Progress Report
to the
Governor and Legislature

November 15, 2014

NITC | Nebraska Information
Technology Commission

State of Nebraska

Nebraska Information Technology Commission

nitc.nebraska.gov

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Executive Summary

The Legislature established the Nebraska Information Technology Commission (NITC) in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state. This progress report highlights many of the significant accomplishments of the Commission and fulfills the requirement of Section 86-518 to submit a progress report to the Governor and Legislature by November 15 of each even-numbered year.

In particular, significant progress has been made on the following priority areas designated as strategic initiatives by the NITC.

- **Network Nebraska.** During the 2012-2014 time period, Network Nebraska grew its membership by 14 school districts, 2 Educational Service Units, 1 parochial school, and 1 private college. The demand for Internet has increased by 241% as the unit cost has decreased by 50%.

- **Community IT Planning and Development.** The NITC and NITC Community Council, in partnership with the University of Nebraska, the Nebraska Public Service Commission, the Nebraska Department of Economic Development, and AIM, have developed a state broadband plan which describes the current broadband landscape and presents 10 recommendations to further broadband development in Nebraska.

- **eHealth.** On March 14, 2014 the Nebraska Information Technology Commission/Office of the State CIO successfully completed a four-year $6.8 million cooperative agreement from the U.S. Department of Health and Human Services' Office of the National Coordinator for Health IT. During the grant period, health information exchange through NeHII grew from 464 users in March 2010 to over 3,500 users in March 2014.

- **Public Safety Communications System**. The Nebraska Statewide Radio System serves local, state and federal agencies and public utilities across the state. The system was funded through a partnership between the State and Nebraska Public Power District to jointly own, manage and operate the system.

- **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.

- **State Government Efficiency.** In 2009, the State Government Council identified enterprise content management (ECM) as an area to explore as a potential shared service. For years, as agencies purchased their own content/document management systems, the state was in the position of owning and operating multiple systems, each with standalone equipment and staff support. Six agencies volunteered to be involved with the requirements, Request for Proposal (RFP), and award process for

the new shared ECM system. Over six months, the group identified 126 requirements, prepared an RFP and evaluated the results. In September 2010, an ECM system contract was awarded. As of July 2014, fourteen agencies are using the ECM system with over 7,700 internal users, over 18,000 external users, and over 26.5 million documents in the system.

• **Nebraska Spatial Data Infrastructure**. This initiative promotes coordination, guides policy, provides guidance on data accuracy requirements, coordinates dissemination of data through NebraskaMAP, and strengthens data sharing through partnerships to ensure access to quality geospatial datasets for governmental business needs and the public.

• **E-Government.** Nebraska has been recognized as a leader in e-government.   The 2014 Digital States Survey, conducted by the Center for Digital Government, awarded the State of Nebraska a letter grade in the "B" category.

• **Security and Business Resumption**. The State of Nebraska continues to make progress in securing information resources, reducing associated vulnerabilities and updating policy. Over the course of the last two years, the NITC Security Work Group has worked with the State Government Council, the Technical Panel and agencies in order to formulate new polices for emerging technologies and update existing policies.

Over the past two years, the NITC has also realized significant achievements in each of the seven criteria set forth in Section 86-524(2).

• The NITC's vision is being realized and short-term and long-term strategies have been articulated and employed. The NITC has developed a vision statement, goals, and strategic initiatives to articulate its vision and to highlight technology projects which have strategic importance to the State of Nebraska.

• The statewide technology plan prepared annually by the NITC has been an effective vehicle for identifying key projects, building stakeholder support, coordinating efforts, and communicating with policy makers.

• Recommendations made by the commission to the Governor and Legislature have assisted policy and funding decisions. The review process and prioritization of new IT projects provides policy makers with information about the objectives, justification, technical impact, costs, and risks of proposed systems.

• In order to encourage interoperability and standardization, the NITC has adopted over 40 standards and guidelines.   Within the past two years, 10 new or revised standards and guidelines have been adopted.

• The NITC website serves as an information technology clearinghouse.   In addition, the eHealth Council produces a newsletter to inform stakeholders of new research and developments.

- The NITC encourages and facilitates input and involvement of all interested parties by engaging in collaborative processes, involving five advisory councils, the Technical Panel, and numerous workgroups and subcommittees. Additionally information is publicly distributed and public input is encouraged.

- The NITC is addressing long-term infrastructure innovation, improvement, and coordination through Network Nebraska and related initiatives.

Introduction

The Legislature established the Nebraska Information Technology Commission (NITC) in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state. The NITC is chaired by Lieutenant Governor John E. Nelson. Commissioners are appointed by the Governor and represent elementary and secondary education, postsecondary education, communities, the Governor, and the general public.

The NITC conducts most of its work through six advisory groups: the Community Council, Education Council, eHealth Council, Geographical Information Systems Council, State Government Council, and Technical Panel. Each council establishes ad hoc work groups to prepare recommendations on specific topics.

The Office of the Chief Information Officer provides support for the NITC, its Councils, the Technical Panel, and ad hoc groups. The Governor appointed Brenda Decker as Chief Information Officer in February of 2005. On March 7, 2006 the 99th Legislature of the State of Nebraska passed LB 921, changing the duties of the Office of the Chief Information Officer. As a result of LB 921, the Division of Communications and the Information Management Services Division became part of the Office of the CIO. This change in legislation has helped the State of Nebraska more closely align IT policy and IT operations.

Section 86-518 directs the NITC to submit a progress report to the Governor and Legislature by November 15 of each even-numbered year. This report is offered in fulfillment of that requirement. Over the past two years, the NITC has realized many significant achievements in each of the seven criteria established by the Legislature in Section 86-524(2). This report details those achievements.

Realization of Vision and Employment of Strategies

The vision has been realized and short-term and long-term strategies have been articulated and employed.

The NITC has developed a vision statement, goals, and strategic initiatives to articulate its vision and to highlight technology projects which have strategic importance to the State of Nebraska. The NITC continues to make progress toward the realization of its vision. However, because technology constantly presents new challenges and opportunities, the NITC's vision will continually evolve.

