

Network Nebraska

2012-2014

Objective

- To develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska.

Description

Network Nebraska aggregates disparate networks into a multipurpose core backbone extending from Omaha to Lincoln to Grand Island and Scottsbluff, with Ethernet clouds extending out to the furthest corners of the state. The State of Nebraska Office of the CIO, the University of Nebraska, Nebraska Educational Telecommunications Commission, Department of Education, Public Service Commission, and the Nebraska Information Technology Commission have formed the Collaborative Aggregation Partnership (CAP) to guide and implement Network Nebraska. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through local aggregation.

The major components of this initiative include:

- Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e., local and state government, K-12 and higher education) to purchase the amount of service that the entities need, when they need it, on an annual basis;
- Establishment of a catalog of value-added services that enables eligible entities to pick and choose applications that are pertinent to them (e.g., Internet1, Internet2, and videoconferencing);
- Implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;
- Establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts;
- The organization of advisory groups (i.e. Network Nebraska—Education) that can provide input and recommendations on network issues to the executive sponsors of such networks.

Benefits

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:

- Lower network costs;
- Greater efficiency for participating entities;
- Interoperability of systems providing video courses and conferencing;
- Increased collaboration among all K-20 educational entities, as well as state agencies;
- New educational opportunities;
- Competitiveness with surrounding states; and
- Better use of public investments.

Current Action Items (2012-2014)

1. Identify Tier II communities that offer opportunities for aggregation for services onto the network.

Action: The CAP will work with communities that express an interest in aggregating their public sector data transport.

Lead: Network Nebraska (CAP)

Participating Entities: Specific communities, NITC Education Council, Nebraska League of Municipalities, Nebraska Association of County Officials, and public libraries

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

Action: Education entities will act as primary tenants to encourage the aggregation of data transport by community anchor institutions.

Lead: K-12 districts, ESUs, colleges/universities

Participating Entities: Specific communities, Office of the Chief Information Officer, NITC Education Council, Nebraska League of Municipalities, Nebraska Association of County Officials, and public libraries

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: New

2. The Chief Information Officer will continue the LB 1208 implementation by annually bidding infrastructure and connectivity ~~for new regions of participants~~ and developing the most cost-effective and efficient support structure possible for the statewide network.

Action: The Network Nebraska network design/support team will develop a service level agreement with local and regional education entities in order to develop a cooperative support system for the statewide education network that will insure data transport and synchronous video reliability.

Lead: Network Nebraska (CAP)

Participating Entities: Network Nebraska—Education Advisory Group, ESU-NOC, Higher education entities, NITC Education Council

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

Action: The Chief Information Officer will annually update the State master purchase contracts for edge devices and monitor the local site purchases of such equipment in order to promote and encourage network equipment standardization.

Lead: Office of the Chief Information Officer

Participating Entities: Network Nebraska (CAP), ESU-NOC, Education Council

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

3. Offer Internet I services to eligible network participants.

Action: The CAP will accept new orders for Internet service and continue to aggregate purchasing demand to secure a more economical price for statewide Internet service.

Lead: Network Nebraska (CAP)

Participating Entities: Office of the Chief Information Officer, NITC Education Council, ESU-NOC, Higher Education Entities

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

4. Prepare for the future of Network Nebraska as a statewide, multipurpose, high capacity, scalable telecommunications network that shall meet the demand of state agencies, local governments, and educational entities as defined in section 79-1201.01.

Action: Develop appropriate participation criteria (e.g. type of entity, bandwidth expectations) and a differential catalog of services and fees for Network Nebraska to serve all network participants (i.e. public/nonpublic K-12, public/nonpublic higher education, public libraries, others).

Lead: Network Nebraska—Education Advisory Group

Participating Entities: Network Nebraska (CAP), NITC Education Council

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation with minor revisions

Action: Charter a work group to research advanced network services for Network Nebraska participants.

Lead: Network Nebraska—Education Advisory Group,

Participating Entities: NITC Education Council, Network Nebraska (CAP)

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

Action: Annually reissue the Network Nebraska Marketing Survey and subsequent Report to help steer the strategic direction of Network Nebraska—Education.

Lead: Education Council Marketing Task Group

Participating Entities: Network Nebraska—Education Advisory Group.

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

Action: Annually update the Network Nebraska Marketing Plan.

Lead: Education Council Marketing Task Group

Participating Entities: Network Nebraska—Education Advisory Group.

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Continuation

Action: Develop and deploy an enterprise MCU bridging service for Network Nebraska participants.

Lead: Office of the Chief Information Officer

Participating Entities: Network Nebraska (CAP), Network Nebraska Advisory Group, ESU Coordinating Council, ESUs, higher education entities

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: New

Action: Facilitate the implementation and training of IPv6 routing on a timely basis across all Network Nebraska entities.

Participating Entities: Network Nebraska (CAP), Office of the Chief Information Officer, Network Nebraska Advisory Group, ESU-NOC, higher education entities

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: New

Completed Action Items

Action: Develop an online E-rate cost allocation calculator that will enable K-12 and non-K-12 entities to estimate the ineligible telecommunications costs resulting from offering non-K-12 services in a K-12 facility.

Lead: Education Council Funding/E-rate Task Group

Participating Entities: Distance Education Council

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Completed 2011

Action: Review the viability and effectiveness of the Network Nebraska—Education Advisory Group and make appropriate changes to affect its structure, membership and meeting frequency.

Lead: Education Council Governance Task Group

Participating Entities: Education Council, Chief Information Officer

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Completed 2011

Discontinued Action Items

Action: Work to change the federal E-rate policies that create impediments and financial disincentives for collaborative usage of networks and videoconferencing by ineligible populations (Pre-K, adults, telehealth, etc...).

Lead: Nebraska E-rate Coordinator

Participating Entities: Educational Service Units, NITC Education Council

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Discontinued 2011

Action: Research and pursue grant writing that would assist with the deployment of statewide technology services.

Lead: Education Council Funding/E-rate Task Group

Participating Entities: Network Nebraska—Education Advisory Group, ESU Coordinating Council.

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: Discontinued 2011

Action: Develop a business plan for Network Nebraska—Education.

Lead: Education Council Marketing Task Group

Participating Entities: CAP, Network Nebraska Advisory Group, ESU Coordinating Council, ESUs

Timeframe: 2012-2014

Funding: No funding requested for this action item at this time.

Status: **Discontinued 2011**

IT Planning and Development

2012-2014

Objective

- To foster community and economic development in Nebraska communities through the effective use of information technology.

Description

Technology is an important economic development tool for communities. Telecommunications infrastructure is often compared to roads and water in its importance to communities. As important as infrastructure is the ability of community leaders to utilize technology effectively to enhance economic development opportunities. The Community Council has been addressing technology-related development in Nebraska's communities since its formation in 1998. As technologies and the needs of communities have changed, programming and areas of emphasis have shifted. The Community Council recognizes the importance of building partnerships, leveraging resources, and building community capacity in addressing technology-related development. Over the past several years, partnerships have been developed with many partners including the University of Nebraska, Nebraska Department of Economic Development, Nebraska Public Service Commission, Nebraska Public Power District, the AIM Institute, and other organizations.

