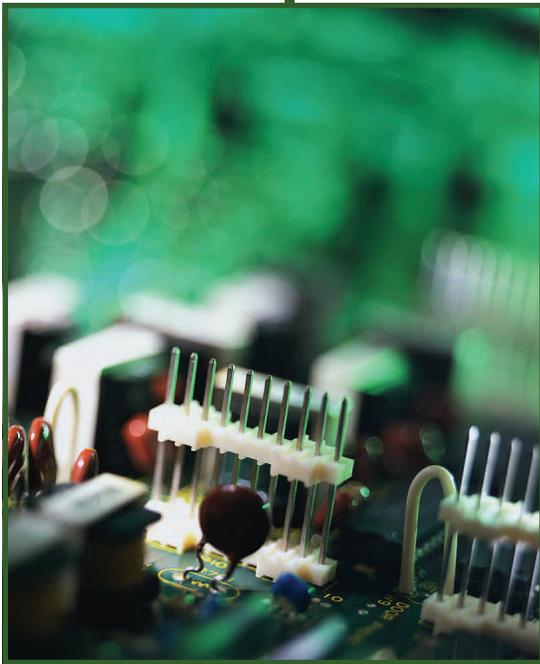


Digital Nebraska Envisioning Our Future

Nebraska's Statewide Technology Plan
2012



2012
State of Nebraska
Nebraska Information Technology Commission
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Nebraska's Statewide Technology Plan
is available from the NITC Web site:
www.nitc.nebraska.gov



Foreword



Dave Heineman
Governor

STATE OF NEBRASKA
OFFICE OF THE CHIEF INFORMATION OFFICER
Brenda L. Decker
Chief Information Officer

My Fellow Nebraskans:

The Nebraska Information Technology Commission's annual statewide technology plan presents a vision for the use of technology in education, economic development, all levels of government, and health care.

To achieve this vision, the NITC works with its advisory groups, state agencies, and other stakeholders to identify and support initiatives of strategic importance to the state. Through the efforts of the NITC and its many partners, the State of Nebraska is expanding access to services, reducing costs, increasing efficiency, and improving public safety through the use of technology.

I would like to thank the NITC Commissioners, members of the NITC's advisory groups, and the NITC staff for their contributions to the statewide technology plan.

Sincerely,

Rick Sheehy
Lieutenant Governor
and Chair, Nebraska Information Technology Commission

Rick Sheehy
Lieutenant Governor



Nebraska Information Technology Commission
Lieutenant Governor Rick Sheehy, Chair

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Commissioners and Staff

Commissioners

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Pat Flanagan, CoSentry, Omaha

Senator Galen Hadley, Nebraska Legislature, Ex-officio member

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Executive Summary

*D*igital Nebraska: *Envisioning Our Future* sets forth the vision and goals for the use of information technology in Nebraska, building upon Nebraska’s successes in using technology to expand access to services, reduce costs, increase efficiency, and improve public safety. The Nebraska Information Technology Commission (NITC) was established by the Legislature in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state.

In accordance with the Legislature’s directive (Neb. Rev. Stat. § 86-516) to “annually update a statewide technology plan,” the NITC has updated the statewide technology plan for Nebraska. The development of the statewide technology plan is an iterative process. Each new edition of the statewide technology plan builds upon previous editions. On even-numbered years, the statewide technology plan undergoes a more extensive revision. On odd-numbered years, action items are updated, but only minor revisions are made to the rest of the plan.

Vision and Goals

The vision of the NITC is to improve the quality of life of all Nebraskans by promoting the use of information technology in education, health care, economic development and all levels of government. To achieve this vision, the NITC has identified five goals:

- Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable, and efficient;
- Support the use of information technology to enhance community and economic development;
- Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including homeland security;
- Ensure the security of the State’s data and network resources and the continuity of business operations;
- Promote effective planning, management and accountability regarding the state’s investments in information technology.

The development of a statewide technology plan is the primary mechanism by which the NITC addresses its goal of promoting effective planning, management and accountability regarding the state’s investments in information technology.

Executive Summary

Strategic Initiatives

The NITC has identified eight strategic initiatives which materially advance the Commission's vision and goals. These strategic initiatives are projects that are ready to be implemented and that require an enterprise approach, involvement by the NITC, and/or cooperation of multiple entities for their success. By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives. The statewide technology plan includes a set of action items for each strategic initiative. These action items guide the work of the Nebraska Information Technology Commission (NITC) and its advisory groups.

The NITC's current strategic initiatives are:

- Network Nebraska
- Community IT Planning and Development
- eHealth
- Public Safety Communications System
- Digital Education
- State Government Efficiency
- E-Government
- Security and Business Resumption

Executive Summary

OCIO Assists Firefighting Efforts

Lightning sparked three fires near Norden in North Central Nebraska on July 20, destroying at least 14 homes and 17 outbuildings. The Fairfield Creek fire burned more than 104 square miles. The Wentworth and Hall fires blackened nearly 10.6 square miles and more than 4.25 square miles, respectively. The Office of the CIO assisted firefighting efforts in the following areas:

- Coordinated with US Cellular, to bring in a temporary cellular tower and to deployed a COLT (Cellular on Light Truck).
- Coordinated with Three Rivers Communications to install additional landlines and DSL to the temporary NEMA incident command center.
- Coordinated with the Department of Roads, NSP and NEMA to ensure statewide radio system was working according to expectations.
- A request was made to the OCIO to identify pertinent GIS files that could be used in emergency planning and response. The data provided included geographic coordinates and information about roads, water resources and structures (schools, hospitals, communication towers, chemical storage and emergency services). Within 24 hours of the request, our federal partner for the NITC GIS Council was able to request federal assistance to capture satellite imagery of the affected area.



Photo credit: State of Nebraska

Governor Dave Heineman meets with firefighters.

NITC Vision and Goals

The vision of the NITC is to improve the quality of life of all Nebraskans by promoting the use of information technology in education, health care, economic development and all levels of government. To achieve this vision, the NITC has identified five goals:

- Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable, and efficient;
- Support the use of information technology to enhance community and economic development;
- Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including homeland security;
- Ensure the security of the State's data and network resources and the continuity of business operations.
- Promote effective planning, management and accountability regarding the state's investments in information technology.