Vision. The NITC vision statement is to "promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans."

Goals. The NITC has established four goals:

1. Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable, and efficient;

2. Support the use of information technology to enhance community and economic development;

3. Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including homeland security;

4. Promote effective planning, management and accountability regarding the state's investments in information technology.

Strategic Initiatives. In 2004 the NITC began identifying priority areas as strategic initiatives. Each strategic initiative includes a strategic plan. The development of the strategic plans has been a collaborative effort involving many individuals and entities. These efforts have been successful in gaining cooperation of many stakeholders. The strategic initiatives form the core of the NITC's annual Statewide Technology Plan (http://nitc.nebraska.gov/documents/statewide_technology_plan.pdf).

The current list of strategic initiatives includes:

- Network Nebraska

- Community IT Planning and Development

- eHealth

- Public Safety Communications System

- Digital Education

- State Government Efficiency

- Nebraska Spatial Data Infrastructure

- E-Government

- Security and Business Resumption

The past two years have brought significant progress in each of the strategic initiatives. A summary of each strategic initiative follows.

Network Nebraska

In order to develop a broadband, scalable telecommunications infrastructure that optimizes quality of service to public entities, the State of Nebraska and the University of Nebraska began aggregating their backbone network services into a core network backbone in 2003. In 2006, the Nebraska Legislature passed LB 1208 which named the statewide network as Network Nebraska, and tasked the Chief Information Officer (assisted by the University of Nebraska) with "providing access to all education entities as soon as feasible, but no later than July 1, 2012." Network Nebraska is also expected to "meet the demand of state agencies and local governments…Such network shall provide access to a reliable and affordable infrastructure capable of carrying a spectrum of services and applications, including distance education, across the state."

Network Nebraska has succeeded in lowering the unit cost of Internet service to participating entities through aggregated purchasing power. By combining Network Nebraska's K-12 Internet purchases into two state contracts of almost 25Gbps, the K-12 E-rate-eligible price has gone from $2.55/Mbps on July 1, 2012 down to $1.28/Mbps on July 1, 2014, a 50% decrease in unit cost. This will benefit all current and new Network Nebraska schools, ESUs and colleges that purchase their Internet service from the statewide master contract.

Benefits of Network Nebraska also include flexible bandwidth utilization, Intranet routing, lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, new student learning opportunities, enterprise network management software, and better use of public investments.

Network Nebraska has also stimulated investments in telecommunications infrastructure. As the State bid connectivity to large regional areas of schools and colleges, the telecommunications companies responded with new network technologies such as metropolitan optical Ethernet, multi-protocol label switching (MPLS), and Ethernet "clouds", which have provided benefits for other nonpublic entities.

The development of the K-20 education network has increased the number of distance education courses available to Nebraska students. Through interactive videoconferencing, Nebraska high schools and community colleges exchange over 600 courses per year (2013-14) and that number is expected to increase. World languages, mathematics, science, and dual credit courses are popular offerings leveraged by our rural students.

Network Nebraska is now represented as a compilation of three major sub-networks: The University of Nebraska Computing Services Network, State and County Government Network, and the K-20 Education Network. Each network has its own management staff, but takes advantage of co-location facilities, Internet and telecommunications contracts, and shared infrastructure wherever possible.

Due to advances in WAN Ethernet technology, Network Nebraska-Education is now able to reach almost every education entity in the State through five core aggregation points: Grand Island--College Park, Lincoln--Nebraska Hall, Scottsbluff-State Office Building, Omaha-1623 Farnam, and Omaha—Peter Kiewit Institute.

The development of the K-20 education sub-network has increased the number of customers served by Network Nebraska. Data and Internet customers currently include the three state colleges, all six community colleges, the University of Nebraska system, several private colleges, and more than 230 school districts under 17 different educational service units. The number of K-12 educational entities increased as the remaining K-12 districts in southeast Nebraska elected to participate in 2014. The

Nebraska K-20 Education sub-network is completely funded by Participation and Interregional Transport Fees from its 254 members.

Network Nebraska has also provided support and assistance to the Nebraska Statewide Telehealth Network. The Nebraska Statewide Telehealth Network connects nearly all of Nebraska's hospitals and public health departments in one of the country's most extensive telehealth networks.

Network Nebraska has been made possible through a cooperative effort of the Collaborative Aggregation Partnership (CAP). CAP was established by Governor Dave Heineman (who was at the time Lieutenant Governor and NITC Chair) and former University of Nebraska President L. Dennis Smith. CAP is composed of several operational entities: Office of the CIO, University of Nebraska, and Nebraska Educational Telecommunications with policy assistance from the Nebraska Department of Education, Public Service Commission, and the NITC.

Network Nebraska is not a state-owned network. Facilities and circuits are leased from private telecommunications providers in the state, allowing the State of Nebraska to act as an anchor tenant.

Community IT Planning and Development

The NITC and NITC Community Council, in partnership with the University of Nebraska, the Nebraska Public Service Commission, the Nebraska Department of Economic Development, and the AIM Institute, have developed a state broadband plan which describes the current broadband landscape and presents 10 recommendations to further broadband development in Nebraska. "Broadband in Nebraska: Current Landscape and Recommendations" was released for public comment on September 19, 2014. A revised plan integrating comments received was presented to the NITC on Oct. 28, 2014. The development of a state broadband plan is the culmination of broadband mapping and planning efforts funded by a grant from the National Telecommunications and Information Administration to the Nebraska Public Service Commission.

The plan includes the following findings and recommendations:

Economic Impact. Broadband is impacting Nebraska's economy in a number of ways[1], including:

- **Expanding Markets by Selling Online.** Over 60% of Nebraska businesses reported selling goods or services online.

