITD divisions, and is a key advisor for the enterprise computing operations for all of state government.

Fulfilling this role in an environment where technology is rapidly and continually changing requires expert level knowledge and a commitment to staff education. Through online training, webinars, user groups and conference learning opportunities, we ensure staff have the computer security, language and hosting platform knowledge necessary to maintaining highly secure and highly available computer systems.

THE INTERNET OF THINGS

A recent and rapidly growing movement in the IT industry is the Internet of Things (IoT). IoT is about enabling devices to talk to each other to complete tasks that have historically required human intervention. Key to IoT is connecting practically any device imaginable to the internet, from traffic lights to office chairs. We have identified an initiative in our 2017-2019 Strategic Plan around understanding how we can incorporate potentially millions of these devices into the state's IT systems. The necessary interfaces to make these devices talk to each other require in-depth knowledge of internet cloud services, languages and modern security models. It is a very exciting new wave of use-cases that we are actively engaged in. As these dedicated devices become more prevalent, we will ensure that they are operating correctly to meet agency needs and ultimately benefit North Dakota.

CLOUD COMPUTING

Cloud advocates are embracing cloud computing as a path to greater opportunity. While ITD is optimistic as to the potential cloud computing can bring to the bottom line, we are working through the challenges associated with building cloud offerings in a secure, high-performing and managed approach.

We have completed cloud storage proof-of-concept projects with Microsoft Azure and Amazon Web Services. A major benefit of these projects is the potential for offering agencies additional storage and hosting tiers that utilize the cloud and can be customized according to agency data needs. With an on-premise and cloud hybrid design, we can start to add these cloud vendor resources to our data center in a fully tested, secure and managed approach. Full application testing has now started with pilot agencies. Future testing will utilize other vendors in the market, including Google and IBM cloud technologies.

END USER INITIATIVES

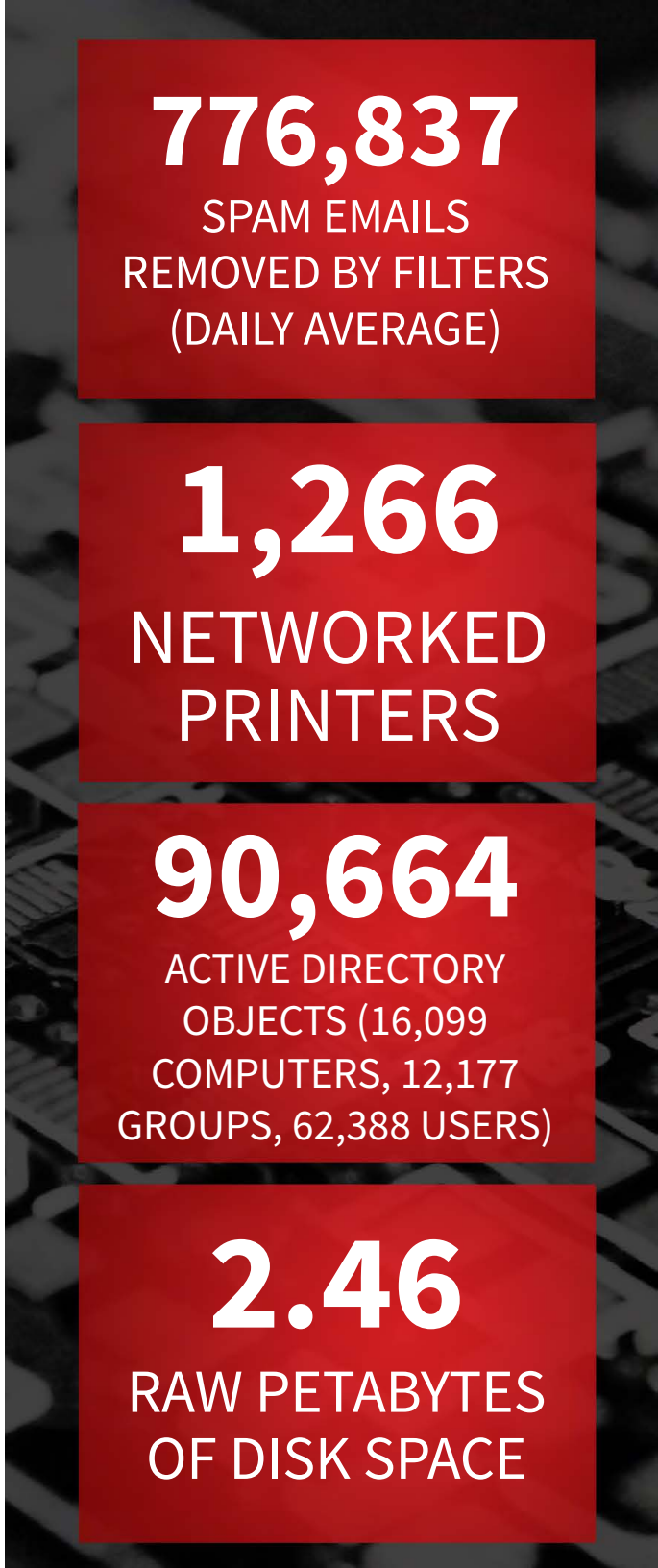
Our Desktop Support team rolled out a full-service deployment of desktop and laptop services to nineteen state agencies. The comprehensive Desktop Support Service includes computer patching, anti-virus and firewall software, encryption, on-site and remote support, computer procurement, and Microsoft Office 365 among other features. This new level of support greatly reduces the time to resolve problems, which hindered agencies in the past. Additionally, with a fixed fee rate model established, agencies are able to stay current with hardware and software in a predictable cost manner. We offer business grade computers to ensure that agencies have a full life-cycle of vendor support for their devices. Security is also greatly improved as outdated hardware and software is phased out in a timely manner. ITD Desktop Support staff maintains industry certifications, which helps ensure that our skills are current and more importantly, that technology is running the way it was designed to operate.