In order to further these goals, the NITC has identified eight key initiatives on which to focus. The eight strategic initiatives directly support the first four goals listed.

Although no strategic initiatives are specifically identified for the fifth goal of promoting effective planning, management and accountability regarding the state's investments in information technology, much work is also being done in this area. The development of this statewide technology plan is perhaps the most visible evidence of planning for the effective use of information technology. Other activities which support effective planning, management and accountability include the development of standards and guidelines and the review of technology-related budget requests.

Role of Advisory Groups

The NITC conducts the majority of its work through its advisory groups. Each of the councils and the Technical Panel has a charter, adopted by the NITC, which establishes the council membership, responsibilities, and meeting procedures. Charters, proceedings, and other information are available on the NITC Website.

Advisory Groups

Much of the NITC's work is conducted through its advisory groups:

- The **Technical Panel** provides analysis and recommendations to the NITC on technical issues.
- The **Community Council** is composed of representatives from business and economic development, work force development, public libraries and local government. It was formed to identify, prioritize, and coordinate user needs with respect to community information technology.
- The **Education Council** is a 16-member advisory committee composed of representatives from K-12 and postsecondary education. It identifies, prioritizes, and coordinates user needs with respect to educational information technology.
- The **State Government Council** is a 25-member advisory committee composed of agency directors, state IT professionals, and two representatives of the private sector. It provides direction and oversight for the development of vision, goals, and policy related to the use of information technology in state government.
- The **eHealth Council** is composed of representatives from public health, consumers, state and federal government, employers, eHealth initiative groups, health care providers, and other resource providers. It was formed to identify, prioritize, and coordinate issues within the realm of healthcare and technology.
- The **GIS Council** is composed of representatives from state and local government associations. They provide statewide coordination of GIS initiatives and enhanced collaboration between municipal, county, state, and federal government entities.

Role of Advisory Groups

- **Other Coordinating Entities.** The NITC also recognizes the important contributions of other information technology coordinating entities, such as the Criminal Justice Information Systems (CJIS) Advisory Committee. The CJIS Advisory Committee includes representatives of state and local agencies involved in all aspects of criminal justice. It conducts strategic planning and sponsors automation and data sharing projects. Further information about the CJIS Advisory Committee is available at [NCJIS - Nebraska Criminal Justice Information System](#).

LB 1208 (2006) created the Distance Education Council, composed of the administrators from all 17 Educational Service Units. The Distance Education Council evolved into the ESU Coordinating Council (N.R.S. 79-1245) on July 1, 2008 and is responsible for planning and delivering the most cost-effective approach to statewide distance learning and other statewide initiatives. More information about the ESU Coordinating Council is available at [Nebraska's ESUs and Statewide Projects - Home](#).

The Nebraska GIS/LIS Association was established as a recommendation from the GIS Council and other GIS professionals in 1998. The purpose of the Association is to assist, educate, coordinate, and guide implementation, development and maintenance of GIS technology in the State of Nebraska. More information about this Association is available at <http://www.gis/lis.org/>.

The NITC encourages other information technology coordinating entities to collaborate with the NITC and its advisory councils.

Strategic Initiatives

The NITC has identified eight strategic initiatives, which address the NITC's goals of supporting the development of a robust telecommunications infrastructure, supporting community and economic development, promoting the efficient delivery of government and educational services, and ensuring the security of data and network resources and the continuity of business operations. By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives.

The NITC's current strategic initiatives are:

- Network Nebraska
- Community IT Planning and Development
- eHealth
- Public Safety Communications System
- Digital Education
- State Government Efficiency
- E-Government
- Security and Business Resumption

A brief description of each strategic initiative, listed as supporting the NITC goals, follows:

Development of a Robust Telecommunications Infrastructure

Network Nebraska. In order to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the state of Nebraska, the Office of the CIO and the University of Nebraska engaged in a collaborative partnership that used existing and new resources to aggregate disparate networks into a multipurpose core backbone extending from Omaha, Lincoln, Grand Island to Scottsbluff. Benefits of Network Nebraska include lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, new educational opportunities, more affordable Internet access, and better use of public investments. Network Nebraska is now shifting its focus to utilization and application development. To facilitate this shift, eight continued and three new action items are included in this new version of the Statewide Technology Plan. Community aggregation, IPv6 planning, and enterprise MCU bridge services are featured among the new action items.

Strategic Initiatives

Community and Economic Development

Community IT Planning and Development. In order to foster community and economic development in Nebraska through the effective use of information technology, the NITC Community Council has built partnerships with other organizations to develop and deliver outreach programs. The Community Council is currently supporting the broadband planning initiative funded as part of the Nebraska Public Service Commission's broadband mapping grant from the National Telecommunications and Information Administration. More information can be found at broadband.nebraska.gov.

Efficient Delivery of Services

eHealth. eHealth technologies include telehealth, electronic health records, e-prescribing, computerized physician order entry, and health information exchange. The widespread adoption of electronic health records and other eHealth technologies is expected to reduce medical errors, improve quality of care, and reduce health care costs for payers.

The Nebraska Information Technology Commission formed an eHealth Council in 2007 to make recommendations on how the State of Nebraska can effectively and efficiently promote the adoption of interoperable health technologies. On March 15, 2010, the State of Nebraska received \$6.8 million in funding from the Office of the National Coordinator's State Health Information Exchange Cooperative Agreement program, which was created as part of the HITECH ACT in the American Recovery and Reinvestment Act. The eHealth Council has developed strategic and operational eHealth plans which guide the implementation of Nebraska's State HIE Cooperative Agreement funding.

Digital Education. The primary objective of the Digital Education Initiative is 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. This initiative will involve the coordination and promotion of several major systems and applications that have either been developed mostly at the local level or have not been replicated statewide. A new action item involves development of statewide directory services structured to allow students and staff a single sign-on to learning management and content management systems. This initiative also includes four previous action items for continuation. The Distance Education Council/ESU Coordinating Council is recognized as a lead entity to assist in moving these actions forward.

Strategic Initiatives

State Government Efficiency. The State Government Council will address multiple items improving efficiency in state government, including implementing shared services and adopting standards and guidelines. The council has identified and is working to implement multiple shared services for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts.