The Nebraska Public Service Commission is partnering with the University of Nebraska, NITC Community Council, Nebraska Department of Economic Development, and AIM Institute on a broadband planning project funded as part of the Nebraska Public Service Commission's broadband mapping grant from the National Telecommunications Information Administration. The grant was funded through the American Recovery and Reinvestment Act. The project is identifying barriers to the adoption of broadband and IT services, creating and facilitating local technology planning teams, and collaborating with broadband service providers to encourage broadband deployment. Project activities are summarized below:

1. Regional planning teams are being formed to conduct regional assessments, prioritize needs, and develop strategies to address needs.
2. An initial survey of Nebraskans about their computer and Internet usage, challenges and desires for the future was conducted in 2010. Follow-up surveys are also planned.
3. Regional forums were conducted to present broadband mapping and mail survey results, to solicit feedback, and to kick off regional planning efforts.
4. A broadband conference was held in Lincoln on Nov. 1, 2011 to facilitate learning and discussions regarding broadband issues.
5. Businesses are being surveyed through the Business Retention and Expansion process to identify the strengths and challenges they face in utilizing technology.

6. Seven to 10 focus groups will be held with anchor institutions and utility providers as well as populations with low usage rates to gain understanding into the barriers from their perspective.
7. Use of the Internet and computers will be encouraged through demonstration workshops and training in collaboration with the broadband service providers and information technology companies.
8. Regional technology plans as well as a statewide report and recommendations will be developed and presented to the Nebraska Information Technology Commission, Nebraska Public Service Commission, Department of Economic Development and University of Nebraska Lincoln. These plans will be made publicly available through the project website.

Benefits

The potential benefits of information technology to communities, businesses, local government, and residents are numerous:

- Communities can use their Web sites to publicize community events, communicate with former residents and prospective newcomers, and advertise available commercial sites.
- Communities can enhance promotional and informational activities through the use of newer technologies such as social networking or video content delivered through youTube or podcasts.
- Businesses can use information technology to decrease costs, increase sales, and provide better customer service.
- Local governments can use information technology to more efficiently deliver services and provide information to citizens.
- Residents can update their skills through continuing education, search for employment, network with others who share their interests, and share photos or videos with distant family members or Internet users worldwide.

Action Plan

Current Action Items

1. **Identify and address technology-related needs in communities through participation in the planning component of the state's Broadband Mapping program.**

Action: Serve as the project's advisory group, including assisting in the development of survey questions, the revision of materials for use with regional technology teams, and the development of a statewide report and recommendations.

Lead: University of Nebraska, Nebraska Department of Economic Development, and Community Council

Participating Entities: University of Nebraska, Nebraska Department of Economic Development, Community Council, Public Service Commission, and others

Timeframe: 2012-2014

Funding: ARRA-funded Broadband Mapping program through the NTIA

Status: Continuing

Completed Action Items (2010-2011)

1. Work with the Nebraska Department of Economic Development, University of Nebraska Extension, and NPPD to continue to provide assistance in website development to communities.

Discontinued Action Items

1. Monitor technology trends that affect Nebraska communities and play a leadership role in presenting these new technologies in a timely manner. (This action item will be incorporated into the broadband planning action item.)

eHealth

2012-2014

Objective

- To foster the collaborative and innovative use of eHealth technologies through partnerships between public and private sectors, and to encourage communication and coordination among eHealth initiatives in Nebraska.

Description

Health information technology (Health IT), often referred to as eHealth, promises to improve individual patient care and public health while reducing costs and improving efficiencies. eHealth technologies include health information exchange, electronic medical records, electronic health records, personal health records, electronic prescribing, clinical decision support, computerized provider order entry, and telehealth.

Health Information Exchange is the electronic movement of health-related information among organizations according to nationally recognized standards. (NAHIT)

An Electronic Medical Record is an electronic record of health-related information on an individual that can be created, gathered, managed, and consulted by authorized clinicians and staff within one health care organization. (NAHIT)

An Electronic Health Record is an electronic record of health-related information on an individual that conforms to nationally recognized interoperability standards and that can be created, managed, and consulted by authorized clinicians and staff across more than one health care organization. (NAHIT)

A Personal Health Record is an electronic record of health-related information on an individual that conforms to nationally recognized interoperability standards and that can be drawn from multiple sources while being managed, shared, and controlled by the individual. (NAHIT)

Electronic Prescribing (eRx) is a type of computer technology whereby physicians use handheld or personal computer devices to review drug and formulary coverage and to transmit prescriptions to a printer or to a local pharmacy. (Office of the National Coordinator Glossary of Selected Terms)

A Decision-Support System (DSS) consists of computer tools or applications to assist physicians in clinical decisions by providing evidence-based knowledge in the context of patient-specific data. (Office of the National Coordinator Glossary of Selected Terms)

Computerized Provider Order Entry (CPOE) is a computer application that allows a physician's orders for diagnostic and treatment services (such as medications, laboratory, and other tests) to be entered electronically instead of being recorded on order sheets or prescription pads. (Office of the National Coordinator Glossary of Selected Terms)

Telehealth is the use of telecommunications and information technologies to provide healthcare services over distance and/or time, to include diagnosis, treatment, public health, consumer health information, and health professions education. (Minnesota e-Health Glossary of Selected Terms)

Current Initiatives

The importance of electronic health records in efforts to improve the quality of care was officially recognized in 2004 when President Bush called for Americans to have electronic health records by 2014 and created the Office of the National Coordinator for Health IT. Under President Obama, the push to adopt health IT and to reform health care has intensified. The American Recovery and Reinvestment Act established several programs to support the meaningful use of health information technology. Meaningful use of health information technology includes the use of electronic health records, e-prescribing, and connectivity to a health information exchange. A detailed definition of Meaningful Use is being developed by the Centers for Medicare and Medicaid Services.

Several eHealth initiatives are currently underway in Nebraska, including the Nebraska Health Information Initiative (NeHII), Electronic Behavioral Health Information Network, Wide River Technology Extension Center, Metropolitan Community College's Health IT Program, and the Nebraska Statewide Telehealth Network.

State HIE Cooperative Agreement. Nebraska received \$6.8 million in funding from the U.S. Department of Health and Human Services Office of the National Coordinator for Health IT on March 14, 2010. The four-year grant is providing funding to expand health information exchange across Nebraska. NeHII, eBHIN, the Nebraska Department of Health and Human Services Division of Public Health, and the Nebraska Statewide Telehealth Network are receiving funding for eHealth activities through the grant.