- **Increasing Efficiencies and Reducing Costs.** Nebraska businesses reported cost

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[1] Strategic Networks Group. (Jan. 31, 2014). Nebraska broadband eSolutions benchmarking report. Retrieved from http://broadband.nebraska.gov
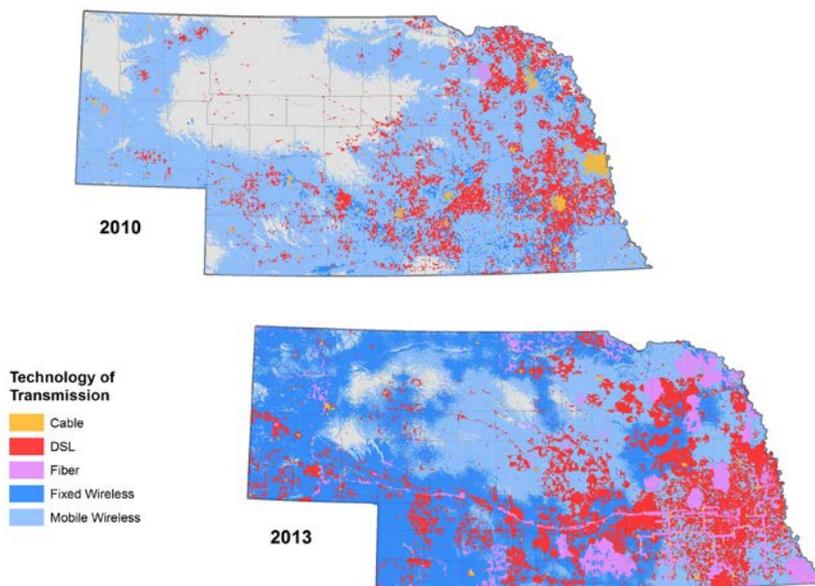
savings averaging 4% due to using the Internet.

- **Creating Jobs.** A 2013 survey of Nebraska businesses found that broadband access to the Internet is having a positive impact on jobs, with 364 respondents reporting a net increase of 654 jobs due to using the Internet.

- **Increasing Revenue.** Broadband access to the Internet is also having a positive impact on business revenue with typical respondents reporting 25 to 45 percent of revenue from the Internet.

National and international research links broadband availability with economic growth. However, broadband adoption appears to have a stronger economic impact than broadband availability, contributing to growth in household income, lower unemployment and other measures of economic success in non-metropolitan counties.[2]

Broadband Availability. Broadband provides high-speed access to applications such as the Internet. Broadband service is available to nearly all Nebraskans, with 99.5% of Nebraskans having access to service with download speeds of greater than 10 Mbps.[3] Nebraska ties for 12th on this measure.

Broadband availability in Nebraska continues to improve. The map on the right shows improvements in broadband coverage from 2010 to late 2013. Some areas of the state remain unserved, however.[4] Additional information on broadband availability in Nebraska can be found at broadbandmap.nebraska.gov.

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[2] Strategic Networks Group. (Jan. 31, 2014). Nebraska broadband eSolutions benchmarking report. Retrieved from http://broadband.nebraska.gov

[3] National Broadband Map (www.broadbandmap.gov) accessed August 1, 2014. Data from Dec. 31, 2013.

[4] Map created by Cullen Robbins, Nebraska Public Service Commission.

Mobile connections are becoming increasingly important to residents and businesses with over 80% of Nebraska businesses currently using smart phones.[5] Although mobile broadband data coverage is improving in Nebraska, mobile coverage in some areas of rural Nebraska is still a challenge. Mobile coverage limitations in rural areas of Nebraska may impact the adoption and utilization of some precision agriculture technologies which rely on mobile broadband services.

Broadband Adoption. Most households in Nebraska (82%) have broadband service. However, there are significant rural-urban differences with subscription rates of 90% in Lincoln and 87% in Omaha, compared to 72% to 77% in other regions of the state.[6]

Nearly all Nebraska businesses are utilizing broadband access to the Internet.   Internet applications relying on broadband networks are becoming increasingly important for agricultural producers. Most livestock producers use the Internet for market information, auctions, government and regulatory agency reporting, and farm business planning. Most grain producers use the Internet for market information, crop management, government and regulatory agency reporting, ROI calculators, farm business planning, and GPS information.[7]

Recommendations. The following recommendations emerged from discussions with stakeholders:

- Encourage investment in Nebraska's telecommunications infrastructure.

- Enhance the capacity of local communities to address broadband development.

- Encourage the development of a skilled IT workforce.

- Support innovation and entrepreneurship.

- Support the use of broadband technologies in businesses and agriculture.

- Support the development of libraries as community anchor institutions.

- Support the use of broadband in education and health care.

- Support the use of broadband by government and public safety entities.

- Support efforts to attract new residents and retain youth.

- Increase digital literacy and broadband access to the Internet.

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[5] Strategic Networks Group. (Jan. 31, 2014). Nebraska broadband eSolutions benchmarking report. Retrieved from http://broadband.nebraska.gov

[6] Vogt, R., Byers, A., Hancock, C., Narjes, C., & Terry, R. (April 2014). Internet connectivity and use in Nebraska: A follow up study. Retrieved from http://broadband.nebraska.gov

[7] Vogt, R., Narjes, C., Byers, A. & Hancock, C. (July 16, 2014). Technology use in agriculture. Cornhusker Economics. Retrieved from http://agecon.unl.edu/cornhuskereconomics

Additional Planning Activities. The planning component of the broadband mapping project (broadband.nebraska.gov) included a number of projects:

Surveys. A survey of Nebraska households was conducted in early 2014 by the University of Nebraska-Lincoln to learn more about broadband adoption in Nebraska. The University of Nebraska-Lincoln also partnered with Strategic Networks Group to survey of Nebraska businesses on their use of broadband technologies in 2014. Coaching on how to better utilize broadband technologies was made available to selected participants.

Broadband Conference. An annual broadband conference has been held since 2011. The most recent broadband conference was held Oct. 1-2 in Kearney with over 300 attendees.

Best Practice Videos. The University of Nebraska and the AIM Institute have developed a series of short videos highlighting how broadband is being utilized in Nebraska. The videos are available at http://Youtube.com/broadbandnebraska.

