2011 Year End Review

700 Governors Drive | Pierre, South Dakota 57501

605.773.4165 | bit.sd.gov | blog.bit.sd.gov

south dakota

bit

bureau of information & telecommunications

Contents

Mission, Vision, Goals

Mission

The South Dakota Bureau of Information and Telecommunications (BIT) strives to partner and collaborate with clients in support of their missions through innovative information technology consulting, systems and solutions.

Vision

Through our highly motivated staff, we will be a leader and valued partner in providing technology solutions, services and support that directly contribute to the success of our clients.

Goals

1. Provide a Reliable, Secure and Agile Infrastructure.
Technology assets must be high performing and dependable to insure services are always available. Centralization, standardization and collaboration are vital to leveraging investments to the highest degree of efficiency. To maintain the public trust, we must secure our data through leading security tools and policies.

2. Deliver Valuable Services at Economical Costs.
Develop innovative and cost-effective solutions through collaboration and cooperation with our clients.

3. Recruit, Build and Retain a Highly Skilled Workforce.
Invest in mentoring, training, cross training and professional development for staff. Provide meaningful employee recognition, rewards and evaluations.

4. Provide e-Government Solutions and Evolving Technologies.
Provide constituents and employers in South Dakota access to state government information through social media, the cloud and other mobile technologies. “People should be online, not waiting in line.”

Commissioner's Message

As interim commissioner it has been an honor to lead the South Dakota Bureau of Information and Telecommunications (BIT) throughout 2011. BIT strives to provide a reliable, secure and agile infrastructure, deliver valuable services through advanced technology solutions and retain a highly skilled workforce to directly support clients and the services they provide to the State of South Dakota.

BIT continues to provide support and technology services in various capacities to the executive, judicial, and legislative branches of state government, as well as to constitutional offices, the K-20 education community, tribal and local governments and ultimately South Dakota residents.

The challenges of the past year allowed us to work through changes and improve the quality of services delivered to our clients. As with other state agencies, we addressed budget cuts and FTE reductions yet still provided the services required by our clients.

This initial year end report showcases a summary of BIT activities, the goals and vision we embrace, significant accomplishments throughout the year. The managerial staff have helped make this agency a great place to work while providing innovative and cost effective technology solutions to ensure BIT clients have the support they need to operate their businesses efficiently. As you read this report, you will discover that BIT contributes to the success our clients experience as they pursue newly developed or enhanced ways of conducting business to provide services and programs benefiting residents of South Dakota.

Thank you for taking the time to understand more about who we are and what we do within state government.

Jim Edman, BIT Interim Commissioner

Executive Summary

As with any year, BIT experienced a combination of new opportunities and adverse challenges in 2011. BIT embraced the opportunities for change by working through a strategic planning process. Through this process, BIT defined the mission statement, developed strategic goals and established measurable objectives paving a way to provide improved services.

The strategic planning process indicated the need to redefine and focus the role of the agency's Points of Contacts (POC). Accordingly, several BIT employees transitioned into new duties to form the Project Management Office (PMO). The PMO provides early identification of agency technology opportunities, improves efficiencies and ultimately, provides better products and services to South Dakota residents. The PMO focuses on our clients and improves partnerships with state agencies to promote innovative services and support optimal technology solutions.

BIT employees also faced several challenges throughout the year. One of the most significant challenges BIT faced were budget adjustments. For the FY12 budget, BIT reduced expenditure authority by approximately $7.4M and FTE by 27.8.

Specific areas impacted were:

- ✔ Administration -4.0 FTE and -$579,020
- ✔ Data Center -4.0 FTE and -$886,301
- ✔ Development -4.5 FTE and -$698,674
- ✔ Telecommunications -5.0 FTE and -$5,174,967
- ✔ State Radio $707,116
- ✔ SD Public Broadcasting -10.3 FTE and -$757,662

A variety of services were reduced, but measureable efficiencies were achieved in other areas which can be seen throughout the report. Other challenges included the devastation of the Missouri River flooding which impacted a large number of state employees, cyber security risks and the ever evolving technology landscape.