The Microsoft Office 365 government system, utilizing a federated directory service, was also brought online this past year. This initiative was completed as a partnership among ITD, Microsoft and agency IT leaders. It allows state agencies to take advantage of Microsoft Office 365 cloud services in an expedited manner, such as Office, Exchange, Skype, OneDrive and soon-to-be-ready SharePoint.

Our Desktop Support team also enhanced our service offering with mobile device management specific to state owned iPhone and iPad devices. The solution creates a stronghold layer for a new device by tightening device security and significantly reduces set up time, allowing users to get the device into production in a matter of minutes.

SYSTEMS AVAILABILITY

Because every agency mission is critical, it is vital that the state's computing infrastructure is built on a strong foundation. That's why our data centers are managed with specialized cooling, fire suppression and uninterruptible electrical equipment. The combination of primary and secondary data centers provides the necessary backup, recovery and highly available designs necessary to support storage networks, database clusters and server clusters. We continue to improve the posture of these systems in line with the requirements detailed in our service level agreements, such as a 99.5% minimum system availability for base systems and 99.98% for highly available designs.



NETWORK SERVICES

Duane Schell, Director of Network Services

Duane Schell, Director of Network Services

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

The infrastructure and services supported by the division are foundational in nature, enabling virtually all other technology initiatives throughout the state, including internet access, telephony, and a safe and reliable transport for all business applications.

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

STAGENET- ENSURING STABILITY, RELIABILITY, AND SECURITY

STAGEnet offers a variety of connectivity options, including traditional broadband, carrier ethernet, and dark fiber solutions. This variety of solutions allows us to meet the diverse business and technical needs of the member community. A consistent business requirement for the members of STAGEnet is stability and reliability. Although part of the responsibility is on the member to choose, with the advice of our team, the solution that aligns with their business requirement, it is incumbent on us to ensure the core network and various services are running in a manner that ensures stability and reliability. This past year, we augmented the reliability and stability of the core network by investing in a dual point of presence architecture in our major communities across the state. This project was made possible due to investments by our carrier community and the strong partnerships that we have with them. Additionally, investments were made to upgrade, strengthen, and solidify the DNS/DHCP infrastructure that serves as a core foundational component to the overall network. These and other efforts continue to build on the historical strength within the network and help to ensure a continued stable and reliable environment.

Although reliability and stability are foundational business requirements, safety and security are very much top of mind for most customers and have been focus areas for ITD for years. The division continues to build upon an already safe and secure environment by leveraging existing technology investments made in the past years. As a result of these efforts, the network is able to respond to and mitigate millions of security events each and every month. By embedding security technologies into the network and leveraging security best practices in both design and management practices, we provide a network environment that is safe and secure, allowing members to conduct business with the confidence their data is protected.

PUBLIC SAFETY COMMUNITY

ITD has partnered with the public safety community to support their mission for a number of years. This past year, the division was involved in three very important and strategic initiatives, each of which provide the opportunity to significantly improve and alter how the public safety community leverages technology.

The first initiative was in the education, outreach, and planning efforts for Firstnet. Firstnet is a planned nationwide wireless data network designed specifically to meet the unique and mission critical requirements of the public safety community. This past year, the project achieved a significant milestone through the submission of North Dakota's requirements. The submission will help Firstnet procure a solution that meets the unique attributes of our state, which include vast rural areas and an international border to the north. The submission was the culmination of a significant effort in information gathering, collaboration, and consensus building across all public safety jurisdictions involving all public safety disciplines statewide.

The second initiative was in the onboarding process of 911 centers onto a shared 911 call taking solution that was implemented the preceding year. During this past year, four 911 centers migrated to the shared solution with three additional 911 centers making commitments to in the upcoming year. This partnership between ITD and the 911 community is allowing partners to replace aging, legacy 911 system with a modern, next generation capable, 911 call taking solution and share in the core investments. This project is a classic example of the partnership and collaboration that exists within the STAGEnet community to achieve business objectives by leveraging a strong network.

The third initiative is the effort to partner with the Statewide Interoperability Executive Committee

Barry Stein, ITD Video Network Business Analyst, presents at the monthly IT Coordinators Council meeting about a new video conferencing solution. The solution, called Pexip, allow users to connect to a video conference using a standard web browser, smart phone, or conventional video conference equipment.

(SIEC) to determine the desirability and feasibility of pursuing a statewide integrated and interoperable radio communications network. This project is another example of strong collaboration and partnership between ITD, the SIEC, vendor community, and public safety disciplines and jurisdictions across the state. The objectives of the project are to:

- Fully understand the current state of public safety radio communications statewide.
- Research and review industry trends and technologies.
- Understand the mission critical business requirements various disciplines.
- Determine a solution that has strong commitment and buy-in of the stakeholder community.