Regional Technology Planning. Regional groups have developed technology plans. The priorities identified in the regional plans were incorporated into the state broadband plan.

eHealth

On March 14, 2014 the Nebraska Information Technology Commission/Office of the State CIO successfully completed a four-year $6.8 million cooperative agreement from the U.S. Department of Health and Human Services' Office of the National Coordinator for Health IT. During the grant period, health information exchange through NeHII grew from 464 users in March 2010 to over 3,500 users in March 2014.

The NITC's eHealth Council was instrumental in developing the strategic plan which guided the implementation of the State Health Information Exchange Cooperative Agreement. The eHealth Council established the following vision which is included in Nebraska's Strategic eHealth Plan:

> *Stakeholders in Nebraska will cooperatively improve the quality and efficiency of patient-centered health care and population health through a statewide, seamless, integrated consumer-centered system of connected health information exchanges. Nebraska will build upon the investments made in the state's health information exchanges and other initiatives which promote the adoption of health IT.*

The plan leveraged the investments made in health information exchange, utilizing NeHII as the state's lead health information exchange and supporting the development of a separate behavioral health network, the Electronic Behavioral Health Information Network (eBHIN). Grant funding was also used to support the electronic submission of information to public health systems. The Nebraska Statewide Telehealth Network also

received support. Evaluation of the grant was conducted by a team of researchers at the University of Nebraska Medical Center.

Accomplishments. Accomplishments to date include:

1. NeHII, Nebraska's lead health information exchange, is one of the largest statewide health information exchanges in the country with over 2.9 million individuals in its Master Patient Index and 3,974 users as of Oct. 3, 2014. NeHII has grown considerably since the start of the State HIE Cooperative Agreement. In March 2010, NeHII had 1.5 million individuals in the Master Patient Index and 464 users. A 2013 survey of Nebraska healthcare providers found that 63% of providers currently using NeHII were satisfied. Accessing a comprehensive patient medication list was identified as the most important feature of the health information exchange.

2. Nebraska also has been a leader in addressing the exchange of behavioral health information. The Electronic Behavioral Health Information Network (eBHIN) went live with its health information exchange functionality in the summer of 2012. Although eBHIN sunset its health information exchange in August 2014, eBHIN has improved the capacity of behavioral health providers to exchange health information. Developments in the use of Direct secure messaging, behavioral health Clinical Document Architecture (CDA), and data segmentation should facilitate efforts to exchange behavioral health information in the future.

3. NeHII implemented an immunization gateway in 2011, enabling the exchange of immunization records between NeHII participants and the state immunization registry. The immunization gateway accepts messages from an EHR and sends the information to the Nebraska State Immunization Information System (NESIIS). The system receives the information, validates the format specifications, transmits the data to NESIIS, receives an acknowledgement from NESIIS and can query NESIIS for immunization information about a patient. This meets the requirement for Meaningful Use Stage 2 Core Objective 13 for eligible hospitals and Core Objective 15 for eligible providers. Regional West Physicians Clinic, York General Hospital and Boys Town are currently sending information. The third phase of the project will allow NeHII users to query NESIIS and save the immunization data available in NESIIS for a patient to the provider's EMR.

4. Legislation in 2011 authorized the Nebraska Department of Health and Human Services to work with NeHII to develop a Prescription Drug Monitoring Program utilizing NeHII's medication history functionality, making Nebraska the first state to incorporate PDMP functionality into an HIE. NeHII has worked with the Nebraska Medical Association to address physician concerns. Self-pay data from nine retail pharmacy chains and five mail order pharmacies was added. NeHII also has begun offering site licenses to all participating hospitals to address physician concerns about cost. NeHII has discussed breaking out the medication query functionality so that it could be offered as a stand alone function. This will be possible when Optum migrates to a new platform.

5. The use of e-prescribing in Nebraska has grown since 2010, with Nebraska ranking 17th in Surescripts' most recent ranking of states in e-prescribing. This is particularly noteworthy considering that in 2009 only 11% of physicians in Nebraska e-prescribed. Today approximately 90% of physicians in Nebraska are e-prescribing. Pharmacy participation in e-prescribing has also increased from 81% of Nebraska community pharmacies receiving e-prescriptions in January 2011 to 95% in February 2013.

6. Lab readiness has also improved. In December 2013, 62% of labs in Nebraska were sending electronic lab results in a structured format, up from just 20% in December 2011. Over a third of labs (35%) are sending electronic lab results using LOINC, up from 15% in 2011.

Nebraska State HIE Cooperative Agreement 2010-2014 Metrics

NeHII	March 2010	March 2014	% Change
Number of Clients			
• Number of Clients in the Master Patient Index	1,544,570	2,703,439	75%
• Total Patients That Have Opted Out	27,032	69,020	155%
• Total Patients Opting Back In	2,092	4,372	109%
Provider Information			
• Total Number of Users	464	3,590	674%
Hospital Information			
• Number of Nebraska Hospitals Participating	8	22	175%
• % of Nebraska Hospitals Participating	8%	23%	188%
• Percent of Nebraska Hospital Beds Covered	36%	52%	44%
Public Health Information			
• State Public Health Systems Connected to NeHII	0	1[8]	
• Local Health Departments Participating in NeHII	0	2	
Payers			
• Number of Payers Participating	1	2	100%
Total Number of Results Sent to Exchange			
• LAB	6,633,699	38,411,495	479%
• RAD	1,838,874	7,399,077	302%
• Transcription	947,739	16,623,562	1654%

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[8] In 2011, NeHI implemented the immunization gateway.

Public Safety Communications System

The Nebraska Statewide Radio System serves local, state and federal agencies, and public utilities across the state. The system was funded through a partnership between the state and Nebraska Public Power District to jointly own, manage and operate the system. State and local agencies are using the system and learning about the many new capabilities.

There are 54 towers owned by a variety of entities, including NPPD, the state, and local agencies that provide radio coverage across the state. Users of the system are able to communicate directly with other users across large geographic areas, and have the ability to communicate with many users at once.