About Us

The Bureau of Information and Telecommunications (BIT) is comprised of the following areas: Administration, Development, Data Center, Telecommunications and South Dakota Public Broadcasting (SDPB). Individually and collectively, these divisions are committed to providing quality customer services and partnerships with our clients to ensure the state's information and technology organization is responsive, reliable and well-aligned to support the business needs of the State of South Dakota.

Quick Facts

✔ Statewide support is provided for approximately 18,445 phone lines and 5,877 voicemail boxes.

✔ BIT supports technology and users at nearly 900 separate locations across the state, from the Capitol Building to entrance booths at state parks.

✔ Approximately 8,500 email accounts are set up, maintained and managed by the Data Center staff for all branches of government, including constitutional and elected offices. In partnership with the South Dakota Department of Education, the Data Center is also responsible for the integration of the K-12 email system.

✔ On average, the Help Desk receives approximately 250 calls or emails each day requesting technology assistance. Monday is the busiest day and most requests are made between 8:00 a.m. - 9:00 a.m.

✔ In 2011, South Dakota Public Broadcasting (SDPB) produced 395 hours of local programming through high school sports, activities and championships, Statehouse, Dakota Life, Garden Line, South Dakota Focus, Dakota Digest, Dakota Midday and daily spots/news.

✔ BIT supports electronic document systems storing over 325 million pages. If printed and stacked, that stack of paper would be over 25 miles high and would require over 300 acres of harvested trees to print.

✔ Nearly 10,000 distance learning conferences cross the Digital Dakota Network annually, delivering advanced, specialized K-12 and higher education courses to all corners of the state.

✔ The Division of Telecommunications manages over 17,000 mobile and portable two-way radios for state government and local public safety organizations using a common interoperable State Radio System with 54 towers.

Overview of Divisions

Administration

The Division of Administration is responsible for key administrative areas of the agency; budget and financial operations; coordination of security efforts; special projects and initiatives; legislative support and activities; strategic planning; state agency partnerships to provide innovative services, support and optimal technology solutions; project management and points-of-contact responsibilities; a system of mass communication services including public and media relations, marketing and social media; implementation and oversight of information and technology policies within state government.

The Commissioner and Deputy Commissioner provide administration and direction to all areas and functions of BIT.

Data Center

The Data Center is responsible for providing application hosting, data storage and retrieval, web support, email and remote desktop and application access. It is comprised of three programs: Database Administration, Technical Administration and Integration, Systems and Operations. Database Administration includes data access, backup and recovery procedures and over a dozen enterprise class database systems. Technical Administration and Integration includes email services, web administration, server and cloud computing, storage and account management and security. Systems and Operations includes data and disaster recovery, operational support and client system monitoring.

Development

The Division of Development is responsible for providing application development services to all state agencies, constitutional offices, Legislative Research Council (LRC). **Application development services include:** providing business analysis, application design, application development, testing, implementation, enhancements and support of information systems. These services are provided on a variety of platforms, including web-based, desktop, mainframe and AS400. Development also supports a number of vendor applications that our client agencies have licensed.

Telecommunications

The Division of Telecommunications is responsible for providing the network and desktop support infrastructure for the State of South Dakota and supporting all desktop and mobile users for state government. The division is comprised of LAN Services, Network Technologies and Engineering. LAN (Local Area Networks) Services manages the state's personal computers, software, and peripherals (printers, scanners). Network Technologies designs and administers communication services to state, county and city governments; K-12 and the Board of Regents (along with the public for video purposes only). Engineering provides telephone services (voicemail, long distance) video-conferencing sites, state radio tower sites and electronics and SDPB tower sites and electronics.

South Dakota Public Broadcasting

South Dakota Public Broadcasting (SDPB) is a vital community resource producing and broadcasting high-quality, commercial-free programs and valuable community outreach projects that educate, enlighten and entertain.

Learn more about SDPB Television, SDPB Radio, SDPB Online Services, SDPB Education and Outreach and Friends of SDPB by visiting sdpb.org.

Administration

2011 Significant Accomplishments

✔ Transitioned BIT employees into new duties to form the Project Management Office (PMO); as mentioned in the executive summary. The PMO focuses on our clients and improves partnerships with state agencies to promote innovative services, support and optimal technology solutions.