E-Government. Through the use of technology, state agencies can enhance information sharing, service delivery, and constituency and client participation. Benefits include improved services for citizens and businesses, and increased efficiency and effectiveness for agencies.

Security of Data and Network Resources and Continuity of Business Operations

Security and Business Resumption. This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources. Benefits include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Each strategic initiative is discussed in greater detail in the following section. A set of action items is included for each strategic initiative. These action items guide the work of the Nebraska Information Technology Commission (NITC) and its advisory groups.

Network Nebraska

The World through Distance Learning

Published May 22, 2011 *Omaha World Herald*

By Kevin Cole, World-Herald Staff Writer

Hollie O'Brien's road from central Nebraska to the Massachusetts Institute of Technology took her through five schools without leaving her Arcadia High School desk.

Wanting to better her chances for admission to one of the nation's premier science schools, O'Brien took courses in nuclear engineering and physics taught at Burke High in Omaha; government, pre-calculus, trigonometry and geometry from Ansley High; calculus from Burwell High; and English from Central Community College in Kearney. And just for fun, she added some computer science for advanced scholars from the University of Nebraska-Lincoln.

"I was able to take the courses that I needed in schools all around Nebraska without leaving Arcadia," O'Brien said. "I wanted more math, so I went for it."

But some rural students, like O'Brien, take full advantage of the program to pack their semesters with challenging classes and help build a resumé that positions them for acceptance by some of the most competitive colleges in the country.

O'Brien, who graduated last week with a 4.0 grade-point average and first in her class of nine, said she wouldn't have been accepted into MIT without access to the interactive videoconferencing courses.

And the 18-year-old did more than earn a place in MIT's next freshman class: She earned a full-ride scholarship valued at \$42,000 to study aerospace engineering.

Network Nebraska operates under the auspices of the Nebraska Information Technology Commission and includes the state's 17 educational service units that assist school districts in identifying courses that can be offered online or via a videoconferencing system.

John Stritt, director of Educational Service Unit 10, which includes Arcadia, said Network Nebraska benefited from the Omaha and Lincoln public school districts starting to share their courses in 2009.

"That gave us more teachers and curriculum to share with students in rural Nebraska," Stritt said. "Anywhere in Nebraska, students have the opportunity to take video or Internet-based classes."

Mary Schlegelmilch, the distance education supervisor for the Omaha Public Schools, said that next school year, OPS will share 26 videoconferencing courses and 32 online courses on Network Nebraska. In 2009-10, a total of 337 courses were shared through the network.

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I was able to take the courses that I needed in schools all around Nebraska without leaving Arcadia. I wanted more math, so I went for it."

- Hollie O'Brien

Network Nebraska

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.

Network Nebraska

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

Network Nebraska

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.

Network Nebraska

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

Network Nebraska

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.

Network Nebraska

Timeframe: 2012-2014

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

Status: Continuation

Action: Maintain 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

Network Nebraska

Participating Entities: Distance Education Council

Timeframe: 2010-11

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: 2010-11

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: 2010-11

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

Status: Discontinued 2011

Network Nebraska

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: 2010-11

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: 2010-11

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

Status: Discontinued 2011

Network Nebraska

Making Music Beyond the Classroom Walls: My Experience of Teaching a Distance Learning Course

By Dr. Lance Nielsen, Lincoln Public Schools, SIGMT 2012

Satellite TV was used to connect classrooms between various schools either through educational service units or consortiums. This model has recently been expanded by the use of high speed Internet, high definition video and digital sound technologies.

The benefits of distance learning are numerous especially for rural schools in the Midwest in which there are few opportunities for one-on-one music lessons with a private teacher or in providing unique music courses such as music technology, music theory, or specific music topics such as History of Rock and Roll or World music.

Lincoln Public Schools in Lincoln, Nebraska is one of those school districts that have embraced this new learning opportunity. Through a grant, the district provided each high school with a LifeSize distance learning (DL) cart that included a passport Internet connection, HD video camera, 42" plasma TV, and digital microphone. The package also included Scopia Desktop, software that is a distance learning solution for laptops.

Music is one of the classes that can benefit from this type of technology. Currently, I am teaching an Electronic Music Theory course at Lincoln East High School. The objective of this course is to teach students the art of music composition and arranging utilizing various types of music software including GarageBand, Sibelius or Finale. The course fosters creativity while teaching the fundamental elements of music theory. In essence, students learn music theory through the process of actually composing music.

Besides the students at my high school, this course was offered through eNVision: The Nebraska Virtual Instruction Source, a clearinghouse of (DL) courses offered to all Nebraska schools. Besides the fifteen students in my classroom, we have one rural school that enrolled five students and another high school within Lincoln Public Schools that enrolled one student. The rural school has the same DL cart as East High School. The one student at the other LPS High School uses the Skopia App on her computer to connect with the class. All the students can see each other as well as converse, asking and answering questions. Besides connecting via the LifeSize cart every class period, the students are also enrolled in a Moodle site, a course management system. The Moodle site allows for course content to be delivered, assignments collected, and opportunities for peer collaboration.

Performance coaching and clinics are also available to schools. The Lincoln East High School chamber string orchestra participated in the Manhattan School of Music Distance Learning ensemble coaching. A group of eleven string students were coached by a music professor from the Manhattan School of Music in three different sessions. Students had this to say about the experience.

Violin Student: "It was a wonderful experience in which the professor from the Manhattan School of Music pushed us to new heights musically".

Network Nebraska

Viola Student: "It was really exciting to work with a prominent music professor from New York; an experience that we would not get unless if we actually went there".

The benefits of distance learning are numerous especially for rural schools in the Midwest in which there are few opportunities for one-on-one music lessons with a private teacher or in providing unique music courses such as music technology, music theory, or specific music topics such as History of Rock and Roll or World Music. Music teachers may also choose to have a guest clinician listen and evaluate an ensemble performance prior to a concert or festival through a DL set-up. Whatever the situation, music education can definitely benefit from the new Distance Learning Technologies that are available to schools.

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Community IT Planning

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.

Community IT Planning

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 ten 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 websites 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.

Community IT Planning

- 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.

Community IT Planning

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.)