The Nebraska Health Information Initiative (NeHII), the state's largest health information exchange, is a fully operational and sustainable health information exchange. As the lead health information exchange for Nebraska, NeHII will act as the integrator for the state, providing the technical infrastructure for the sharing of health information. NeHII is exchanging laboratory, radiology, medication history and clinical documentation information between hospitals throughout the state. As of Nov. 7, over 30 hospitals are actively participating in NeHII or have signed participation agreements.. When all of these hospital connections have been implemented, nearly two-thirds of the state's hospital beds will be covered by NeHII. In addition, insurance eligibility information is being sent and will be used to create a comprehensive patient summary. NeHII is providing e-prescribing functionality, linking hospitals and provider with pharmacy services. NeHII offers physicians a basic, web-based electronic medical record (EMR) that is certified, so that providers who have not yet implemented electronic medical records can participate at an affordable price. Over 1800 users are currently participating in NeHII. Over 1.9 million patient records are available through the system. More information is available at www.nehii.org.

The Electronic Behavioral Health Information Network (eBHIN) is currently developing an eHealth network to exchange behavioral health information among behavioral health providers in the Region V Service area, with the applications offered to other Regions in the State as time and resources allow. eBHIN has implemented its electronic health record and is uploading information to Magellan, the Administrative Service Organization (ASO) which oversees the provision of mental health, substance abuse and gambling addiction treatment for eligible

children and adults. The health information exchange is scheduled to go live in early 2012 in Region V. Region I in the Panhandle will follow later in 2012. Planning is beginning for other regions. eBHIN and NeHII have developed an innovative consent process to allow for the release of health information exchange between the two exchanges.

The **Nebraska Statewide Telehealth Network** connects nearly all of the state's hospitals and all of the state's public health departments. The Nebraska Statewide Telehealth Network is used for patient consultations, teletrauma, teleradiology, continuing medical education, and other applications.

Wide River Technology Extension Center provides assistance to primary care physicians and critical access hospitals in implementing electronic health records. Nearly all of the state's rural primary care physicians are working with Wide River Technology Extension Center. Wide River Technology Extension Center has received funding through the Office of the National Coordinator for Health IT.

Metropolitan Community College is offering a health IT certificate through the Community College Consortium program funded by the Office of the National Coordinator for Health IT. Metropolitan Community College is a leader nationally in the number of students completing the program.

Benefits

Benefits of eHealth include:

- **Reducing medication errors.** More than 2 million adverse drug events could be prevented through e-prescribing, saving 4.5 billion annually and 190,000 hospitalizations per year.
- **Reducing health care waste.** Health IT adoption is estimated to save an average of \$42 billion annually during a 15-year adoption period.
- **Facilitating medical research.** Health IT can facilitate research on the effectiveness of new therapies and can accelerate the diffusion of health care knowledge.
- **Reducing variability in healthcare delivery and access.** Disparities exist in access to care and quality of care. Telehealth can provide access to specialists in rural areas. Clinical decision support systems can improve quality of care by providing treatment reminders at the point of care. Adults in the U.S. receive only about 55 percent of recommended care for a variety of common conditions. Clinical decision support systems have been shown to increase adherence to recommended care guidelines.
- **Empowering consumer involvement in health management.** Having access to medical histories as well as customized health education and guidance could increase consumer participation in their health maintenance and care.
- **Improving the identification and reporting of disease outbreaks and other public health threats.** One study found that the use of a countywide electronic system for public health reporting led to a 29% increase in cases of shigellosis identified and a 2.5 day decrease in reporting time.

Action Plan

Current Action Items

1. **Support the development of statewide health information exchange through the State HIE Cooperative Agreement Program, including developing strategic and operational plans and overseeing implementation.**

Lead: eHealth Council and Lt. Governor Sheehy

Participating Entities: eHealth Council, Lt. Governor Sheehy, NeHII, regional and specialty health information exchanges, and others.

Timeframe: 2012-2014

Funding: State HIE Cooperative Agreement Program

Status: Continuation

Status: Continuation

Discontinued 2010-2011

1. Develop a sustainable action plan to facilitate progress (present and future) in assuring privacy and security protections in the exchange of health information for and by each of our citizens.
2. Support efforts of the Nebraska Statewide Telehealth Network Governing Board to advocate for ongoing support for line charges for telehealth. Activities supporting this action item could include writing letters of support to policy makers as well as sharing information on this issue with policymakers.
3. Support efforts of the Nebraska Statewide Telehealth Network Governing Board to advocate for the reduction of barriers to connectivity posed by federal Universal Service Fund rules, regulations, and policies. Activities supporting this action item could include writing letters of support to policy makers as well as sharing information on this issue with policymakers. The eHealth Council will also explore the development of a position paper no longer than four pages in length which clarifies the issue, identifies barriers, specifies what action needs to be taken, and identifies opportunities that can be leveraged.

Completed Action Items (2008-2009)

1. Work with Lt. Governor Sheehy and other policymakers to develop a process to assess, evaluate and prioritize health IT activities (including statewide initiatives, proposed eHealth projects of the eHealth Council or other state entities, and eHealth components such as e-prescribing) in order to make funding recommendations. Criteria used to evaluate eHealth activities, will include return on investment (ROI) as well as additional evaluation criteria determined by the eHealth Council with input from policy makers.
2. Develop a plan and resources to inform citizens, health care providers, and other stakeholders about issues related to health information security and privacy and involve them in policy discussions.
3. The eHealth Council should ensure that an in-depth short-term study of existing laws and regulations, with guidance from representatives from the health professions, health educators and health organizations, be done in order to identify health information security and privacy and make recommendations.
4. Explore the optimal method for identifying clients in health information exchange.

Discontinued 2010-2011

1. Develop a sustainable action plan to facilitate progress (present and future) in assuring privacy and security protections in the exchange of health information for and by each of our citizens.
2. Support efforts of the Nebraska Statewide Telehealth Network Governing Board to advocate for ongoing support for line charges for telehealth. Activities supporting this action item could include writing letters of support to policy makers as well as sharing information on this issue with policymakers.
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Public Safety Communications System

2012-2014

Objective

- Implement the Nebraska statewide radio system and migrate state law enforcement and other state agencies onto the system. Create the system user group to educate, train and develop best practices for agencies using the system. Develop interoperability options for local agencies to enable cost-effective, functional, and reliable communications between state, local and public power agencies.

Description

The OCIO-Network Services Public Safety team coordinates project coordination, technical planning, and management of the Nebraska statewide radio system. This is in partnership with the Nebraska Public Power District, an equal owner and operator of the system. OCIO and NPPD jointly coordinate regular system user group meetings, and hold ongoing meetings with the system operating group concerning management, policies, and infrastructure planning.

State agencies are actively using the system for their communications while OCIO is coordinating with the agencies on decommissioning their old systems. Coverage, voice clarity, and ease of use have improved dramatically with the new system. OCIO and NPPD have ongoing discussions with local agencies and public power districts interested in participation on the system. OCIO is the lead contact for public safety agencies, while NPPD is the lead contact for utilities.