The result of this effort will be to provide policy makers, including the North Dakota State Legislature and county and city commissions across the state, with information to make informed policy decisions. The ultimate goal is to ensure that public safety officials of all disciplines across the state have a mission critical radio network that provides them with the features and capabilities to fulfill their mission.

VOICE AND VIDEO TECHNOLOGIES

The division is also responsible for providing and supporting voice and video communication technologies. These technologies continue to be instrumental in facilitating communications within government and education, and with the constituents they serve. The division's goal is to ensure a reliable and stable environment that is both feature rich and secure, and evolves with the business requirements and expectations of the community we serve. The past year, we focused on upgrading significant segments of the infrastructure that help ensure we meet those goals. As in preceding years, many of the feature enhancements continue to be focused on the mobile user and the mobile experience. Additionally, focus continues to be on enhancing the experience for the PC and laptop user and providing them with tools that improve and promote collaboration. The division is committed to ensuring we maintain the high standards the user community has come to expect and deliver on the evolving expectations and requirements of the community we serve.

INTERNET AVAILABILITY:
99.998%

INTERNET BANDWIDTH:
11,705 G

VIDEO EVENTS:
43,078

CARRIER ETHERNET CIRCUITS:
362

FIBER CIRCUITS:
232

BROADBAND CIRCUITS:
276

IP ADDRESSES ISSUED DAILY:
250,000+

LONG DISTANCE MINUTES:
10 MILLION

HUMAN RESOURCES

Shelly Miller, Director of Human Resources

Shelly Miller, Director of Human Resources

The Human Resources Division works to maximize the contribution of people towards ITD's goals. This is accomplished through investing in the People Perspective of ITD's Strategic Plan and by providing guidance, support and advice on the effective implementation of the strategies, policies, and procedures. Activities that are vital to the People Perspective include workplace culture, employee recruitment, training, and leadership development. 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 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, leadership development, compensation and benefits, and employee relations.

RECRUITMENT

Over the last year, ITD recruited for 59 positions, receiving 369 applicants, of which 195 met the minimum qualifications. Many of the requisitions were due to internal promotions or retirements of long-term staff in addition to normal attrition. As the IT market continues to tighten, we have to continually focus on our recruitment strategies. To that end, we have increased our utilization of radio advertising in order to attract passive job seekers.

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. To that end, ITD has developed a robust employee recognition committees within state government. The committee focuses on promoting employee recognition opportunities, as well as numerous events paid for through employee donations to the program.

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

TRAINING

More than most other industries, 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 significant effort into training. Multiple ITD employees continue to take advantage of our tuition

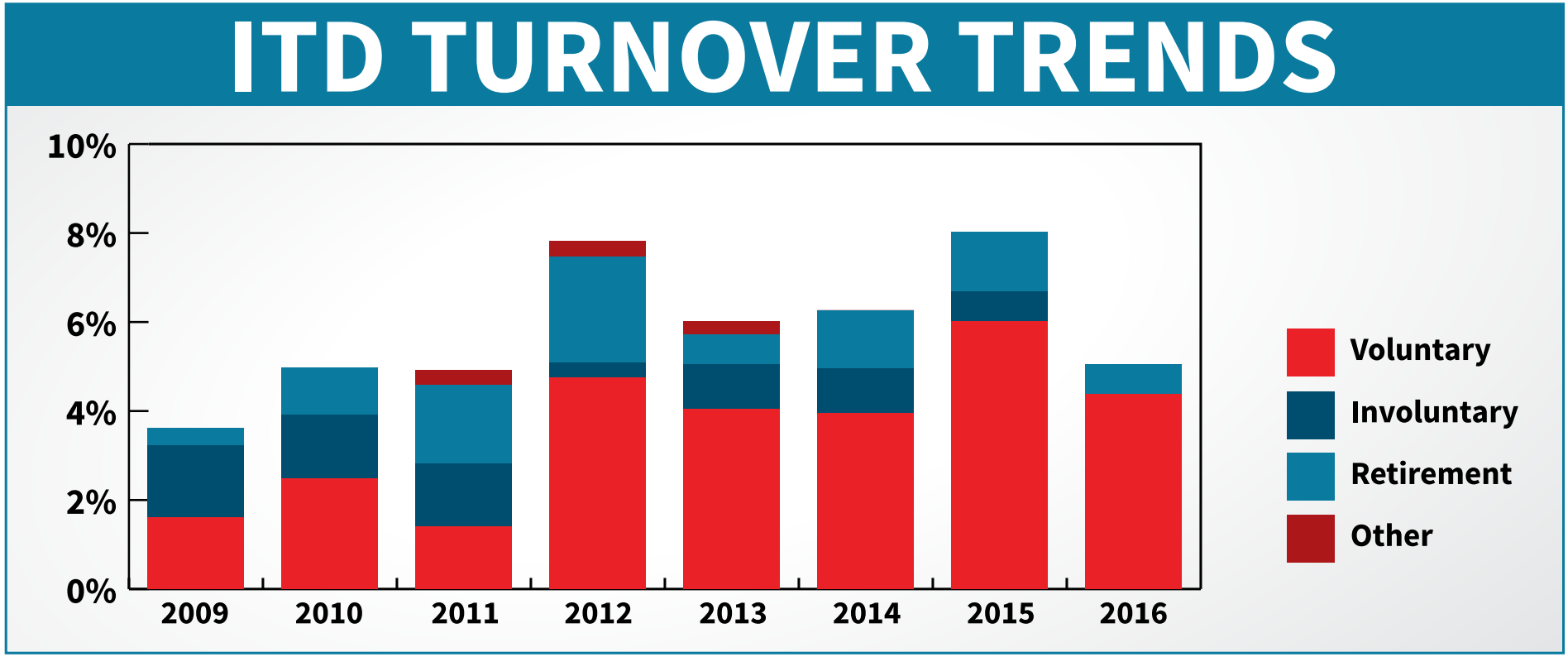
assistance and reimbursement program to finish bachelor's degrees. This not only helps employees advance their careers, it improves the credibility of the entire organization.