✔ Established a Security Infrastructure Group to assist in the sharing of security information across all BIT divisions and other government groups. The purpose is to ensure timely communication and understanding of important technology security issues and identify processes to address these issues appropriately. BIT continues to build a technology environment to protect the confidentiality and integrity of the state's digital resources.

✔ Improved the previous Project Portfolio Management (PPM). The new approach is called the IT Project Prioritization System and allows agencies to determine individual criteria for prioritization, reduces complicated reporting requirements and aggregates all technology projects into a single system.

✔ Expanded the federal broadband grant by $3.8M for a total award of $5.7M. In 2011, the broadband team collected telecommunications provider broadband data; developed broadband.sd.gov to include social media and mapping data components; formed the Broadband Advisory Team; and initiated a wireless broadband testing process which covered over 19,000 miles of South Dakota.

✔ Created a focused, online presence through the BIT website, blog and other social media platforms. Historically, BIT lacked the needed resources to build and maintain an online communications strategy. This is a priority that has shifted and there are high expectations for continued improvements for the web and social media presence.

✔ Eliminated the Standards group while related regulatory processes were streamlined.

Data Center

2011 Significant Accomplishments

✔ Transferred over 100 computing systems to the state's virtual infrastructure, eliminating older systems and reducing the need to purchase new hardware and software. In addition to savings in space, power, cooling, and improved reliability from virtual computing, the total cost avoidance from this transfer is over $750,000.

✔ Migrated more than 10,000 datasets from manually loaded, legacy tape storage to high-speed disk and a modern, high-capacity robotic tape storage system resulting in an annual savings of more than $30,000.

✔ Migrated more than 40 million lines per month of reports (historically printed on microfiche) to digital format resulting in a savings of more than $60,000 per year.

✔ Encouraged state agencies to allow the use of personal devices to access state email. The newly developed Remote Access Device (RAD) policy includes a request form that be submitted in order for users to access state email through their personal device.

✔ Facilitated the formation of a statewide user group for virtual-computing technologies. Representatives include companies and government entities who utilize the same virtual-computing software as the State of South Dakota. It is expected that these entities (who voluntarily participate) will find a competitive advantage for their business needs through the sharing of technical expertise and experiences.

Data Center

2011 Significant Accomplishments

✔ Updated the state's Request for Proposal (RFP) and Contract processes to help those who are not information and technology professionals make informed decisions when acquiring technology for their agency.

✔ Worked with the state's Division of Criminal Investigation (DCI) and the National Center for Missing and Exploited Children to review and approve Facebook notifications for South Dakota Amber Alert activations. Future Amber Alerts for South Dakota will appear on the state's national Facebook account as part of the Amber Alert secondary distribution process.

✔ Met with agency attorneys to educate them on the eDiscovery environment and what services it provides in personnel and litigation matters. eDiscovery could have a significant impact on how the State of South Dakota uses technology and performs records retention.

✔ Developed standards for modern imaging processes that clearly define the minimum levels of security, auditability, life-cycle management, backup, and recovery required for agencies to shred paper records after copying them into an imaging system. The new standards ensure the state archivist is involved in the process and allow the state to eliminate millions of sheets of paper records.

✔ Installed additional in-row coolers for parts of the Data Center which reduces the energy load in certain buildings and supports routine growth for new hardware and other state agency systems.

✔ Completed an onsite virtual environment Health Check for the state's virtual systems. This was a strategic review to ensure the state's virtual systems are ready for the influx of new workloads scheduled to take advantage of the benefits and savings of virtual computing.

Development

2011 Significant Accomplishments

✔ Designed and launched a newly enhanced, user-friendly website to serve as the face of state government in South Dakota, sd.gov. The site provides users access to all online services and transactions, social media, open government and the latest headlines, road conditions and more.

✔ Launched the Governor's Scheduling Request system which automates the process to request a meeting or event with the Governor saving staff time and providing a convenience for citizens.

✔ Developed a Content Management System (CMS) for the state news website which manages agency press releases and multimedia files. Additional system functionality allows an administrator to establish roles regarding who can add, update, or prioritize content.

✔ Launched BeattheBeetles.com in support of the Governor's initiative to stop the spread of the mountain pine beetles in the Black Hills.

✔ Developed a website for South Dakota Flavor by transforming the user interface, navigation, security and layout; providing users with enhanced functionality for viewing and searching for products and company listings.