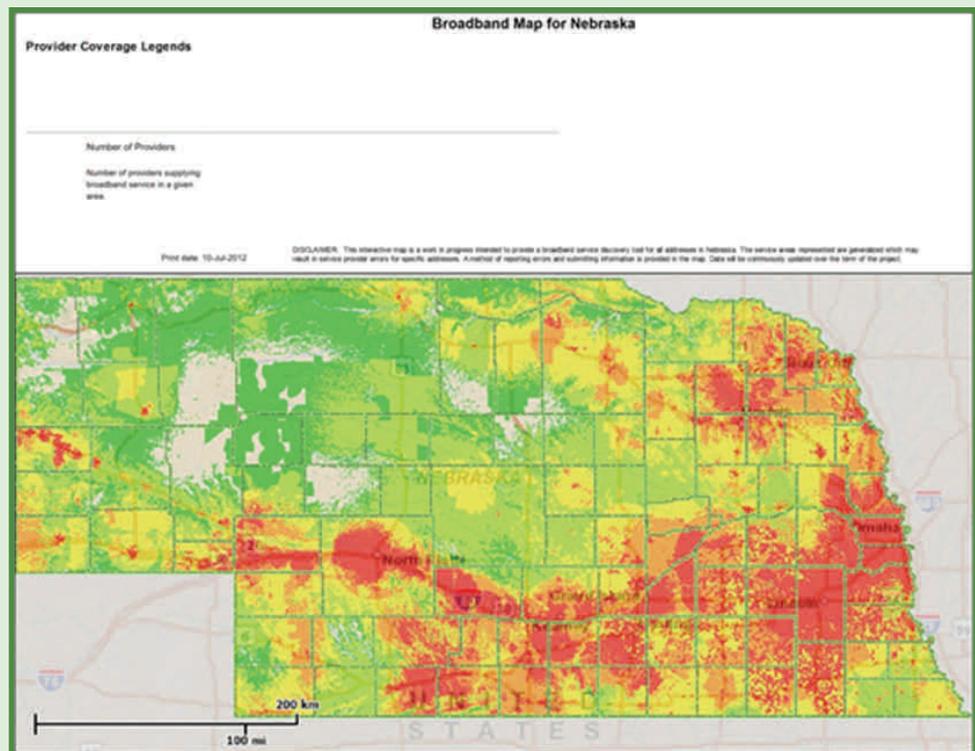
Community IT Planning

Map Shows Broadband Availability

On January, 12, 2010, the National Telecommunications and Information Administration awarded the Nebraska Public Service Commission approximately \$1.6 million in funding from the American Recovery and Reinvestment Act for broadband data collection and mapping activities and nearly \$500,000 for broadband planning activities over a two-year period in Nebraska, bringing the total grant award to approximately \$2.1 million. On September 27, 2010 an additional \$3.5 million was awarded to the Public Service Commission for mapping and planning activities in years 2-5 of the project.

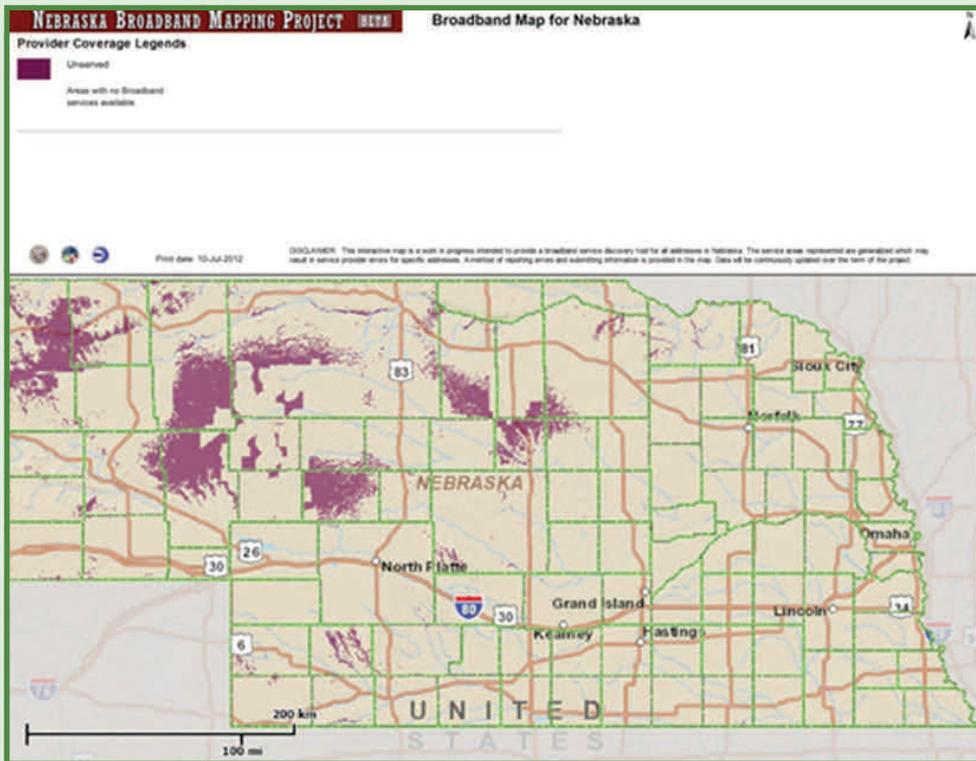
With this funding, a broadband map of Nebraska was developed. The map is available at <http://broadband.nebraska.gov/home>. The map provides information that may be useful for policymakers, economic development professionals, businesses, and residents.

The following map shows the number of broadband providers as of July 2012.



Community IT Planning

The map below shows areas in Nebraska without non-satellite broadband service as of July 2012.



Nebraska Doctors Recognized as Leaders in Transition to Electronic Health Records (EHRs)

By Jennifer Rathman, Communications Manager, Wide River Technology Extension Center

"It may seem like a small thing, but never losing a chart, never looking for a chart, never having to wait for a chart, never fighting over a chart and therefore always having immediate access to any and all patient information is a tremendous time saver and stress reliever. EHRs make me more confident that important information about the patient is not slipping through the cracks."