A System Operating Agreement outlines the management and operational practices OCIO and NPPD are developing in support of the OCIO-NPPD interlocal agreement to jointly own, operate and maintain the statewide radio system. The system operating group manages the system and coordinates the system user group to address ongoing system issues and improvements.

Next steps involve these major milestones:

- Complete the System Operating Agreement
- Complete the system policy, system management, and user guide documents

- Determine support resources needed from the system vendor (Motorola)
- Complete steps and resolve any outstanding issues to develop the system acceptance test plan to complete system acceptance.
- Continue developing planning steps to ensure successful migration of new user agencies.

Benefits

The system plan brings state agencies and NPPD on a single technology platform. The system improves radio coverage, technology, and capacity. The infrastructure is able to grow as additional agencies migrate to the system. The system leverages existing towers, network and personnel resources to the greatest degree feasible. Benefits of the system include:

- Reduces multiple agency systems to a consolidated shared infrastructure;
- Provides the ability for the State Patrol and other agencies to be interoperable; where old state systems lacked the necessary capacity and technology;
- Leverages existing state, local, and utility tower assets;
- Reduces the cost of the initial system through partnering with the state's largest utility provider;
- Enables participation opportunities for any public safety or public utility to use the system.

Action Plan

Current Action Items

1. CIO-Network Services is:

- Continuing to jointly develop with NPPD the operational and management aspects of the system.

Lead: OCIO-Network Services

Participating Entities: State Patrol, Nebraska Public Power District, Game and Parks Commission, State Fire Marshal's Office, Department of Correctional Services, Department of Agriculture, Department of Motor Vehicles, Nebraska Emergency Management Agency, Department of Roads, and several local and

federal agencies.

Timeframe: September 2011 – June 2012

Funding: State and NPPD share the cost of ownership, state agencies and other partner agencies pay the cost of operation through user fees. The system is self-sustaining.

Status: System is operational, ongoing management and operational planning.

Completed Action Items (2007-2011)

1. RFP requirements and procurement process (Completed March 2008)
2. Contracts in place to develop tower infrastructure, license frequencies and consulting assistance for RFP technical evaluations and implementation
3. Initiated regional leadership meeting to coordinate state and local interoperability planning in all regions of the state.
4. Conduct competitive bid process for the system. (Completed October 8, 2008)
5. Establish interoperability governance structure. (Completed December 2008)
6. System operational December 2010.
7. Participation plan and fee structure in place.
8. Levels of participation created for flexibility in migrating to the system.

Digital Education

2012-2014

Objective

- To promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

Description

This initiative will involve the coordination and promotion of several major systems and applications that heretofore have either been developed mostly at the local level or have not been replicated statewide.

The initiative will be dependent upon adequate Internet connectivity and transport bandwidth for learners, instructors, administrators, and for educational attendance sites. A minimum acceptable level of classroom technology will have to be established for the initiative to be successful.

The Digital Education Initiative will recognize that many standalone and disparate software applications are needing to undergo integration and convergence so that an instructor can: 1) research digital content, 2) construct a lesson or unit on a computer in a series of virtual or face-to-face or videoconferencing activities using rich multimedia, 3) assess the learners electronically, and then 4) move the student data to a database or data warehouse, 5) export relevant achievement and attendance data to a web-based student information system so parents, or the students themselves, can view it from home; 6) export data to a statewide student information system; and then finally 7) make “real-time” instructional decisions based upon the recently documented progress of the learners.

The primary components of the Digital Education Initiative would include:

- A statewide telecommunications network with ample bandwidth capable of transporting voice, video, and data between and among all education entities [see Network Nebraska];
- Distance insensitive Internet pricing for all Nebraska education entities;
- Development of a statewide eLearning environment so that every teacher and every learner has access to a web-based, digital curriculum and learning management system;
- Development of a statewide digital resource library so that any teacher or learner will be able to retrieve digital media for use in instructional and student projects;
- Synchronous videoconferencing interconnections between all schools and colleges;
- The means to coordinate and facilitate essential education opportunities for all students through a statewide student information system; and
- Regional PreK-20 education cooperatives that vertically articulate educational programs and opportunities.

Benefits

Establishing a Digital Education Initiative is critical to Nebraska’s future. Internet has gone from a “nice to have” educational application of the 1990’s to the “must have” mission critical source of information for the 21st Century. So much of what teachers, students, and administrators do today is tied to Internet-

based information and communication. Although Nebraska's ranking of 'students per high speed, Internet-connected computer in the classroom' seems to compare favorably with the U.S. average, it still makes it challenging for students to complete their digital assignments when they are expected to share two or three students to a computer, or to wait their turn to be able to use a computer. Educators and administrators everywhere should continue to make technology investments until 1:1 computer or 1:1 Internet-connected device use is attained.

The benefits of the Digital Education Initiative would include:

- Greater technical capacity for schools and colleges to meet the increasing demands of a more diverse customer base;
- More equitable and affordable Internet access for Nebraska schools and colleges;
- A comprehensive Web-based approach to curriculum mapping and organization and automation of student assessment data gathering and depiction;
- The availability of rich, digital media to the desktop that is indexed to Nebraska standards, catalogued, and searchable by the educator or student;
- A more systematic approach to synchronous video distance learning that enables Nebraska schools and colleges to exchange more courses, staff development and training, and ad hoc learning opportunities.

Each of the components of the Digital Education Initiative is vital to future student success in Nebraska. The components are especially pertinent in that these applications and services provide the foundation for capacity building in our schools and colleges.

Current Action Items (2012-2014)

Promote the availability, distribution, and use of digital media throughout the Nebraska educational community.

Action: Promote the usage of the National Repository for Online Courses (NROC) content by Nebraska educators.

Lead: ESU Coordinating Council

Participating Entities: NITC Education Council

Timeframe: 2012-2014

Funding: Some funding will be required to complete this action item.

Status: Continuation with minor revisions

Action. Set a deadline, and establish standard(s) related to the deployment, administration and maintenance of content management systems by K-12 schools.

Lead: NITC Technical Panel

Participating Entities: ESU Coordinating Council, Distance Education Council, Nebraska Educational Telecommunications

Timeframe: 2012-2014

Funding: No funding is requested for this action item at this time.

Status: Continuation

Action: Develop and deploy a statewide digital content repository that allows the assignment of digital property rights and the uploading, cataloguing, metatagging, searching, and downloading of digital learning objects by Nebraska educators.

Lead: Nebraska Educational Telecommunications (NET) & ESU Coordinating Council

Participating Entities: Nebraska Department of Education, Education Council Services Task Group, ESU Instructional Materials Committee, Distance Education Council

Timeframe: 2012-2014

Funding: Considerable funding will be required to complete this action item.

Status: Continuation

Action: Develop and deploy a statewide learning management system for every K-12 teacher and learner, grades 6-12, and to also train teachers in effective instructional design to integrate synchronous and asynchronous technologies.