✔ Created a website for the state's Division of Insurance to search and view insurance rate filings; providingcitizens the ability to view rate filings from all insurance companies licensed to sell insurance in South Dakota as part of a grant under the Patient Protection and Affordable Care Act (PPACA).

✔ Reduced resident response time when searching for employment opportunities on the Department of Labor's SDWorks system by approximately 50 percent.

✔ Worked with the Bureau of Finance and Management to launch a new agency website.

Development

2011 Significant Accomplishments

✔ Placed Self-Service Terminals for motor vehicle registration and license renewal at two sites in the city of Sioux Falls.

✔ Implemented a web-based system to schedule a "Drive Test" for the Department of Public Safety; allowing citizens to schedule a Drive Test online.

✔ Lottery retail clerks can validate scratch ticket winners faster and more accurately by utilizing a new bar-code method.

✔ Implemented an International Registration Plan / International Fuel Tax Agreement system for the Department of Revenue which includes additional functionality for online credentialing of motor carriers.

✔ Implemented a new Department of Transportation Cash Forecasting system.

✔ Replaced the Department of Transportation's Bid Letting vendor who managed digital certificates and acted as a 'lock box' to hold construction bids. Now all bid processing is conducted through the state. Contractors have secure user IDs and passwords that serve as electronic signatures.

✔ Upgraded the Education Financial Reporting System allowing school districts an automated means to report financial information to the Department of Education saving staff time for both schools and state government.

✔ Added Imaging capabilities to a system used by the Department of Health's Kids with Chronic Conditions (KICC). Previous paper forms and charts were filed by various KICC clinic locations, this new system enhancement reduces paper filing requirements and allows DOH staff to electronically query patient forms and charts.

✔ Implemented an automated process for the Department of Environment and Natural Resources to transfer water quality data, habitat information and biological aquatics data electronically saving staff time and meeting EPA requirements.

Development

2011 Significant Accomplishments

✔ Completed over 20 e-government applications; including applications for the Departments of Labor, Revenue and Game, Fish and Parks in support of the Governor's Better Government initiative.

✔ Modified Child Support Enforcement systems to better manage the collection of interest charges on child support payments to comply with new federal government guidelines.

✔ Modified the Family and Children Information System to use an improved federal funding match rate for the placement costs of children in foster care on certain reservations.

✔ Modified the Sales Tax on Food Refund Program to reduce the need for eligibility verification from once every quarter to once a year.

✔ Implemented a Quality Improvement Strategy software for the Department of Human Services to collect data and improve analysis abilities for Medicaid Home and Community Based Services within the agency's three waiver programs.

✔ Implemented a new Offender Management System for juveniles which replaces several disparate applications that utilized old technology.

✔ Provided support activities for the new case management system under the Unified Judicial System.

✔ Implemented a new Benefits Enrollment web application for state employees, eliminating vendor maintenance and support costs; saving the state $400,000 a year.

✔ Assisted the Bureau of Personnel with implementing a New Pay Plan for Air Rescue Fire Fighters that tracks employee hours for four weeks up to 212 hours as one work period allowing for flexible scheduling and less overtime in a given work period.

✔ Purchased Interferometric Synthetic Apperture Radar GIS Data for all of state government that can be used for such things as predicting flooding scenarios.

Telecommunications

2011 Significant Accomplishments

✔ Upgraded the network portion of the State Radio System to P25 standards, a $6,500,000 project upgrade. The former technology was phased out by Motorola, and the nearly 20,000 radios on the system were at risk of losing the wide-area capabilities now in use.

✔ Migrated 105 state government agency locations to Virtual Private Network (VPN) connections which increased bandwidth to most edge sites by over 30 times while saving the state $200,000.

✔ Negotiated a contract to upgrade the telephone services currently in use across state government, higher education, and local governments to a platform that is expected to provide a 10 percent savings while maintaining current service levels.

✔ Migrated over 3,500 cell phones, air cards, modems and smartphones over a four week timeframe due to the Alltell/AT&T merger.

✔ Expanded Voice over IP Telephony (VoIP) services with 525 devices installed in eight facilities that had been served with outdated equipment. The IP-based systems allow telephones to share network infrastructure with data services and will eventually allow direct calls across the (state) wide area network, reducing costs associated with long distance services.