LEADERSHIP DEVELOPMENT

Developing a leadership program was one of the initiatives on ITD's 2015-2017 Strategic Plan, which has been successfully implemented. We want employees to see ITD as a place they can grow, build new skills, and advance their career. ITD has partnered with BSC (Bismarck State College) in their Excellence through Leadership program. Our annual mentorship program, called AMPLIFY, is now starting its second year. It is designed to allow participants to grow personally and professionally, enhancing career development by gaining knowledge and developing skills through their participation in the mentoring relationship. The program also encourages learning, collaboration, and knowledge sharing.

COMPENSATION & BENEFITS

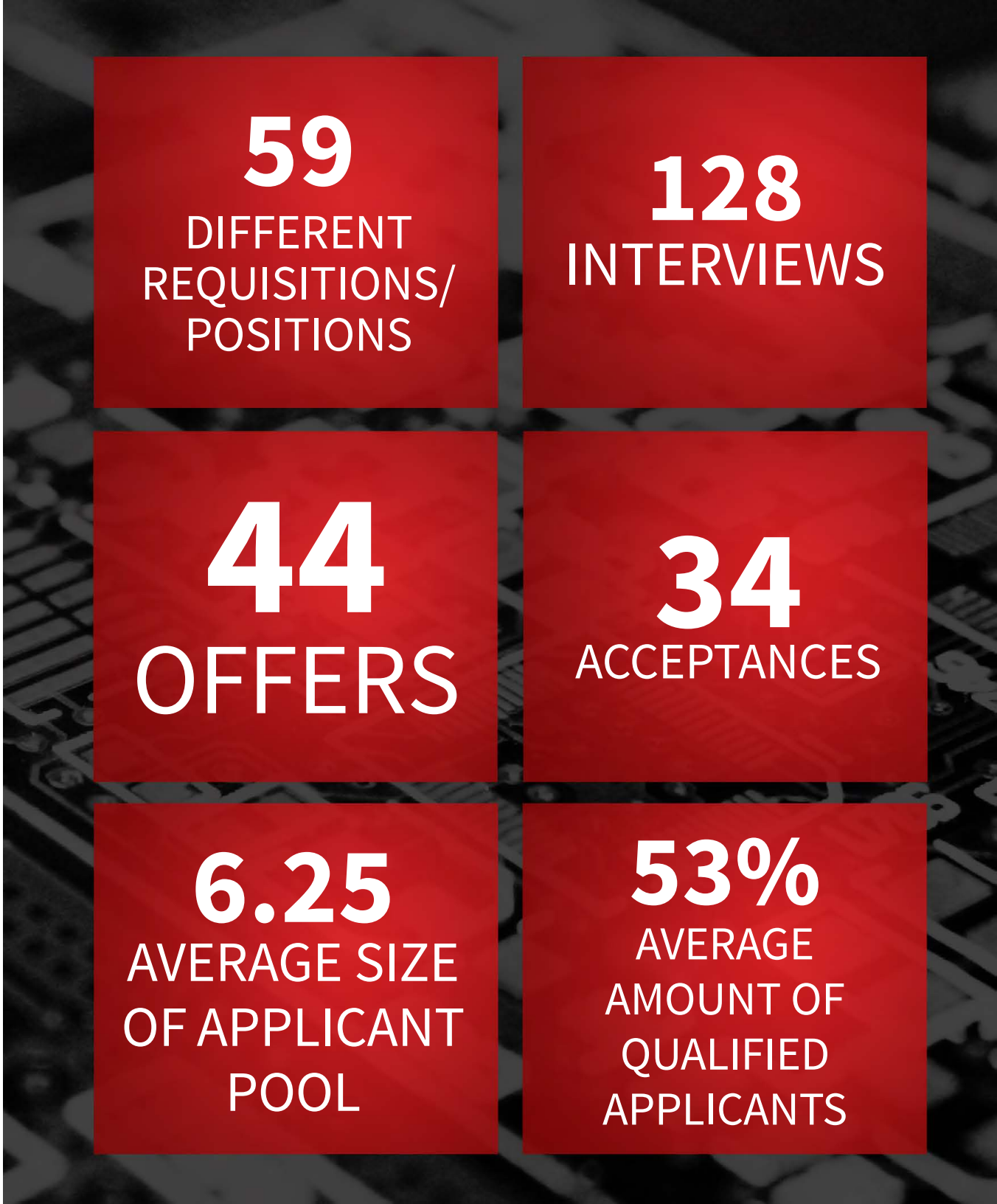
With an ever evolving IT field, remaining competitive with IT salaries is vital to securing a skilled workforce. As such, we conduct research into industry and local trends to make informed decisions when determining proper compensation and benefits packages. We analyze data from various sources, including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



EMPLOYEE RELATIONS

Diligent efforts are put forth in a variety of areas dealing with employee relations. This includes employee wellness and safety, a biennial employee satisfaction survey, monthly lunch meetings with management, an annual Meet-and-Greet with each work unit, as well as cultural improvement activities. We have showcased some of the diversity within ITD by holding a cultural days celebration where employees could taste-test different foods, from various cultures, during their lunch hour. We have increased our efforts on wellness and safety by bringing in presenters covering topics such as drugs in our community, protecting self and others in case of an active shooter, and naturopathic medicine. We also held a health fair for employees to learn about various aspects of wellness from local companies.