Lead: ESU Coordinating Council

Participating Entities: NITC Education Council, ESU Technology Affiliate Group

Timeframe: 2012-2014

Funding: Considerable funding will be required to complete this action item.

Status: Continuation with minor revisions

Action: Develop and deploy a statewide directory services structure that will enable students and teachers a single sign-on to associated learning management services and content management resources.

Lead: Nebraska Department of Education (NDE) & ESU Coordinating Council

Participating Entities: ESU-NOC, ESU-iMAT

Timeframe: 2012-2014

Funding: Some funding will be required for this action item

Status: New

Completed Action Items

Action: Provide training and encourage all education providers to list all dual enrollment and concurrent enrollment courses, and all enrichment opportunities on the statewide clearinghouse and scheduling software system.

Lead: ESU Coordinating Council

Participating Entities: NITC Education Council, Higher education entities

Timeframe: 2010-2011

Funding: No funding is requested for this action item at this time.

Status: Completed 2011

Action: Monitor the Nebraska Statewide Assessment System (NeSAS) and develop strategies that will assure its continued success and use of the most efficient and scalable technology infrastructure.

Lead: Technical Panel

Participating Entities: Education Council Services Task Group, ESU-NOC

Timeframe: 2010-2011

Funding: No funding is requested for this action item at this time.

Status: Completed 2011

Discontinued Action Items

Action: Develop a business plan for Network Nebraska—Education to provide digital education resources statewide.

Lead: Education Council Marketing Task Group

Participating Entities: CAP, Network Nebraska Advisory Group, ESU Coordinating Council, ESUs

Timeframe: 2010-2011

Funding: No funding requested for this action item at this time.

Status: Discontinued 2011

State Government Efficiency

2012-2014

Objective

- To address multiple items improving efficiency in state government, including implementing enterprise shared services and adopting standards and guidelines.

Description

The primary components of this initiative are the implementation of shared services and the development of standards and guidelines.

Shared Services. The State Government Council has identified a number of potential shared services for state government. Action items are included for those services that are actively being reviewed and implemented.

Standards and Guidelines. The State Government Council, working with the Technical Panel, will continue to develop standards and guidelines to better coordinate state agency technology efforts.

Benefits

Benefits of this initiative include lower costs, easier interoperability among systems, greater data sharing, higher reliability, and improved services.

Action Plan

Current Action Items

Shared Services

1. Implement Enterprise Maintenance / Purchase Agreements as a shared service.

Lead: Steve Schafer

Participating Entities: State Government Council, EM/PA Work Group

Timeframe: Ongoing

Funding: No funding required.

Status: Continuation. The Office of the CIO implemented several enterprise agreements during FY2011. An enterprise agreement with Adobe qualifies state agencies for a discount on Adobe products. On some products the savings are as much as 21%. Access to this discount will become easier after a new software reseller contract is in place, sometime in FY2012. On behalf of seven state agencies needing assistance with implementation of the state's enterprise content management system, the Office of the CIO entered into a "block time" services agreement with eDocument Resources that reduces the hourly cost of solution analysts by 32% (from \$180 per hour to \$123 per hour), by guaranteeing a minimum of 9,825 hours of work through February 2012. The annual agreement with IBM provided savings of \$213,749 in FY2011. The Microsoft Enterprise Agreement for Office and Windows licenses will save the Department of Health and Human Services \$317,530 per year and the Department of Roads \$42,336 per year, while giving all agencies access to software assurance and other benefits at a deeply discounted price. The Office of the CIO and the Materiel Division also began participating in the Premium Savings Package of the Western States Contracting Alliance (WSCA). This gives state agencies discounts on standard configurations of PCs and laptops of as much as 46% compared to normal pricing.

Several initiatives started in FY2011 will take effect in FY2012. These include new contracts for long distance service that will save agencies 14% on long distance calls and toll free calls with Windstream and 12% on use of Language Line interpretation services. The State of Nebraska has also become a participant in a recent WSCA contract for Software Value Added Reseller (VAR) Services. The new software reseller contract will be available sometime in the first half of FY2012. It will provide better pricing and streamlined purchases on an extensive list of software manufacturers and products.

2. Implement Geographic Information System (GIS) as a shared service.

Action: NebraskaMAP - a Geospatial Data Sharing and Web Services Network. Continue the development of the NebraskaMAP – an enterprise-level geospatial web portal, with Internet mapping and data services. A collaborative pilot project developed a NebraskaMAP working prototype designed to enable the users of Nebraska-related GIS/geospatial data to efficiently and reliably find, access, display, and build public information applications utilizing the geospatial data maintained by a wide variety of state, local and federal agencies and where appropriate, provide for a coordinated security system, including the possibility for limited data access and password protection. To sustain and enhance this successful collaborative endeavor, the development of a plan for providing on-

going administrative and technical support is critical.

Lead: NITC GIS Administrative Manager, Nebraska GIS Council

Participating Entities: State Government Council; GIS Council

Timeframe: December 31, 2013

Funding: The original two-year pilot project was funded with a mix of state and federal funding sources, with one-half coming from the NITC Government Technology Collaborative Fund. Unfortunately the end of the two-year pilot occurred in the midst of a significant state budget crunch. This has made it especially challenging to arrange for the funding required to provide on-going technical support for this collaborative effort. A second \$25,000 grant has been secured from the State Records Board to help pay software maintenance costs and some interim technical support costs. For the project to survive and prosper it will be necessary to identify sustainable funding for the dedicated technical support required.

Status: Continuation. Twelve state and local government agencies endorsed a Project Charter to indicate their support for, and partnership in, developing this online, enterprise-level GIS/geospatial data mapping and services portal. The OCIO was asked to be the lead agency for this collaborative project. Funding was secured for a two-year pilot project and through a contract between the OCIO and UNL a Project Manager was hired. A working prototype of this data sharing and web services portal was developed. The specialized online GIS server software was purchased and installed on OCIO servers along with the customized NebraskaMAP application. In addition to facilitating the location and access of GIS data, two initial applications/services were developed: serving statewide street centerline-address data (with a geocoding service) and serving statewide aerial imagery. With the end of the initial two-year pilot project funding, the Project Manager position was terminated. The prototype continues to function from its current home on the OCIO servers. However, with no dedicated technical support staff, the further development of the program is severely limited. The interagency NebraskaMAP Partners Committee is working with the OCIO and the GIS Council to explore avenues for sustainable funding for the necessary technical support. In the interim, some Partner agencies are lending technical personnel to help maintain the system.

Action: Street Centerline-Address Database. Update an existing statewide street centerline-address database with more recent data and develop a plan (including responsibilities and resource requirements) for the on-going

maintenance of a composite, “best available”, statewide street centerline/address database.