Through the partnership with NPPD, the state has been able to share the cost of network infrastructure, towers, and upkeep of the system. A system user group represents all user agencies on the system, including NPPD, the State Patrol, Fire Marshal, Game and Parks, Corrections, Department of Roads and several local and federal agencies.

Benefits of the system include:

- Shared statewide communications infrastructure

- Interoperability for the State Patrol and other agencies

- Ability for local communications systems to interconnect

- Technology platform is scalable, expandable and upgradeable

- Partnership opportunities for other local, state and federal agencies

The Office of the CIO provides the operational support to public safety using the system. State agency partners in the project include the Nebraska State Patrol, the State Fire Marshal's Office, the Nebraska Game and Parks Commission, the Nebraska Emergency Management Agency, the Nebraska Departments of Agriculture, Correctional Services and Roads. Other partners include the Office of the Chief Information Officer, which provides technical support for the statewide radio network, and Nebraska Educational Telecommunications, which has provided access to many existing radio towers across the state.

During the past two years, much time has been spent on refining processes, developing standards, improving the methods of communication between the users and the system owners and expanding interoperability within the State of Nebraska. System acceptance of the Statewide Radio System was taken in September 2014.

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.

The initiative is 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 primary components of the Digital Education Initiative 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;

- Development of a statewide digital resource library so that any teacher or learner will be able to retrieve digital media for use in instructional and student projects;

- Synchronous videoconferencing interconnections between all schools and colleges;

- The means to coordinate and facilitate essential education opportunities for all students through a statewide student information system; and

- Regional Pre-K-20 education cooperatives that vertically articulate educational programs and opportunities.

Establishing a Digital Education environment 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 application of the 2010's. So much of what teachers, students, and administrators do today is tied to Internet-based information and communication. Nebraska has continued to make progress in the ratio of students per high speed, Internet-connected computer in the classroom. However, 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 are urged to work to achieve the goal of attaining 1:1 computer (or Internet-connected device) availability.

The benefits of the Digital Education Initiative would include:

- Greater technical capacity for schools and colleges to meet the increasing demands of a more diverse customer base;

- More equitable and affordable Internet access for Nebraska schools and colleges;

- A comprehensive Web-based approach to curriculum mapping and organization and automation of student assessment data gathering and depiction;

- The availability of rich, digital media to the desktop that is indexed to Nebraska standards, catalogued, and searchable by the educator or student;

- A more systematic approach to synchronous video distance learning that enables Nebraska schools and colleges to exchange more courses, staff development and training, and ad hoc learning opportunities.

Network Nebraska has recently undergone a significant upgrade process that began in July 2012. By moving to a high bandwidth, flexible IP network, participating education entities will be able to:

- Have more bandwidth for local and regional transport to accommodate present and future education technology applications;

- Take advantage of nationwide Internet2 routing and resources;

- Purchase some of the lowest Internet access pricing in the country;

- Participate in a statewide, standards-based IP videoconferencing system between all schools and colleges;

- Post their course offerings and unfilled curriculum needs to a statewide clearinghouse and scheduling system for all synchronous and asynchronous distance learning;

- Position themselves to develop new and exciting regional and statewide applications of digital content to serve all students and teachers.

The furthering of the Digital Education initiative and completion of the Digital Education action items requires the participation of many education-related entities. The Educational Service Unit Coordinating Council (ESUCC) has recently testified before the Legislature's Education Committee (LB 1103) to describe the future vision and feasibility of a statewide learning management and statewide content management system, which would greatly enhance Nebraska's eLearning system.

State Government Efficiency

The State of Nebraska is improving efficiency in state government through the development of standards and guidelines and the implementation of shared services.

Standards and Guidelines. In order to encourage interoperability and standardization, over 40 standards and guidelines have been adopted. Within the past two years, 10 new or revised standards and guidelines have been adopted, including:

- Web Domain Name Standard

- Information Security Policy

- Web Branding and Policy Consistency

- Active Directory; User Photographs

- Password Standard

- Geospatial Metadata Standard

- Elevation Acquisition using LiDAR Standards

- Imagery Standards

- Agency IT Plan Form

- Project Proposal Form

Shared Services. The NITC has supported the long-term effort to consolidate the purchase and operations of certain technology services through a shared services initiative. The initiative has been very successful in reducing costs and increasing efficiency. The NITC's State Government Council has played an important role in identifying the potential services which could be offered as a shared service. Over the past two years efforts have focused on the following shared services:

- Enterprise Maintenance / Purchase Agreements

- E-mail and Collaboration Services

- Business Continuity / Disaster Recovery

- Enterprise Content Management

- Interactive Voice Response

Nebraska Spatial Data Infrastructure

Recognizing the increasing importance of geospatial data to support the business needs of all levels of government, the NITC included Nebraska Spatial Data Infrastructure (NESDI) as a strategic initiative in the Statewide Technology Plan. This initiative promotes coordination, guides policy, provides guidance on data accuracy requirements, and strengthens data sharing through partnerships to ensure access to quality geospatial datasets for governmental business needs and the public.

Geospatial technologies incorporate geographic information systems (GIS), global positioning systems (GPS), remote sensing such as imagery and Light Detection and Ranging (LiDAR), and other geographic data and information systems. GIS is a tool to capture, store, manipulate, analyze, manage, and present all types of geographic data.

The objective of the NESDI is:

> **"**_To develop and foster an environment and infrastructure 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 and data 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._**"**

The major components of this initiative include:

1. Facilitating the creation, maintenance, analysis and publishing of quality **NESDI** data and information systems.

2. Encouraging data sharing and provide widespread access to data and services through NebraskaMAP.gov.

3. Developing and implementing NESDI layer standards and guidelines.

4. _Facilitating technical assistance and education outreach opportunities for furthering the adoption of the NESDI and geospatial applications._

5. _Achieving sustainable and efficient allocation of resources to support the implementation and wise governance of GIS services and geospatial data._

NESDI Framework Layer Assessment. The NESDI comprises of geospatial data layers that have multiple applications and are used by a vast majority of stakeholders. They are consistent with the Federal National Spatial Data Infrastructure (NSDI) "7 framework layers" and provide additional layers of particular importance to Nebraska stakeholders. The current priority layers for the state include imagery, elevation, street centerlines, point addressing, and land records.