- Dr. Mark Woodruff

Nebraska health care providers, Dr. Mark Woodruff and Dr. William Weeks, were recognized on July 19, 2011 by Nebraska's Lt. Governor, Rick Sheehy, and Wide River Technology Extension Center (TEC), for their leadership in the transition to Electronic Health Records (EHRs). Drs. Woodruff and Weeks, of Southwest Family Physicians, are among the first physicians in the state to successfully attest and certify Meaningful Use of their EHR system as part of the Medicare EHR Incentive Program. Drs. Woodruff and Weeks have been providing medical care to families in the Omaha area since 1984.

The Centers for Medicare & Medicaid Services (CMS) awards providers an incentive payment as part of the Medicare and Medicaid EHR Incentive Programs. Drs. Woodruff and Weeks are among the first physicians in the country to each receive an initial \$18,000 Medicare EHR incentive payment from CMS.

Eligible professionals and hospitals receive financial incentives when they demonstrate meaningful use of a certified EHR. Provider payments can amount to \$44,000 through Medicare or \$63,750 through Medicaid over the life of the initiative.

To assist Southwest Family Physicians in meeting this tremendous achievement, Wide River TEC supported the clinic's efforts to become meaningful users of EHRs. Designated by the Office of the National Coordinator for Health Information Technology (ONC), Wide River TEC is currently supporting over 700 providers in Nebraska to help ease this transition. Through an advisory role, Wide River TEC brings local expertise and support to primary care physicians and other healthcare for successful EHR adoption.

"It may seem like a small thing, but never losing a chart, never looking for a chart, never having to wait for a chart, never fighting over a chart and therefore always having immediate access to any and all patient information is a tremendous time saver and stress reliever," noted Dr. Mark Woodruff. "EHRs make me more confident that important information about the patient is not slipping through the cracks."

As a result of their efforts, Dr. Weeks and Dr. Woodruff have joined an exclusive group of national healthcare leaders as members of the Meaningful Use Vanguard (MUV). MUV is an initiative of ONC and is designed to honor, thank and bring together clinicians who have successfully made the transition to EHRs. They will serve as local leaders and advisors in the nation's transition toward an electronically enabled health care system.

2011 is the first year doctors are eligible for incentives. The incentive dollars were authorized as part of the 2009 economic stimulus also known as the American

eHealth

Recovery and Reinvestment Act.

The stimulus bill included nearly \$20 billion for health information technology initiatives, including the incentive payments to doctors and other providers. The federal government's goal is for every American to have an electronic health record by 2014.



Drs. Woodruff (left) and Weeks (right) pose with Lt. Governor Rick Sheehy (center) after the recognition ceremony on July 19, 2011.

Press release was developed by CIMRO of Nebraska through funding from the United States Office of the National Coordinator, Department of Health and Human Services, grant number 90RC0018/01.

eHealth

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. (ONC 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. (ONC Glossary of Selected Terms)

eHealth

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. (ONC 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 which promote the use of health information technology, including the Medicaid and Medicare EHR incentive programs, state health information exchange program, regional extension center program, and community college consortia to educate health IT professionals.

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

The Nebraska Health Information Initiative (NeHII) is the state's largest health information exchange. As the lead health information exchange for Nebraska, NeHII is acting 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. 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. Over 2,000 health care providers are currently participating in NeHII.

eHealth

Over two 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 with patient consent. eBHIN began rolling out its HIE functionality in Region 5 in southeast Nebraska in July 2012. Region I in the Panhandle and Region 6 in the Omaha area are the next regions slated for implementation. Planning for implementation in Regions 2, 3 and 4 is also underway, supported by funding from a HRSA planning grant. eBHIN will utilize Direct secure messaging to exchange patient information with consent outside of the eBHIN exchange. Additional information is available at www.ebhin.org.

Direct enables a healthcare provider to electronically and securely push specific health information, such as discharge summaries, clinical summaries from primary care providers and specialists, lab results to ordering providers, or referrals over the internet to another healthcare provider(s) who is a known and trusted recipient. NeHII (through HIO Shared Services) is acting as Nebraska's Health Information Services Provider and is offering Direct services.

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.

eHealth

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.**

eHealth

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

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

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.

Public Safety Communications System

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

Public Safety Communications 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.

Public Safety Communications System

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

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

Digital Education

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;

Digital Education

- 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)

1. 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

Digital Education

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

Digital Education

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

Digital Education

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

Digital Education

Gov. Heineman Announces Virtual School Agreement

On August 12, 2011 Gov. Dave Heineman was joined by Nebraska education leaders to announce the creation of the Nebraska Virtual Partnership, and outline plans for the creation of the Nebraska Virtual School and the Nebraska Virtual Library systems. Efforts of the Nebraska Virtual Partnership will significantly increase educational opportunities for students throughout the state.

“This is a significant step forward for the future of education in Nebraska,” said Gov. Heineman. “The Virtual School will provide Nebraska students a rigorous online high school curriculum with an emphasis on Science, Technology, Engineering and Math, commonly referred to as STEM courses, and Advanced Placement courses in both rural and urban areas. Additionally, the Virtual School establishes a single, centralized website informing students parents, teachers and schools of virtual learning opportunities in Nebraska.”

Nebraska educational leaders signed a Memorandum of Agreement (M.O.A.) formally establishing the Nebraska Virtual Partnership. The M.O.A. represents the commitment of the Department of Education, the Educational Service Unit Coordinating Council, the University of Nebraska and Nebraska Educational Telecommunications (NET) to the construction of the Nebraska Virtual School.

In addition to the Virtual School, the Nebraska Virtual Partnership will establish the Nebraska Virtual Library. NET has proposed to make multi-media and digital instructional resources available to students and teachers across Nebraska.

University of Nebraska President James B. Milliken said, “The Nebraska Virtual High School will be an important part of providing educational opportunities to students across Nebraska and the University is very pleased to join Governor Heineman in this initiative. We look forward to working with our partners, leveraging the successful record of UNL's Independent Study High School as well as other state resources to increase access to science and math curriculum, Advanced Placement courses and other opportunities all Nebraska students should enjoy. This represents a true partnership among educational and political leadership in Nebraska and the beneficiaries will be our high schools students.”

Fully accredited by state, national and international agencies, the Independent Study High School now serves more than 300 Nebraska students as well as students from 135 countries around the world in a flexible, asynchronous environment.