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



The first group to complete ITD's leadership development and mentorship program, AMPLIFY, is featured here. The program brings together mentors and mentees from across ITD for a year-long commitment. AMPLIFY provides a space for participants to grow personally and professionally by gaining knowledge and developing skills through the mentor-mentee relationship.

SECURITY

Sean Wiese, Director of Security

Sean Wiese, Director of Security

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

Cybercrime in 2016 has been on the rise and the State of North Dakota was not immune. Cyber criminals continue to improve their techniques and threats continue to evolve across a broad range of attack vectors. At ITD, we have made and continue to make significant investments in our security infrastructure, practices and partnerships. Security continues to be one of our major operational and strategic focuses.

ITD CYBERSECURITY FRAMEWORK

Addressing the cybersecurity challenge requires prioritizing assets, understanding threats, directing resources to critical areas, and increasing security awareness at all levels of the organization. The foundation of this effort is ITD's Cybersecurity Framework.

The Framework outlines ITD's security objectives and processes surrounding North Dakota's information and information technology assets. It is built upon proven security policies, standards and procedures to assist in managing the State's security risk. The Framework consists of five core functions – Identify, Protect, Detect, Respond and Recover focusing on four key areas – network, host, application, and user security.

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

Information Security Management

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

Information/Application Owners

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

Technology Providers

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

Supporting Functions

IT Security relies on a broad range of supporting individuals and functions. For example, auditors, physical security staff, training staff, and facilities management all have a role to play. From making sure the power stays on, to ensuring doors are locked

and new employees are aware of best practices, security requires collaboration among many parties.

Users

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

ACCOMPLISHMENTS

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

Partnerships

We worked closely with federal, state, local, and private industry partners to collect and analyze information on cyber threats and vulnerabilities that pose a threat to the state's information systems and critical information managed within those systems. An essential partnership we have continued to strengthen is with the Multi-State Information Sharing & Analysis Center (MS-ISAC). The MS-ISAC is

The Security Division, shown here, meets daily to discuss and prioritize current security events. Cybersecurity is an environment in which threats arise rapidly and require prompt, coordinated responses. It's through constant communication and strong partnerships with security staff from other agencies that ITD is able to lead the effort in protecting the state's IT infrastructure.

affiliated with the federal Department of Homeland Security, and we collaborate with them on proactive network monitoring, information sharing, and cybersecurity forensics.

Expanded Efforts

In 2015, Governor Dalrymple formed a Cybersecurity Task Force charged with reviewing the state's current cybersecurity policies and practices, and making policy and resource recommendations needed to ensure the security of state networks and systems. The task force is comprised of directors and IT experts from numerous state agencies. ITD has been actively involved in the task force, helping ensure North Dakota is equipped to meet evolving cyber threats.

During the last legislative session, the Governor and Legislature added a dedicated ITD security analyst at the State and Local Intelligence Center (SLIC). This position assists in analyzing cybersecurity threats affecting state infrastructure and key resources, and works with the rest of the SLIC staff to increase cybersecurity awareness in critical sectors. Our security initiatives also included adding a new security analyst in our EduTech division. This position works to improve security awareness and best practices in the PK-12 community.

Improving our overall security posture continues to be primary focus for ITD with multiple initiatives for STAGEnet and the state data center along with a continued commitment to scanning critical web applications to proactively identify and remediate potential security vulnerabilities. We continue to see progress in agencies adopting multi-factor authentication to strengthen the security posture for critical systems and users with privileged access.

Audits

Independent assessments of ITD's security policies, processes and controls include a biennial SOC2 audit conducted by the Office of the State Auditor, and a security assessment conducted by an external consultant. These audits provide assurance to our customers and their auditors that ITD has appropriate controls in place to protect against the latest threats. The most recent SOC2 audit by the Office of the State Auditor was completed in February of 2014. A copy of the report can be found at http://www.nd.gov/auditor/reports/i112_15.pdf. The most recent audit by the external consultant was completed in June of 2016. A copy of the report can be found at www.nd.gov/auditor/reports/itdva_15.pdf.

Disaster Recovery

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

Minimizing data loss is commonly referred to as the recovery point objective (RPO) and measures the point in time (relative to the disaster) to which you can go back to recover data. The second data center houses the backup data for all systems and allows ITD to perform real-time data mirroring for critical systems. In addition to improving RPOs, ITD continues to work with agencies on the recovery time objective (RTO) for their applications. RTO is a measure of how long it takes for a system to resume normal operations.