> **NESDI Data Layers for Nebraska**
>
> - Survey and Geodetic control
> - Transportation (roads, rail, air, etc.)
> - Cadastre/parcels
> - Elevation
> - Aerial imagery
> - Hydrography
> - Political and administrative boundaries
> - Addresses
> - Soils
> - Groundwater features
> - Watershed boundaries
> - Land use/land cover

An overall inventory and assessment was completed on the twelve NESDI data layers, including the current status of each data layer in terms of accuracy or resolution, completeness of data and metadata, extent of data coverage, age of data, and identification of data stewards. The inclusion of metadata is a key requirement for these data layers.

Metadata standards (NITC 3-201 Geospatial Metadata) have been developed specific to the needs of Nebraska stakeholders while maintaining compliance with the metadata standards from the Federal Geographic Data Committee (FGDC). These standards have

recently been updated to include changes in ISO data standards endorsed by the FGDC. The metadata standards were presented to the NITC for approval on Oct. 28, 2014.

The following are other accomplishments for the priority data layers.

Survey and Geodetic Control. Survey and geodetic control need to be taken into consideration for good quality data to exist in the future for several of the NESDI framework layers—particularly if multiple data sets are used in combinations for analysis and decision making. Some of the State's current data sets were created for specific purposes with given budgets. As the use of geospatial data has grown, there are now other needs for the data. Some of these additional uses require a greater level of spatial accuracy.

An ad hoc group of state agencies and GIS Council members, led by the State Surveyor, began an inventory and assessment of this data. A report is currently being drafted that provides information about the current survey and geodetic control data based on various criteria for its use in the development of other NESDI framework layers. It provides recommendations on use and further development of survey and geodetic control data, education and training needs, and methods and linkages through data sharing to communicate and provide access to relevant data to users and stakeholders.

Elevation (LiDAR). This action item, led by the Elevation Working Group, facilitates the acquisition, maintenance, and sharing of a statewide elevation dataset by developing standards and specifications for LiDAR point clouds and derivative products. It further develops alternatives for systematic and cost-effective acquisition of these products and defines a program of stewardship for managing and publishing the data. A Request for Information (RFI) went out in April of this year for additional industry feedback.

Standards (NITC 3-203 Elevation Acquisition Using LiDAR) were presented to the NITC for approval on Oct. 28, 2014. These standards are intended for entities participating in collaborative efforts to acquire airborne LiDAR elevations that may contribute to a comprehensive statewide elevation dataset in Nebraska. The standards are derived from the U.S. Geological Survey (USGS) National Geospatial Program's (NGP) LiDAR Base Specification Version 1.0. In addition, the standard emphasizes particular requirements and needs for Nebraska that are not available in USGS standards and where additional clarity is needed. Information gathered from the NESDI inventory, RFI, and standards are currently being used in the development of a business plan.

Imagery. This action item establishes the Nebraska Statewide Imagery Program which is designed to provide plans for digitizing and acquisition standards and guidelines, enable data sharing, and complete statewide coverage for various levels of imagery products and services. A business plan is currently being drafted by members of the Imagery Working Group. A specifications document was initiated and was further modified into a standards document. The standards (NITC 3-204 Imagery) were presented to the NITC for approval on Oct. 28, 2014. These standards are designed for future statewide aerial imagery acquisition efforts that meet verified minimum horizontal accuracy requirements for a spatial resolution of 12 inch, preferably flown

during the "leaf-off" period for trees. The requirements from federal standards (i.e., National Emergency Number Association) are also driving the need for greater spatial accuracy of imagery in order to meet needs to develop and create street centerline and address points.

Land Records. This action item enables the integration of different local government land records information into a statewide dataset. Currently 95.8% of all parcels in Nebraska are digitized in some form. The Nebraska State Records Board has provided more than $924,485 in grant assistance to digitize and create geodatabases of the data. In 2013, five counties were awarded State Records Board grants totaling $117,065 for digitizing land parcel information. This leaves five counties without digitized land records.

An ad hoc group of members from the Land Records Working Group prepared implementation steps to begin gathering parcel data from counties. A common geodatabase model and workflow was developed to integrate all county parcel data so it can be used more efficiently in a multitude of state government applications. The State has been soliciting input from assessors to partner on this initiative since 2012 after this layer was deemed a priority layer in the statewide Geospatial Strategic Plan. A formal request for parcel data and shapefiles was sent to all county assessors in June, 2014. Only 44 counties responded to the request with fourteen of these counties actually providing some level of data. The GIS Council is inviting assessors to participate in the Land Records Working Group.

The Land Record Information and Mapping Standards (NITC 3-202) were adopted on January 27, 2006 and are currently being updated**.** These standards provide guidelines for public entities responsible for maintaining property parcel maps**.**

Street Centerline Address Database. This action item is designed to develop and maintain a statewide seamless street centerline and address referencing system used for various transportation, emergency management, public safety (ie, NG9-1-1), economic development and other related applications. A data model schema has been developed for required data to be used in street centerline and address databases. These specifications were incorporated into the development of standards (NITC 3-205 Street Centerline and NITC 3-206 Address).

These standards provide requirements necessary for the creation, development, delivery, and maintenance of a statewide Nebraska Street Centerline Database (NSCD) and Nebraska Address Database (NAD). Both standards have a direct correlation to one another. There are many applications that use street centerline and address point data. These standards will enable the data to be integrated not only with 9-1-1 but with existing applications through emergency management, public safety and other state government agencies. Address points support state agency needs for a central contact database, tax assessment, and geocoding services. The standards are compatible with the National Emergency Number Association (NENA) and Federal Geographic Data

Committee (FGDC) standards for NG9-1-1 and are backwards compatible to enhanced 9-1-1.