“We look forward to working with our partners, leveraging the successful record of UNL's Independent Study High School as well as other state resources to increase access to science and math curriculum, Advanced Placement courses and other opportunities all Nebraska students should enjoy.”

-Governor Heineman

State Government Efficiency

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

State Government Efficiency

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.

State Government Efficiency

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.

One of the pilot project objectives was to research and make recommendations relative to the requirements for on-going support of the project. Consistent with this objective, the NebraskaMAP Working Group formally recommended that a minimum of one FTE, with fairly high level GIS technical skills, would be required to provide on-going support for the NebraskaMAP and its related online GIS services. In the interim, some of the NebraskaMAP partners agencies are providing temporary technical support to maintain the current infrastructure. A business plan is currently being developed to outline future plans and resource requirements to sustain NebraskaMAP as an enterprise-level service. The OCIO is also

State Government Efficiency

identifying shared service costs and methods for cost recovery for NebraskaMAP. It is expected to have cost recover model in effect for FY 2013.

Status: This project was initiated as a two-year pilot project between 12 state and local government agencies and guidance from the NITC GIS Council. The design and testing environment from the pilot project was implemented through the University of Nebraska Center for Advanced Land Management Information Technologies (CALMIT). During this time, funding was secured to hire a Project Manager to build the system. The concept of an online GIS data sharing and web services network was demonstrated and the core architecture was deemed appropriate to meet the needs for Nebraska. Results of this pilot project are summarized in more detail and can be located at the NITC GIS Council web site (<http://nitc.ne.gov/gisc/>).

At the completion of the pilot project a decision was made by the NITC GIS Council and UNL CALMIT to move the entire system to the OCIO for full implementation and operation. Since funding was no longer available the Project Manager position was terminated. A development and production environment currently exists on separate dedicated virtual environments with the latest enterprise software at the OCIO. One of NebraskaMAP's functions is operating as a metadata portal. A statewide street centerline database was uploaded and is available as a web mapping service. An online geocoding service was implemented to support mapping database elements that have associated street addresses. A statewide base map was integrated involving common map features used in tandem (ie, roads, streams, political boundaries, etc.). This provides a visual mapping backdrop reference for a wide variety of mapping applications. The most recent statewide aerial imagery is available through the data repository and serves as an online image service. This feature demonstrates the feasibility of serving very large imagery datasets from a common enterprise location as opposed to copying these large datasets onto multiple agency systems.

All of these datasets can be embedded into an agency's website or desktop application to support a variety of functions. A GIS data repository is currently being developed to host and serve GIS datasets of interest for which other agencies are not currently providing online data access. As newer georeferenced data becomes available and future business plans are in place to enhance the Nebraska Spatial Data Infrastructure (NESDI) this data will become available on NebraskaMAP. Several new pilot projects are underway to test and evaluate advanced technologies using mobile and other

State Government Efficiency

web mapping services components.

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 approaching three 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

State Government Efficiency

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. There are currently 242 metadata files being shared through the geoportal server and it continues to grow. This metadata comes from various city, county, state, federal, and industry providers. The OCIO staff have been working to maintain the current metadata portal and prepare components for expanding the enterprise architecture for NebraskaMAP. Customized online tools have been developed to assist in the development of metadata to document GIS datasets and several agencies trained in their use. Metadata is the formal documentation of GIS datasets and is required for most online data sharing tools to function. 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 involves the broader GIS user community (state, local, and federal agencies, tribes and the private sector) and seeks 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

State Government Efficiency

Participating Entities: State Government Council; GIS Council

Timeframe: December 2012

Funding: This effort has been initiated through the NITC GIS Council Strategic Planning Committee. Resources to support the planning process has been made possible through a cooperative grant effort called the Fifty States Initiative implemented between the Federal Geographic Data Committee (FGDC) and the National States Geographic Information Council (NSGIC). The grant provided \$50,000 to hire a consultant, Applied Geographics, Inc. to facilitate and develop the strategic planning process and report.

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. To oversee the process, a strategic planning advisory committee was established from members of the NITC GIS Council.

In order to help characterize the Nebraska geospatial landscape a survey was sent out to a full spectrum of stakeholders from decision makers with little to no GIS experience to technical GIS users. Information was gathered from over 448 respondents to the survey during January and February of 2012. This is the largest response any state has received involved in the Fifty State Initiative. A total of six stakeholder workshops were conducted in February to gather city, county, and regional input from the survey findings and other topics. The workshops involved 149 participants in Scottsbluff, North Platte, Grand Island, Norfolk, Kearney, Lincoln, and Omaha. Attendees typically included assessors, natural resource district managers, city/county GIS coordinators, clerks, sheriffs, emergency management, industry representative, public health managers and surveyors. A statewide planning workshop and seminar was conducted in June 2012 reaching over 76 attendees making up state agency and association directors and other key GIS users at various state departments.

The general findings from surveys and workshops indicated overwhelming interest and needs at various levels of city, county, and state government for enhancing our geospatial infrastructure. There was also an indication of the lack of awareness of the GIS Council and it's representatives, need for education for various geospatial technologies, and awareness of benefits of using geospatial technologies and data sharing in day-to-day business

State Government Efficiency

operations. The planning committee is in the final stages of completing the report. The following are the vision and strategic goals for the strategic plan.

GIS Strategic Plan Vision and Goals

Vision. To foster an environment that optimizes the efficient use of geospatial technology, data, and services to address a wide variety of business and governmental challenges within the state. Geospatial technologies will be delivered in a way that supports policy and decision making at all levels of government to enhance the economy, safety, environment and quality of life for Nebraskans.

Strategic Goals. The following four specific strategic goals represent a consensus of desired characteristics expressed by the geospatial community during the information and analysis phase of the strategic planning process.

1. Facilitate the creation, maintenance, analysis, and publishing of quality geospatial data.
2. Provide widespread access to data, services and encourage data sharing.
3. Facilitate technical assistance and education outreach opportunities for furthering the adoption of NESDI data layers and geospatial applications.
4. Achieve sustainable and efficient allocation of resources to support the implementation and wise governance of GIS services and geospatial data.