Lead: NITC GIS Administrative Manager, Nebraska GIS Council

Participating Entities: State Government Council; GIS Council

Timeframe: December 31, 2012

Funding: Limited development funding is potentially available through the State Patrol and its Fusion Center Project. Data development funding is on-going through Public Service Commission, Dept. of Roads, and several local governments.

Status: Continuation. An interagency working group of the GIS Council developed draft guidelines for the integration of street centerline-address data from multiple sources into a composite statewide dataset. The staff of the NebraskaMAP project, with limited funding available from NEMA and the State Patrol, developed an initial composite statewide dataset following these draft guidelines. This initial composite dataset was completed in early 2010 and it involved the integration of data from the Public Service Commission’s E911 efforts, Douglas, Sarpy and Lancaster Counties, and the Department of Roads. This dataset is now at least 1-½ years old and more current data has been developed from all of the original data providers. All of the original data providers are willing to share their more recent street centerline-address data. The challenges are to finalize a broadly accepted data model, identify a lead agency, find the funding required, and the development of the interagency agreements necessary to support the ongoing maintenance of this critical dataset.

Action: Metadata and State Geospatial Data Catalog. Document existing state agency GIS/geospatial data with formal metadata and encourage the listing of available geospatial data in NebraskaMAP.

Lead: NITC GIS Administrative Manager, Nebraska GIS Council

Participating Entities: State Government Council; GIS Council

Timeframe: December 31, 2013

Funding: Primarily supported through in-kind support of state and local agency personnel

Status: Continuation. The NITC has adopted a Geospatial Metadata Standard

http://www.nitc.state.ne.us/standards/data/metadata_standard_20050923.pdf), which calls for the progressive documentation of state agency geospatial data, within a one-year timeframe (originally by Sept. 2006). The Department of Natural Resources, in partnership with the Nebraska GIS Council, originally developed a Nebraska Geospatial Data Center, which included metadata development tools. More recently new online metadata develop tools have been integrated into the NebraskaMAP. Metadata training sessions have been held in Lincoln and Omaha. Despite the existence of the NITC standard requiring metadata, the availability of metadata development tools and training, there remains a large body of state agency GIS/geospatial data that has not been documented with metadata and has not been listed either on the Data Center Clearinghouse Catalog or the more recent NebraskaMAP portal. It is hoped that that development of the NebraskaMAP will help to further the development of metadata documentation, as metadata is a requirement for the functioning of the NebraskaMAP online data sharing tools.

Action: Statewide Geospatial Infrastructure Strategic Planning. Develop an enterprise-level, statewide, GIS/geospatial infrastructure strategic plan for the geographic area of Nebraska. The planning process should involve the broader GIS user community (state, local, and federal agencies, tribes and the private sector) and seek to identify parallel needs and plans for geospatial data, standards, online distribution networks and services, coordination, funding, and policies.

Lead: NITC GIS Administrative Manager, Nebraska GIS Council

Participating Entities: State Government Council; GIS Council

Timeframe: December 2012

Funding: A \$50,000 strategic planning grant proposal has been awarded by the Federal Geographic Data Committee (FGDC) to the Office of the CIO on behalf of the Nebraska GIS Council. The majority of these grant funds are to be used to hire a planning consultant.

Status: Continuation. The GIS Council has endorsed a major outreach and planning effort to develop a new GIS/Geospatial Strategic Plan with the goal of facilitating the coordination and collaboration of the broader GIS user community in Nebraska. Due to a prioritization of other efforts, this strategic planning process has been delayed but will proceed in 2011-12. A Strategic Planning Advisory Committee has been established to oversee the process. An RFP for GIS Strategic Planning has been released and a contract has been signed with

Applied Geographics, Inc, a national consulting firm, to assist the GIS Council with this strategic planning effort. The GIS Council, through its Planning Advisory Committee, will lead this process but the active support of the NITC, the State Government Council and its member agencies will be very helpful.

Action: Planning for Periodic, Collaborative Orthoimagery Acquisition.

Research and develop recommendations for standards, policies, infrastructure, and funding to support collaborative efforts by state, local and federal agencies to periodically acquire updated orthoimagery. Most GIS applications require or benefit from the availability of current aerial imagery. The acquisition of updated, orthorectified (corrected for camera tilt and the slope of the earth's surface) imagery requires a significant public investment, but if done collaboratively, on a regular periodic basis, these costs can be minimized and shared across a broad user community.

Lead: NITC GIS Administrative Manager, Nebraska GIS Council

Participating Entities: GIS Council, state, local and federal government agencies

Timeframe: December 2012

Funding: It is believed that existing staff and resources will be sufficient to complete this planning process.

Status: Continuation. It is expected that this effort will largely integrated into the larger Nebraska GIS Strategic Planning process. Efforts will be made to learn from, and build on, existing collaborative imagery acquisition efforts such as the Nebraska-Iowa Regional Orthoimagery Consortium (NIROC) and the USDA Farm Services Agency – National Aerial Imagery Program (NAIP).

Action: Statewide Land Record Information System. Work with local governments, state agencies, and the private sector to develop a collaborative plan, standards/guidelines, and the infrastructure necessary to encourage and facilitate the ongoing integration of separately-maintained state, city, and county land records into an integrated statewide land records system capable of providing reliable online access to this critical data, maintaining restricted privacy access as necessary, and supporting a variety of applications by multiple agencies.

Lead: NITC GIS Administrative Manager, Nebraska GIS Council

Participating Entities: GIS Council; Nebraska Association of County Officials; Department of Revenue, Property Assessment Division

Timeframe: December 31, 2012

Funding: Staffing resources are currently available to support the collaborative planning and standards/guidelines development. The initial hardware and software are available through the NebraskaMAP data sharing and web services network. As more detailed plans are developed related to the specifics of the architecture and protocols for an integrated land record system, additional resources maybe necessary to provide the technical support required to design and implement this system.

Status: New. NITC Land Record Information and Mapping Standards have been adopted with the goal of enabling the integration of local government land records into a statewide dataset. Current intergovernmental working group efforts are focused on developing guidelines for a common geodatabase model that would be freely available to local governments to adopt. The foundation for a decentralized data sharing and web services system has been established by the NebraskaMAP project. Local governments, state agencies, and the private sector need to be engaged in a collaborative planning process to define a shared vision of such a collaborative data sharing and integration system.

3. Explore opportunities and options relating to desktop and server virtualization in state government.

Lead: State Government Council

Participating Entities: State Government Council and Technical Panel

Timeframe: 2012

Funding: None

Status: New.

Standards and Guidelines

4. The State Government Council working with the Technical Panel will continue to develop standards and guidelines to better coordinate state agency technology efforts.