A statewide addressing database was purchased to fulfill current state government business needs. This will also assist the development of addressing points to be used in combination with the street centerline database.

NebraskaMAP.   NebraskaMAP (http://www.NebraskaMAP.gov) provides public access to geospatial data in Nebraska. NebraskaMAP currently provides more than 242 geospatial metadata files and access to server web mapping services for use in other state agency base map applications. Efforts are currently underway to enhance NebraskaMAP towards a multi-use enterprise platform by providing and sharing NESDI data either through direct download, API and REST services, or accessing through web and mobile services.

Several of the current geospatial data holdings for Nebraska have been inventoried and uploaded to the OCIO's SAN file server. This has provided an internal centralized secure and redundant environment for most of the state's geospatial data. Other network connections such as direct file share and SFTP access to the data were established for key staff supporting emergency management and public safety. Data through NebraskaMAP has provided support for legislative research as well as emergency and public safety response for recent natural disasters. Data and map viewer resources were made available for the 2013 South Platte flood and 2014 tornados to pertinent emergency response staff. Plans are currently underway to develop a front-end interface to begin sharing some of the data to the public.

E-Government

Nebraska has been recognized as a leader in e-government.   The 2014 Digital States Survey, conducted by the Center for Digital Government, awarded the State of Nebraska a letter grade in the "B" category. According to the report, that grade indicates:

> "These states are trending up. They show results in many survey categories, and their leaders use modernization to change entrenched practices to prepare for more sustainable operations. Incentives for collaboration are in place, and performance measures are used in key areas."

The State's Web portal, Nebraska.gov, was recognized by the Center for Digital Government as one of the top state Web portals in 2007, 2008, 2009, 2012 and 2014.

An annual e-government conference is held every November to showcase successful e-government projects and to keep both managers and IT staff informed on developments in e-government and technology. The conference is presented in partnership with *Government Technology* magazine.

Security and Business Resumption

Security. The State of Nebraska continues to make progress in securing information resources, reducing associated vulnerabilities, and updating policy. Over the course of the last two years, the NITC Security Architecture Work Group has worked with the State Government Council, the Technical Panel, and agencies in order to formulate new polices for emerging technologies and update existing policies. Third Party data hosting and storage has been a recent working subgroup topic. The group submitted NITC Policy 8-301 "Password Standard" to the Technical Panel for approval in 2013. Work has also been done trying to unify our approach to federal audits and to reduce the individual agency work along with providing a consistent and accurate response to audit requirements.

The OCIO has annually hosted the Nebraska Cyber Security conference. In previous years, sponsors have been used to reduce the fees and provide valuable training for the State, educational participants, and county workers. This year, through additional sponsors and the selection of presenters and keynote speakers with limited travel needs, conference costs were kept to a minimum, and participation continued to increase.

The NITC has also supported cyber security awareness efforts in conjunction with October's designation as Cyber Security Awareness month. Governor Heineman signed a proclamation on Oct. 8, 2014, declaring October as Nebraska Cyber Security Awareness month. The NITC/Office of the CIO sent brochures, posters and materials co-branded with the Multi-State Information and Analysis Center to over one-hundred State agencies, counties, and to the educational service units.

The Cyber Security workgroup portal continues to facilitate interaction and the sharing of information with Agency representatives. The portal contains a calendar of security related events, training opportunities (both free and paid), and current security news. The portal is also being used to increase interaction of the workgroup beyond monthly meetings of Agency representatives and to provide a conduit to continue business between scheduled meetings.

Presentations on security and awareness were provided to Agencies at the 2014 Nebraska Cyber Security Conference and at the 2014 Nebraska Digital Government Summit.

Business Resumption/Continuity of Operations. Recent efforts have been focused on business continuity management practices for improving our Continuity of Operations (COOP) planning and organizational resiliency. Accomplishments include:

- A revision of NITC standards requiring a disaster recovery plan has been drafted. The revision moves disaster recovery requirements from the security architecture standard to a proposed Business Continuity Planning Standard under General Provisions.

- Active interagency dependency planning for increased communication and coordination of planned maintenance events has been included in the OCIO's change management process.

- A $4.2 million Building Master Plan was developed which focuses on the resiliency of the facility to support the current mission of the OCIO and the Agencies supported by the OCIO. Upgrades to the legacy electrical and mechanical services will be the main focus along with consolidating space for more energy efficient systems.

- The Enterprise Mass Notification Service as a software contract was replaced with a new product which allows for improved rapid emergency notification with many new features such as mobile application, GIS integration and social media output. Several new state agencies, regional groups, and individual counties have signed up for this service.

- Bids are currently being taken for the replacement and upgrade to the data center's air handling equipment. The current units are original to the building and are now beyond their design life of reliable critical service.

Improved Coordination and Assistance to Policymakers

The statewide technology plan and other activities of the commission have improved coordination and assisted policymakers.

The statewide technology plan annually prepared by the NITC has been an effective vehicle for identifying key projects, building stakeholder support, coordinating efforts, and communicating with policy makers.

The current plan was prepared in 2012 and updated in 2013. The plan focuses on nine strategic initiatives:

- Network Nebraska

- Community IT Planning and Development

- eHealth

- Public Safety Communications System

- Digital Education

- State Government Efficiency

- E-Government

- Security and Business Resumption

- Nebraska Spatial Data Infrastructure

These initiatives were identified by the NITC and its advisory groups. These groups include representatives of a wide array of entities, including health care providers, education, local government, the private sector, and state agencies. This process has proven to be effective in building stakeholder support. These initiatives are collaborative projects involving many entities both inside and outside of state government. The statewide technology plan provides a method of communicating the importance of these initiatives, progress made, and plans for further implementation. The plan is sent to members of the Legislature and the Governor. The primary role of the NITC in these initiatives has been facilitation and coordination. The success of these initiatives testifies to the NITC's effectiveness at facilitation, coordination, and communication with policymakers.

Chief Information Officer Brenda L. Decker has met with senators at their request and has testified at hearings and given briefings to legislative committees five times over the past two years.