The final report will be completed in the fall of 2012. There will be three business plans as an outcome of the strategic plan report. These include business plans for:

1. Creation, maintenance, and distribution of the Nebraska Spatial Data Infrastructure layers
2. NebraskaMAP as a statewide geospatial data clearinghouse
3. A technical assistance and education outreach plan.

State Government Efficiency

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: June 2013

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: June 2013

State Government Efficiency

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: Continuation. 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

State Government Efficiency

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. Move State email to the cloud.

Lead: Office of the CIO

State Government Efficiency

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

State Government Efficiency

- 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:

State Government Efficiency

- 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)

Completed Action Items Continued (2007-2011)

11. Implement enterprise content management (ECM) as a shared service. (2011)

12. Implement interactive VRU applications as a shared service. (2011)

E- Government

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;

E- Government

- 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

E- Government

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.

E- Government

- 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.

E- Government

ClickDMV Receives Digital Government Achievement Award

On September 8, 2011 the Nebraska Department of Motor Vehicles (DMV) was recognized with a Digital Government Achievement Award for their ClickDMV (www.ClickDMV.ne.gov) portal, which houses all online DMV services. This is the second Digital Government Achievement Award from the Center of Digital Government that the Nebraska DMV has received in the last three years. The award criteria are centered on innovation and efficiency for government applications.

"I am very pleased and excited our Nebraska DMV was recognized for their achievement in promoting eGovernment technology," said Nebraska Governor, Dave Heineman. "As we continue to become a more technologically advanced society, we are demonstrating how efficient Nebraska can be in providing eGovernment services to our citizens."

The ClickDMV website was created with the goal of raising awareness among citizens of available online DMV services. Through a concentrated marketing approach, the Nebraska DMV was able to reach out to 2 million citizens to brand the ClickDMV name and promote awareness. Since the DMV sends out over a million pieces of mail annually, a marketing insert was included in all the mailings as one marketing tactic. Statistics now show the approach has proven to be a huge success. In 2009, before ClickDMV marketing, there were 61,276 interactive transactions online and in 2010, there were 132,695 transactions. Also before ClickDMV marketing, 70% of searches had some form of the word "click" in it, compared to 85% after marketing efforts.

"It has been our goal to reach out to Nebraska citizens to utilize technology and educate them on the efficiency and convenience our online services provide," said Beverly Neth, Director of Nebraska DMV. "To receive this kind of recognition is very exciting. I'm very pleased to see the impact our ClickDMV portal continues to deliver."

The Digital Government Achievement Awards recognize state and local entities for innovative and outstanding websites and digital applications around the world.

"It has been our goal to reach out to Nebraska citizens to utilize technology and educate them on the efficiency and convenience our online services provide"

- Beverly Neth

Security and Business Resumption

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.

Security and Business Resumption

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

Security and Business resumption

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

Security and Business Resumption

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.

Security and Business Resumption

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)

Security and Business Resumption

OCIO Addresses Cybersecurity

Cyber security awareness is a crucial component of an overall security program. This past year the Office of the CIO has purchased the SANS Securing the Human awareness training course. Along with multiple presentations to agencies and other entities, we have helped to increase overall information security awareness in the State. The OCIO also sponsored the 6th Annual Cyber Security conference with over 105 attendees from State and local government along with IT professionals from county government, law enforcement and the private sector. Additional IT and security informational opportunities were also available during the Nebraska Digital Summit which invites Government employees to attend various presentations on IT related materials along with information security topics. October is Cyber Security Awareness month and is also the month when we concentrate on increased cyber security awareness activity and in partnership with the MS-ISAC (Multi-State Information Security and Analysis Center), we make available a cyber-security awareness toolkit and send out cyber security related materials to agencies, counties and schools across the State.

The State has continued to add additional security capability, some of those additions are an upgrade to firewall capabilities, additional security features for wireless networking technologies and an increased capability in detecting potential data loss through email and Internet communications. The OCIO continually evaluates new technologies in an effort to increase the State's security posture and to assist in safeguarding sensitive private citizen information.

The Security Architecture Work Group that is comprised of members from each agency meets every month in an effort to address future informational security issues and to help develop appropriate policy. One recent policy that has been accepted is NITC Policy 5-204 "Linking a Personal Portable Computing Device to the State Email System" – that policy enables the limited use of personally owned mobile technology by State employees in situations that pose minimal risk to data. This year's primary security goal is to increase the use of existing vulnerability detection and management tools and to decrease the time gap between detection and the patching of systems and applications.

Review of systems is a required part of any security program. Audits of systems, communication, policy, data recovery and security are performed throughout the year to maintain compliancy with Federal requirements, with Payment Card Industry requirements and other requirement that must be performed in order to validate that State systems are properly safeguarding information.

The OCIO continually evaluates new technologies in an effort to increase the State's security posture and to assist in safeguarding sensitive private citizen information.

Advisory Group Members

Community Council

Rural and Community IT development/Workforce Development

Rod Armstrong, AIM Institute, Omaha

Linda Fettig

Norene Fitzgerald

Darla Heggem, Twin Cities Development , Scottsbluff-Gering

John Jordison, Great Plains Communications

Joan Modrell, Department of Labor

Tim O'Brien, Nebraska Department of Economic Development

Local Government and Libraries

Chris Anderson, City of Central City

Phil Green, City of Blair

Brett Baker, City of Hickman

At Large

Jerry Vap, Public Service Commission

Advisory Group Members

Education Council

Dr. Terry Haack, Co-Chair, Bennington Public Schools

Ed Hoffman, Co-Chair, Nebraska State College System

Clark Chandler, Nebraska Wesleyan University

Ken Clipperton, Midland University

Ron Cone, ESU 10

Brenda Decker, Nebraska Department of Administrative Services

John Dunning, Wayne State College

Brent Gaswick, Nebraska Department of Education

Stephen Hamersky, Daniel J. Gross Catholic High School

Leonard Hartman, Alliance High School

Dr. Marshall Hill, Coordinating Commission for Postsecondary Education

Yvette Holly, University of Nebraska-Medical Center

Jeff Johnson, Centennial Public Schools

Dr. Mike Lucas, York Public Schools

Lyle Neal, Southeast Community College

Mary Niemiec, University of Nebraska

Randy Schmailzl, Metropolitan Community College

Jeff Stanley, Conestoga Public Schools

Gary Targoff, Nebraska Educational Telecommunications Commission

Dr. Bob Uhing, ESU 1

Advisory Group Members

eHealth Council

The State of Nebraska/Federal Government

Senator Annette Dubas, Nebraska Legislature (term ends Dec. 2010, renew every 2 years)