✔ Distributed 382 surplus computers to state agencies and 246 to K-12 schools.

✔ Migrated over 233 school districts to ethernet connections.

Telecommunications

2011 Significant Accomplishments

✔ Increased Internet bandwidth by a factor of three for all of the public higher education schools across the state.

✔ Received nearly 7,000 customer service surveys returned by clients of LAN Services, of which, 97 percent of the respondents rated the service received as Excellent or Good.

✔ Achieved Payment Card Industry (PCI) compliance for qualified online applications.

✔ Installed Windows 7 and Office 2010 on 2,755 computers.

✔ Processed 112,025 Help Desk requests.

✔ Managed 56,080 support services requests; including, but not limited to: fixing broken technology equipment, setting up and removing state employees on the network, installing hardware and software along with other miscellaneous requests.

✔ Purchased GoverLan software which enables LAN Services to push software updates out to machines and to remotely control client machines. During 2011, through the use of GoverLan, LAN Services avoided 22,759 miles of travel and saved $17,240 in travel costs.

✔ Provided 570 hours of LAN Services support to the Emergency Operations Center (EOC) during the Missouri River flood. In addition, five state government offices were moved due to flood activities and concerns.

✔ Completed deployment of advanced security software, Endpoint Protection, to over 9,000 workstations and servers within state government.

✔ Supported state agency technology audits performed by federal entities; including a comprehensive Risk Assessment review for the Department of Social Services.

SD Public Broadcasting

2011 Significant Accomplishments

✔ SDPB Radio won nine regional Edward R Murrow Awards which is the most of any single station/network in the country.

✔ SDPB Radio won 9 of 13 first place Associated Press awards in competition against all radio stations (commercial and non-commercial) in Minnesota, Wisconsin, North Dakota and South Dakota.

✔ Turned on new FM radio station, KYSD 91.9FM, serving the community of Spearfish and surrounding area.

✔ Increased on-air radio pledge drive revenue by 250 percent in the last 5 years; $178,000 in 2011 compared to $70,000 in 2007.

SDPB
South Dakota
Public Broadcasting

✔ Provided hundreds of hours of coverage on the flood preparation, control and emergency preparedness. Not only did SDPB's statewide live broadcasts share official news with residents and other broadcasters, SDPB technical staff played a key role in providing interactive connections between flood headquarters in Pierre and Dakota Dunes.

✔ SDPB web-cast basketball, wrestling and several cultural activities from the Lakota Nation Invitational in Rapid City. SDPB also added live multi-channel broadcasts of high school sports championships and legislative coverage.

✔ SDPB TV received an Emmy award for the Stavig Letters documentary about Norwegian immigration in South Dakota.

✔ SDPB began live-streaming local events to mobile devices.

✔ SDPB celebrated the 50th Anniversary of SDPB TV.

Challenges for 2012

Throughout the year, we have analyzed what lies ahead for 2012 and continue to develop and change plans to address and overcome those obstacles. Please understand the various opportunities and accomplishments identified earlier also constitute challenges that require attention. As technology continues to evolve, BIT strives to identify solutions that improve services delivered to our customers.

An overview of the challenges BIT has forecast to date:

✔ Renew the focus on recruiting and retaining BIT employees by updating the state's information and technology career classifications and job descriptions to assure the state continues to attract and retain highly skilled and motivated individuals.

✔ Maintain secure systems to prevent malicious, targeted attacks from the Internet and through state email as threats continue to increase in sophistication and in number. Not only does this require secure and modern technology maintentance, it also requires an educational effort to increase awareness among BIT customers of their responsibilities and roles related to cyber security.

✔ Demand for mobile devices continues to increase across state government and within the K-12 network. As the lead support agency, BIT will provide educational programs to increase awareness of policy requirements and other changes to our customers.

✔ Continue the implementation of a next-generation telephony system across the state.

✔ Audit requirements for BIT and other state agencies continue to increase in complexity; requiring BIT to adapt processes and adhere to the changes in regulatory requirements for state, federal and industry needs.

To learn more about the services and support provided by BIT, please visit bit.sd.gov.

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south dakota bureau of information & telecommunications