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

ADMINISTRATION

Greg Hoffman, Director of Administrative Services

Greg Hoffman, Director of Administrative Services

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

HOW ITD FUNDING WORKS

ITD operates as an internal service fund. We track and monitor the expense of each service in cost centers to ensure that one service is not subsidizing another. When needed, we adjust rates accordingly. The federal government does not allow state central service agencies to accumulate an excess fund balance. Regulations establish specific standards for determining allowable costs for services in federally-funded projects.

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

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

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

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

- Center for Distance Education (CDE)
- Statewide Longitudinal Data System (SLDS)
- Education Technology Council (ETC)
- EduTech
- STAGEnet access for the K-12 schools
- Geographic Information Systems (GIS) hub
- Health Information Technology Office (HIT)
- Statewide Interoperable Radio Network Study

This past year, our Computer Systems Division successfully deployed the Desktop Support Service, providing support to 19 state agencies. Included in the Desktop Support rate is Microsoft Office 365 ProPlus licensing, allowing the use of Office products on work and mobile devices. Licensing also enables use of OneDrive for Business and Skype for Business. We've found that including Office 365 as part of the Desktop Support rate has been a great benefit to our customers.

ITD's billing software, BILLIT, went live in July 2015 with both data processing and telecommunications billing. These processes were migrated from two separate legacy mainframe environments. The upgraded system gives greater flexibility to the end user for viewing and reporting billing information.

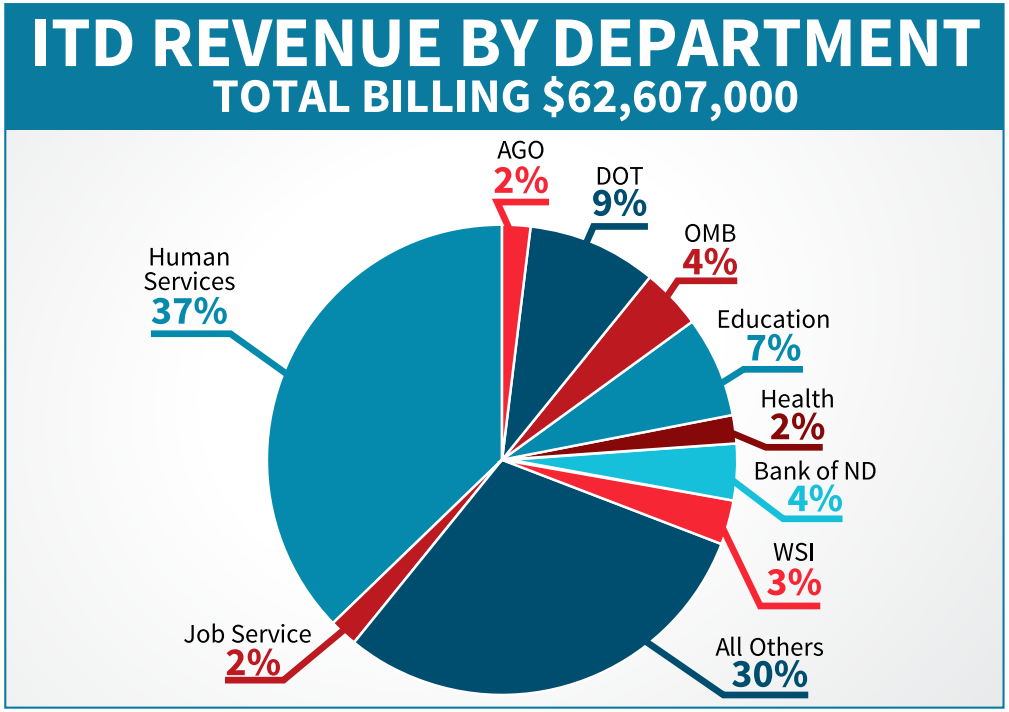
RECORDS MANAGEMENT

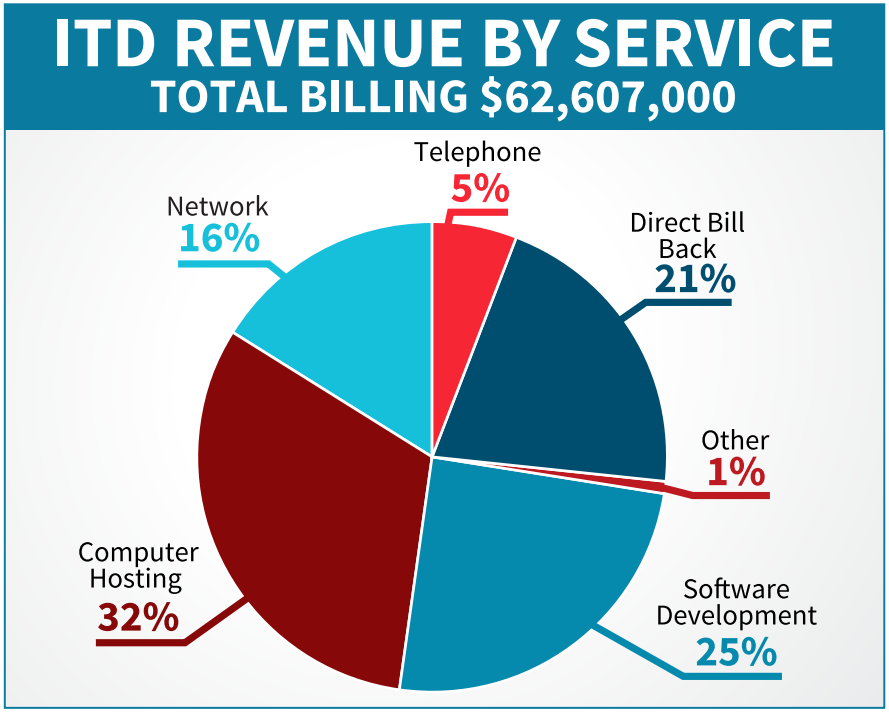
North Dakota Century Code (NDCC) 54-46-11 requires ITD to report on records management practices and programs in state government. This program includes records retention schedules, annual disposal of records, forms management, records management education and consulting.