Steve Urosevich (term ends Dec. 2012)

Congressman Jeff Fortenberry, represented by Marie Woodhead (term ends Dec. 2012, renew every 2 years)

Health Care Providers

Lianne Stevens, The Nebraska Medical Center (term ends Dec. 2013)

Dr. Delane Wycoff, Pathology Services, PC (term ends Dec. 2014)

Dr. Harris A. Frankel (alternate)

Joni Cover, Nebraska Pharmacists Association (term ends Dec. 2012)

September Stone, Nebraska Health Care Association (term ends Dec. 2013)

John Roberts, Nebraska Rural Health Association (term ends Dec. 2014)

eHealth Initiatives

Laura Meyers, Nebraska Statewide Telehealth Network and St. Elizabeth Foundation (term ends Dec. 2012)

Ken Lawonn, NeHII and Alegent Health (term ends Dec. 2013)

Harold Krueger, Western Nebraska Health Information Exchange and Chadron Community Hospital (term ends Dec. 2014)

Wende Baker, Electronic Behavioral Health Information Network (term ends Dec. 2012)

Public Health

Sue Medinger, Department of Health and Human Services, Division of Public Health (term ends Dec. 2013)

Sharon Medcalf, UNMC College of Public Health (term ends Dec. 2014)

Rita Parris, Public Health Association of Nebraska, alternate

Kay Oestmann, Southeast District Health Department (term ends Dec. 2012)

Marsha Morien, UNMC College of Public Health (term ends Dec. 2013)

Advisory Group Members

Joel Dougherty, OneWorld Community Health Centers (term ends Dec. 2014)

Payers and Employers

Susan Courtney, Blue Cross Blue Shield (term ends Dec. 2012)

Vivianne Chaumont, Department of Health And Human Services, Division of Medicaid and Long Term Care (term ends Dec. 2013)

Consumers

Nancy Shank, Public Policy Center (term ends Dec. 2014)

Alice Henneman, University of Nebraska-Lincoln Extension in Lancaster County (term ends Dec. 2012))

Resource Providers, Experts, and Others

Kimberly Galt, Creighton University School of Pharmacy and Health Professions (term ends Dec. 2012).

Greg Schieke, Wide River Technology Extension Center (term ends Dec. 2013)

Todd Searls, Wide River Technology Extension Center (alternate)

Donna Hammack, St. Elizabeth Medical Center (term ends Dec. 2014)

Advisory Group Members

GIS Council

James W. Ohmberger, Chair, Office of the Chief Information Officer
Mike Preston, Vice Chair, Nebraska Geospatial Professional Association
Chad Boshart, Nebraska Emergency Management Ag.
Karis Bowen, Department of Health and Human Services
Rose Braun, Department of Roads
Lash Chaffin, League of Nebraska Municipalities
Timothy Cielocha, Nebraska Public Power District
Dick Clark, Governor's Policy Research Office
Steve Cobb, State Surveyor
Nancy Cyr, Clerk of the Legislature
Eric Herbert, Sarpy County GIS
Les Howard, Conservation and Survey Division
Mike Hybl, Nebraska Public Service Commission
James Langtry, Federal Agency Liaison
Josh Lear, Department of Natural Resources
Jeff McReynolds, City of Lincoln, Lancaster County, Nebraska
John Miyoshi, Lower Platte North Natural Resource District
Kelly Mueller, Antelope County Assessor's Office
Paul Mullen, Metropolitan Area Planning Agency
Kyle Otte, Nebraska State Patrol
Sudhir Ponnappan, Nebraska Game and Parks Commission
Michael Schonlau, Douglas County, City of Omaha
Ruth Sorenson, Department of Revenue
Paul Yamamoto, Department of Environmental Quality

Advisory Group Members

State Government Council

Brenda Decker, Chair, Chief Information Officer

Michael E. Behm, Crime Commission

Beverlee Bornemeier, Office of the CIO, Enterprise Computing Services

Dennis Burling, Department of Environmental Quality

Mike Calvert, Legislative Fiscal Office

Carlos Castillo, Department of Administrative Services

Dick Clark, Governor's Policy Research Office

Douglas Ewald, Department of Revenue

Pat Flanagan, Private Sector

John Gale, Secretary of State

Rex Gittins, Department of Natural Resources

Dorest Harvey, Private Sector

Eric Henrichsen, Department of Health and Human Services

Catherine Lang, Department of Economic Development

Glenn Morton, Workers' Compensation Court

John Munn, Department of Banking and Finance

Beverly Neth, Department of Motor Vehicles

Gerry Oligmueller, State Budget Administrator

Sameano Porchea, Department of Education, Data, Research and Evaluation

Col. David Sankey, Nebraska State Patrol

Jayne Scofield, Office of the CIO, Network Services

Robin Spindler, Department of Correctional Services

Rod Wagner, Library Commission

Janice Walker, Supreme Court

Bill Wehling, Department of Roads

Advisory Group Members

Technical Panel

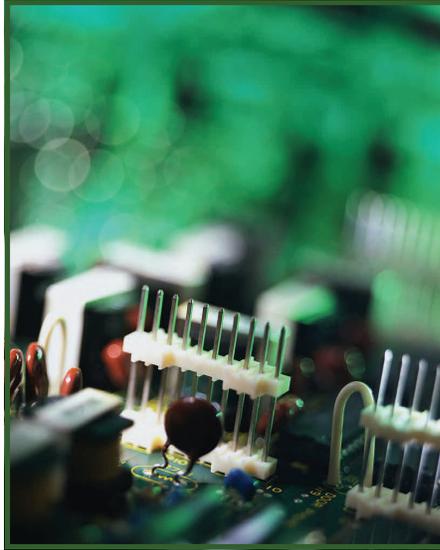
Brenda Decker, State of Nebraska

Christy Horn, University of Nebraska

Kirk Langer, Lincoln Public Schools

Walter Weir, University of Nebraska Computing Services Network

Michael Winkle, Nebraska Educational Telecommunications



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