Lead: Rick Becker

Participating Entities: Technical Panel, State Government Council

Timeframe: Ongoing

Funding: None

Status: Ongoing. New and revised standards and guidelines adopted in 2010-2011: NITC 4-201: Web Branding and Policy Consistency; NITC 1-201: Agency Information Technology Plan Form; NITC 4-205: Social Media Guidelines; NITC 3-202: Land Record Information and Mapping Standard; NITC 5-204: Linking a Personal Portable Computing Device to the State Email System; NITC 5-102: Microsoft Enterprise Agreement – Home Use Program Policy; NITC 7-201: Network Edge Device Standard for Entities Choosing to Connect to Network Nebraska

Other

5. Review issues and determine process for maintaining an inventory of non-education state government technology assets, including hardware, applications, and databases.

Lead: Office of the CIO

Participating Entities: State Government Council

Timeframe: 2012

Funding: None

Status: Continuation

6. Provide access to OCIO electronic billing information for state agencies.

Lead: Steve Schafer

Participating Entities: Office of the CIO and State Government Council

Timeframe: 2012

Funding: None

Status: Continuation. Billing detail for all Office of the CIO services is now available electronically. This gives customers access to much more information in a more flexible format than previously available. Several agencies have allowed the Office of the CIO to end sending paper copies of the billing detail with the monthly invoice. The Office of the CIO will continue improving electronic access and eventually plans to eliminate paper copies for most state agencies.

7. Moving State email to the cloud.

Lead: Office of the CIO

Participating Entities: Office of the CIO and State Government Council

Timeframe: 2012

Funding: None

Status: New

Future Action Items

1. Services identified as potential shared services by the State Government Council include:

- Active Directory
- Automated Building Systems (HVAC, access, etc.)
- Backup Management
- Database Management
- Desktop Support
- Electronic Filing
- Encryption
- Enterprise Knowledge Management Databases
- General Platform Management
- Help Desk
- Payment Portal
- Project Management
- R&D
- Remote Access
- Software Deployment and Management
- SQL Database Design and Development
- Voice Network Design
- VoIP
- Wireless
- Wiring Services

Completed Action Items (2007-2011)

- 1. New and revised standards and guidelines adopted:** [2007] NITC 8-303: Remote Access Standard; NITC 4-204: Emergency Information Page; NITC 8-304: Remote Administration of Internal Devices; NITC 8-103: Minimum Server Configuration; NITC 7-103: SMTP Routing Standard; NITC 7-102: DNS Forwarding Standard; NITC 8-101: Information Security Policy; NITC 8-102: Data Security Standard; NITC 8-301 Password Standard; and NITC 5-201: Email Policy for State Government Agencies. [2008-2009] NITC 1-101: Definitions; NITC 1-103: Waiver Policy; NITC 1-201: Agency Information Technology Plan; NITC 1-202: Project Review Process; NITC 1-203: Project Status Reporting; NITC 1-204: IT Procurement Review Policy; NITC 1-205: Enterprise Projects; NITC 5-202: Blocking Email Attachments; NITC 5-301: Use of Computer-based Fax Services by State Government Agencies; NITC 7-101: Acceptable Use Policy; NITC 7-403: Scheduling Standard for Synchronous Distance Learning and Videoconferencing; NITC 8-301: Password Standard; NITC 8-401: Incident Response and Reporting Standard. [2010-2011] NITC 4-201: Web Branding and Policy Consistency; NITC 1-201: Agency Information Technology Plan Form; NITC 4-205: Social Media Guidelines; NITC 3-202: Land Record Information and Mapping Standard; NITC 5-204: Linking a Personal Portable Computing Device to the State Email System; NITC 5-102: Microsoft Enterprise Agreement – Home Use Program Policy; NITC 7-201: Network Edge Device Standard for Entities Choosing to Connect to Network Nebraska
- 2. Review and revise procurement review process for IT related purchases by state agencies. (2007)**
- 3. Review options for integrating agency IT plans and IT project proposal forms into new budget system. (2007)**
- 4. Email shared service implementation. (2009)**
- 5. Video conferencing shared service implementation. (2009)**
- 6. Instant messaging shared service implementation. (2009)**
- 7. Review secure file transfer shared service options. (2009)**
- 8. RFP for contract vendors that provide temporary IT personnel. (2009)**
- 9. Review issues and determine process for project status reporting. (2009)**
- 10 GIS - Statewide LiDAR Acquisition. (2010)**
- 11. Implement enterprise content management (ECM) as a shared service. (2011)**
- 12. Implement interactive VRU applications as a shared service. (2011)**

E-Government

2012-2014

Objective

- To further the use of e-government to improve services and increase the efficiency and effectiveness of agencies.

Description

The three goals for e-government are:

- **Government-to-Citizen and Government-to-Business.** Anyone needing to do business with state government will be able to go to the state's Web site, easily find the information or service they need, and if they desire, complete all appropriate transactions electronically. Areas to be addressed include citizen portal enhancement; business portal enhancements; education portal; and forms automation.
- **Government-to-Government.** State agencies will improve services and increase the efficiency and effectiveness of government operations through collaboration, communication, and data sharing between government agencies at all levels.
- **Government-to-Employee and Internal Operations.** Agencies will examine internal operations to determine cost-effective e-government applications and solutions. The purpose of these efforts is to improve efficiency and effectiveness by replacing manual operations with automated techniques.

The e-government principles guiding the council are:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;
- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;
- Agencies have responsibility for performing statutory functions, which means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve

the greatest benefit;

- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;
- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues; and
- E-government is defined as the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships.

Benefits

The primary benefits from the use of e-government are:

- Improved services for citizens and businesses.
- Increased efficiency and effectiveness for agencies.

Action Plan

Current Action Items

1. Provide better mobile browsing access and functionality for state government websites, including offering mobile apps when suitable.

Lead: State Government Council

Participating Entities: Office of the CIO, Webmasters Workgroup

Timeframe: Ongoing

Funding: None

Status: Revised.

2. Provide for better access to information and services from the OCIO by providing services through an online Apps Catalog and Store.

Lead: Steve Schafer

Participating Entities: Office of the CIO, State Government Council

Timeframe: 2012

Funding: To be determined.

Status: Continuation.

3. Maintain the Education Portal on the State of Nebraska website.

Lead: Nebraska.gov (Nebraska Interactive LLC)

Participating Entities: Education Council

Timeframe: Ongoing

Funding: No funding requested for this action item at this time

Status: Continuation.

Future Action Items

1. Work with the Nebraska.gov Manager and county officials to provide the means for online payment of property taxes and other local fees. This system is currently being provided by NACO/MIPS. Nebraska.gov will consider the cost benefit of moving forward with this project.
2. Work with the Nebraska State Patrol to review options for providing online access to certain, limited, criminal history information.
3. Develop an online application for use by businesses attempting to find a suitable site for business development.
4. Develop strategies to address the following government-to-government activities:
 - Intergovernmental Cooperation Groups. Expand upon current intergovernmental cooperative efforts like the CJIS Advisory Committee and the GIS Council; and develop new cooperative groups for those agencies that have specific, shared interests.
 - Integration of Government Information and Services. Develop strategies for using Internet technologies to provide integrated access to information and services to

citizens, businesses, employees, and other governmental entities.