In April 2015, phase one of the Records Management System upgrade project was completed, migrating internal ITD processes off the legacy mainframe platform. Phase two of the upgrade project will go live August 2016, automating several paper-driven processes surrounding forms control and records retention schedules. The upgraded system will increase efficiencies in workflow while allowing Records Management to move away from mainframe computing.

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 10,640 cubic feet of records that satisfied their retention requirements. This savings in storage space, equipment, and related salaries resulted in a cost avoidance of $3,589,704. For the entities reporting a volume of electronic records, 7,350 GB were disposed for a cost avoidance of $29,399.

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





RATES
COMPARISON

RATES AS OF JULY 2016

IT SUPPORT

Enterprise	Location	Developers
Information Technology Dept	State of ND	81 - 115
Applied Engineering	Bismarck, ND	88 - 102
Eide Bailly	Bismarck, ND	90 - 165
Enterprise Solutions	Bismarck, ND	90 - 130
Nexus Innovations	Bismarck, ND	94 - 140
Agency Mabu	Bismarck, ND	75 - 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
TEK Systems	Atlanta, GA	88-103

	North Dakota ITD	South Dakota BIT	Montana ITSD	Minnesota OET
Staffing				
Senior Analyst	105.00 / hr.	71.00** / hr.	103.00/ hr.	110.00/ hr.
Server Administrator	95.00 / hr.	**	127.78/ hr.	110.00/ hr.
	** DBA and Server Admin. Rates included in Info Management fee below			
Central Computer CPU				
Batch CPU	.64	.50	2.71	N/A
CICS CPU	.64	.50	1.30	N/A
ADABAS CPU	.64	.50	1.20	N/A
TSO CPU	.64	.50	1.90	N/A
	SD also charges $.03 per 1000 I/Os. MN uses service units to bill rather than CPU seconds. This is because they run three different processors.			
Network Fees				
Technology Fee*	59.00	73.00	71.41	66.95
Info / Enterprise Mgmt Fee*	included	53.25		
Desktop Support	$100/PC/Mo.	included	101.25/ hr.	78.00/ hr.
*Per domain account				
DSL Service	Cost + $175 / 5mb	Actual	Actual	Cost + 15%
ETS-5 (5mbps bandwidth)	765.00	Actual	Actual	$229 + circuit
Telephone Fees				
Telephone Line	20.00	18.00	24.04	35.00
Speaker/Display	3.00	Actual	included	Actual
Voice Mail (unlimited)	5.00	6.00		5.45
(3 minute limit)			3.77	
(per additional minute)			2.23	

Long Distance	North Dakota	South Dakota	Montana	Minnesota
In-State	.045	.06	.06	.053
Out-of-State	.045	.07	.07	.065
800 Service	.05	.07	.07	.085

SERVICE RATE TRENDS

	Jul '09	Jul '10	Jul '11	Jul '12	Jul '13	Jul '14	Jul '15	Jul '16
Software Development								
Systems Analyst	75.00	75.00	86.00	86.00	94.00	94.00	105.00	105.00
Programmer	63.00	63.00	67.00	67.00	69.00	69.00	73.00	73.00
Central Computer CPU								
Batch CPU	1.17	1.07	.74	.62	.64	.58	.64	.64
CICS CPU	1.17	1.07	.74	.62	.64	.58	.64	.64
ADABAS CPU	1.23	1.17	.84	.62	.64	.58	.64	.64
TSO CPU	1.17	1.07	.74	.62	.64	.58	.64	.64
Network Fees								
Technology Fee	43.50	43.50	49.00	49.00	49.50	49.50	59.00	59.00
ETS-5	890.00	890.00	890.00	765.00	765.00	765.00	765.00	765.00
Telephone Fees								
Telephone Line	24.00	24.00	24.00	24.00	24.00	20.00	20.00	20.00
Speaker/Display	5.00	5.00	5.00	5.00	5.00	3.00	3.00	3.00
Voice Mail (unlimited)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Long Distance								
In-State	.075	.07	.07	.07	.06	.06	.05	.045
Out-of-State	.075	.07	.07	.07	.06	.06	.05	.045
800 Service	.07	.07	.07	.07	.07	.07	.05	.05

STRATEGIC PLANNING & PERFORMANCE MEASURES

ITD STRATEGY MAP

OUR STRATEGY MAP IS WHAT WE DO

The strategy map is a one-page representation of ITD's strategic focus areas. It's the starting point and foundation for ITD's biennial strategic planning process, the product of which is ITD's Strategic Plan.

The vertical pillars represent broad, Strategic Focus Areas, while the horizontal bands identify specific Objectives required to excel in those focus areas.