- Forms Automation. Work with state agencies and political subdivisions to identify and prioritize opportunities for automating forms that local government uses to interact with state government.

5. The State Government Council will identify specific improvements and value-added services to be incorporated into the state employee portal.

6. Develop method of providing authentication for “first time” users.

Completed Action Items (2007-2011)

1. Phase 1 of the online business registration project was completed in November 2007 with the creation of the Nebraska One-Stop Business Registration Information System website (<https://www.nebraska.gov/osbr/>).

2. Department of Motor Vehicles provided for online specialty plate ordering in March 2008.

3. Phase 2 of the online business registration project was completed in January 2009. In December of 2008, new code was launched, giving One Stop users the option to create a basic account allowing them to save their business start up checklist, and to file online. In January of 2009 the first online filings were integrated. The Office of the Secretary of State’s Business Division accepted its first corporate filings online through the system, LLC Biennial Reports and LLP Annual reports.

4. Department of Motor Vehicles provided for online vehicle registration renewals in December 2008.

5. Department of Motor Vehicles provided for online driver license renewals in April 2010.

6. Nebraska Judicial System developed mobile apps for the Nebraska Court Calendar in December 2010.

7. Nebraska Internship website launched by the Department of Economic Development in August 2011.

Security and Business Resumption

2012-2014

Objective

- To define and clarify policies, standards and guidelines, and responsibilities related to the security of the state's information technology resources.

Description

Information security serves statutory goals pertaining to government operations and public records. These include:

- Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Neb. Rev. Stat. § 28-901 and 84-1201);
- Protect safety and integrity of public records (Neb. Rev. Stat. § 28-911, 29-2391, and 84-1201);
- Prevent unauthorized access to public records (Neb. Rev. Stat. § 29-319, 81-1117.02, and 84-712.02);
- Insure proper use of communications facilities (Neb. Rev. Stat. § Section 81-1117.02); and
- Protect privacy of citizens (Neb. Rev. Stat. § 84, Article 7).

Major activities include:

- Development of an overall security strategy, including policies, security awareness, and security infrastructure improvements;
- Network security standards and guidelines;
- Education and training;
- Authentication (directory services);
- Disaster recovery for information technology systems (as part of a broader business continuity planning);

- Compliance with federal privacy and security mandates;
- Security assessments.

Benefits

Benefits will include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Action Plan

Current Action Items

Security

1. Review and revise policies and procedures relating to identity management and directory services.

Lead: State Information Security Officer

Participating Entities: State Government Council, Security Work Group

Timeframe: 2011-2012

Funding: No funding required.

Status: Continuation

2. Develop policies and standards relating to the hosting of State data by vendors.

Lead: State Information Security Officer

Participating Entities: State Government Council, Security Work Group

Timeframe: 2011-2012

Funding: No funding required.

Status: New

Business Resumption

3. Implement shared disaster recovery facilities. Mission critical systems have three common requirements: 1) Recovery times must be measured in hours, not days or weeks. 2) Recovery facilities should be physically separated so that they will not be affected by a single disaster. 3) There must be staff available to assist with the recovery efforts. Achieving these requirements is very expensive. Sharing disaster recovery facilities and establishing a collaborative approach to disaster recovery is one strategy for managing costs. The Office of the CIO and the University of Nebraska are jointly developing a fast recovery capability using mutual assistance of physically separated data centers.

Lead: Office of the CIO and University of Nebraska

Participating Entities: State Government Council

Timeframe: Ongoing

Funding: The cost and source of funding have not been determined.

Status: Continuation. An alternate site providing greater geographical separation has been established. The University of Nebraska and the Office of the CIO have acted on two important items:

- Established a fiber optic communications link between the University and State enterprise server primary sites located in Lincoln and an alternate site that provides greater geographic separation.
- Acquired and implemented an enterprise server that can provide backup and execute assigned processing loads.

The acquisition and implementation of both items are complete. The University and the State not only have their critical data mirrored at a geographically separated site, but are working toward the capability, at the alternate site, to continue the most critical enterprise server production processing with less than 10 hours interruption.

The University of Nebraska and the Office of the CIO will continue to:

- Develop plans and procedures for fast recovery capability using the mutual assistance of physically separated data centers.
- Develop a capabilities-based all-hazards approach to a multi-year exercise program to evaluate plans, procedures and infrastructure associated with the alternate site. The purpose of this exercise program will be to measure and validate performance of capabilities and critical tasks.

- Maintain and exercise the operating system on the enterprise server to insure compatibility between locations.
- Identify business applications to be tested and operated from the alternate location.

4. Promote disaster planning for information technology systems, including developing elements of a common planning document and developing an approach for common governance during an event.

Lead: Jim Ohmberger / Mark Robertson

Participating Entities: State Government Council

Timeframe: Ongoing

Funding: No funding required.

Status: Continuation. The Director-level meetings, chaired by Lt. Governor Sheehy, identified critical business functions and categorized them into one of three categories: public safety, public health and institutional care. Progress has been made with public safety (lead by Nebraska State Patrol) in identifying:

- The agencies that work together in the public safety domain
- The data the partners use to complete their work
- The IT infrastructure used to support the data

Initial kick-off meetings have been held with public health (lead by Department of Health and Human Services) to identify the same items. Work continues with Nebraska Emergency Management Agency to understand and refine the implementation of the incident command system and its interactions with the State EOC. Work to integrate continuity of operations, disaster recovery, emergency operations and emergency action plans will be advanced by establishing a working group within the State Government Council.

Completed Action Items (2007-2011)

Security

- 1. Conduct annual independent security audits. (2008)**

2. Enhance Network Security and Network Management.

Action: Investigate and recommend an enterprise solution to ensure that encrypted traffic adheres to State security requirements. **Status:** Completed. Migration of all Avaya firewalls to the Fortinet infrastructure. (2008)

Action: Evaluate and recommend options for providing encryption to clients across the state's Wide Area Network. **Status:** Completed. The State of Nebraska has entered into a contract with PGP for whole disk encryption. (2008)

Action: Evaluate and recommend options for providing compliance auditing across the state's Wide Area Network. **Status:** Completed. The State of Nebraska has purchased Cisco's Compliance Manager and has been attending training classes for staff. (2008)

3. Implement security incident response team. NSP has lead with State IT resources as needed. (2010)

4. Develop policies and procedures governing the use of mobile devices on the state network and review and make recommendations on the use of personal devices on the state network. (2011)

Business Resumption

5. Encourage testing and updating of disaster plans. The Continuity of Operations Planning/Disaster Recovery Planning Shared Services Group worked to develop and act on ways to better coordinate disaster recovery planning and to provide for more consistent disaster recovery plans. **Status:** Completed. An NITC standard ("Information Technology Disaster Recovery Plan Standard") has been put in place. Work has been completed to better understand disaster recovery plan assumptions and dependencies. (2008)