To help determine if the Objectives are being met, Measures have been developed against which ITD's performance can be judged. The following pages detail how well ITD is meeting many of these Measures. Read ITD's Strategic Plan for a more complete view of the Strategy Map, Objectives, Measures, and the Initiatives we've identified for completion over the coming biennium.

STRATEGIC PLANNING & PERFORMANCE MEASURES

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

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

Measurement	Target	June 2015	Baseline (Previous Years)
Percentage of ITD Rates Reported in Annual Report That Are Competitive	100%	100%	2012 – 100% 2013 – 100% 2014 - 100%

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

Total Number Of Service Requests And Incidents Completed	Target	FY 2016	FY 2015	FY 2014
Service Requests	MONITOR	45,493	46,875	45,948
Incidents		84,361	72,755	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. Customer were encouraged to provide feedback on 90,805 of the requests/incidents. 85 respondents were dissatisfied with the overall experience, creating an overall satisfaction rate of 99.9%.

Customer Satisfaction Indexes	Target	% Satisfied		
		FY 2016	FY 2015	FY 2014
Value	≥ 92%	87.3%	93%	87.3%
Timeliness	≥ 97%	94.6%	95.3%	91.1%
Quality	≥ 97%	96.4%	95.3%	92.4%
Knowledge	≥ 98%	98.2%	95.3%	93.7%
Professionalism & Courtesy	≥ 100%	96.4%	100%	93.7%

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, 56 people provided feedback on these attributes. Customers are encouraged to offer candid feedback regarding ITD's ability to meet their business needs.

STRATEGIC PLANNING & PERFORMANCE MEASURES CONTINUED

Measurement	Baseline (Previous Years)	2014/2015	Target
Employee Satisfaction Index	2012/2013 – 2.20	2.17	≥ 2.0

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

Measurement	Baseline (Previous Years)	June 2015	Target
Total Employee Turnover	2013 – 6.06% 2014 - 6.27%	8.03%	< 6%

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

Measurement	FY 2016	FY 2015	Target
Percentage of Service Levels Met	TBD	TBD	100%

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

Measurement	BI 2015-2017		BI 2013-2015		Target
	FY 17	FY 16	FY 15	FY 14	
Percent of Strategic Business Plan Objectives Completed or On Schedule	TBD	85%	54%	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. ITD's 2015-2017 Strategic Plan identified 13 initiatives; 11 of which are completed or on schedule. 4 additional strategic initiatives are also completed or on schedule. They were established after the plan was published in response to changes in technology, laws, priorities, or other unforeseeable factors.

FINANCIAL STATEMENTS

FINANCIAL STATEMENTS

Statement of Net Assets June 30, 2015 & 2014

	FY 2015		FY 2014	
ASSETS				
CURRENT ASSETS:				
Cash Deposits at BND	4,784,805		9,877,837	
Intergovernmental Receivables	786,065		137,358	
Accounts Receivable	123,837		128,295	
Due From Other Funds	6,866,453		4,925,891	
Prepaid Items	1,579,505		1,579,505	
TOTAL CURRENT ASSETS		14,140,665		16,648,886
Non -current Assets :				
Capital Assets:				
Building & Equipment - Net	13,106,951		10,258,013	
Total Non-current Assets		13,106,951		10,258,013
TOTAL ASSETS		27,247,616		26,906,899
LIABILITIES				
CURRENT LIABILITIES:				
Accrued Payroll	211,907		2,059,636	
Accounts Payable	3,618,140		705,283	
Due to Other Funds	27,310		7,981	
TOTAL CURRENT LIABILITIES		5,757,357		2,772,900
NON-CURRENT LIABILITIES:				
Compensated Absences Payable	2,076,480		2,015,194	
TOTAL NON-CURRENT LIABILITIES		2,076,480		2,015,194
TOTAL LIABILITIES		7,833,837		4,788,094
NET ASSETS				
Invested in Capitol Assets, Net of Related Debt	13,106,951		10,258,013	
Unrestricted	6,306,828		11,860,792	
TOTAL NET ASSETS		19,413,779		22,118,805
TOTAL LIABILITIES & NET ASSETS		27,247,616		26,906,899

FINANCIAL STATEMENTS

Statement of Revenues, Expenses, and Changes in Fund Net Assets for years ending June 30, 2015 & 2014

	FY 2015		FY 2014	
OPERATING REVENUE:				
Sales and Services		57,690,590		60,619,327
OPERATING REVENUE:				
Salaries and Benefits	25,504,604		24,644,621	
Operating	29,562,359		29,287,294	
Depreciation	4,981,956		4,343,898	
TOTAL OPERATING EXPENSES		60,048,919		58,275,813
OPERATING INCOME (LOSS)		(2,358,329)		2,343,514
NON-OPERATING REVENUES (EXPENSES):				
Interest Expense	-		(14,239)	
Loss on Sale of Capital Assets	(346,697)		(12,543)	
Other	-		24,982	
TOTAL NON-OPERATING REVENUE (EXPENSES)		(346,697)		(1,800)
INCOME (LOSS) BEFORE CONTRIBUTIONS AND TRANSFERS		(2,705,026)		2,341,714
TOTAL NET ASSETS-BEGINNING OF YEAR		22,118,805		19,777,091
TOTAL NET ASSETS-END OF YEAR		19,413,779		22,118,805


ITD
Information Technology
Department