The Chief Information Officer and the staff or advisory groups of the NITC are occasionally called upon to provide analysis or review of technology initiatives, explanation of state-specific information technology data, and other requests as needed by the Governor and Legislature.

Policy and Funding Recommendations

Recommendations made by the commission to the Governor and Legislature have assisted policy and funding decisions.

Section 86-516 (8) directs the NITC to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel," as part of the biennial budget process. Prior to budget submissions, agencies submit IT plans which are reviewed by the Office of the CIO and the NITC Technical Panel. This information provides a context in which to better review IT projects submitted by agencies. Technical reviews of information technology projects are conducted by a team of reviewers. With input from the NITC State Government and Education Councils, the Technical Panel further reviews the project proposals. Using information from the review process, the NITC makes funding recommendations to the Governor and the Legislature by November 15 of each even-numbered year. The review process and prioritization of new IT projects provides policy makers with information about the objectives, justification, technical impact, costs, and risks of proposed systems. The agency comprehensive information technology plans and the project proposal forms for budget requests of new IT spending provide policy makers with far more information in a consistent format than before. The Technical Panel also conducts voluntary review of IT projects and projects awarded funding through the NITC Community Technology Fund and Government Technology Fund.

In 2014, six IT budget requests for new projects were reviewed. Recommendations on these requests were submitted to the Governor and the Legislature.

Policies, Standards, Guidelines, and Architectures

Policies, standards, guidelines, and architectures have been developed and observed.

In order to encourage interoperability and standardization, over 40 standards and guidelines have been adopted. The development of standards and guidelines has helped the State of Nebraska achieve greater interoperability and efficiency. The process encourages public input from all involved constituents. Most standards are developed by a work group consisting of stakeholders from state government agencies and other interested entities. The Technical Panel recommends approval of standards and guidelines to the NITC. All standards are approved at open NITC meetings after a 30-day comment period.

Within the past two years, 10 new or revised standards and guidelines have been adopted, including:

- Web Domain Name Standard

- Information Security Policy

- Web Branding and Policy Consistency

- Active Directory; User Photographs

- Password Standard

- Geospatial Metadata Standard

- Elevation Acquisition using LiDAR Standards

- Imagery Standards

- Agency IT Plan Form

- Project Proposal Form

Information Technology Clearinghouse

An information technology clearinghouse has been established, maintained, and utilized of Nebraska's information technology infrastructure and of activities taking place in the state involving information technology, and the information flow between and among individuals and organizations has been facilitated as a result of the information technology clearinghouse.

The NITC's website (www.nitc.nebraska.gov) serves as an information technology clearinghouse, providing access to information including resources for communities, health care providers, educational entities, the GIS community, and state government. The NITC website is the official repository for agenda, minutes, and documents for the NITC, its councils and their workgroups. The section on "Standards and Guidelines" provides access to all technical standards and guidelines adopted by the NITC or under development. The eHealth Council also publishes an electronic newsletter which is available from the NITC website. The NITC website also includes a link to NebraskaMAP (http://www.NebraskaMAP.gov) which provides public access to geospatial data in Nebraska. Additionally, NITC staff members handle requests for information on technology projects and development and facilitate the exchange of information.

Input and Involvement of Interested Parties

Input and involvement of all interested parties has been encouraged and facilitated.

The NITC engages in collaborative processes, involving five advisory councils, the Technical Panel, and numerous workgroups and subcommittees. Additionally information is publicly distributed and public input is encouraged through the NITC's website and through e-mail distribution. NITC staff also present information on NITC initiatives at conferences, workshops, and meetings across the state.   The list of NITC Commissioners, council members, and Technical Panel members is included in this document.

Active work groups and subcommittees over the past two years include:

- State Government Council—Enterprise Content Management Shared Service Work Group

- State Government Council— Open Data Work Group

- State Government Council— Security Architecture Work Group

- State Government Council—Webmasters Work Group

- Technical Panel—Accessibility of Information Technology Work Group

- Technical Panel—Learning Management System Standards Work Group

- Technical Panel—Intergovernmental Data Communications Work Group

- Community Council—Broadband Planning Steering Committee

- Community Council—Economic Development Work Group for Broadband Plan

- Community Council—Agriculture Work Group for Broadband Plan

- Community Council—Broadband Availability and Affordability Work Group for Broadband Plan

- Community Council—Digital Literacy and Adoption Work Group for Broadband Plan

- eHealth Council—E-Prescribing Work Group

- eHealth Council—eHealth Implementation Work Group

- GIS Council—Street Centerline-Address Database Work Group

- GIS Council—Imagery Work Group

- GIS Council—Land Records Work Group

- GIS Council—Elevation Work Group

- GIS Council—Geospatial Data Sharing and Web Services Work Group

- GIS Council—Strategic Planning Work Group

- Education Council—Marketing Task Group

- Education Council—Services Task Group

- Education Council—Emerging Technologies Task Group

- Education Council—Network Nebraska Governance Task Group

- Education Council—Network Nebraska Advisory Group

Infrastructure Innovation, Improvement and Coordination

Long-term infrastructure innovation, improvement, and coordination has been planned for, facilitated, and achieved with minimal barriers and impediments.

The NITC is addressing long-term infrastructure innovation, improvement, and coordination through Network Nebraska and related initiatives.

Network Nebraska has aggregated statewide telecommunications to a common infrastructure, generated considerable cost savings to public entities, and decreased the unit cost of Internet service by leveraging the consolidated demand of all participating entities. Since September 2003, Network Nebraska has grown to serve the data and Internet service needs of all state agencies with outstate circuits, the University of Nebraska's four campuses, all six of the state's community colleges, all three state colleges, and more than 230 school districts under 17 different educational service units. The number of customers is expected to continue growing due to the favorable Internet rates and the high quality of service offered by Network Nebraska. Additionally, 140 public libraries are 2010 recipients of grants from the federal Broadband Technology Opportunities Program and Bill and Melinda Gates Foundation to upgrade their infrastructure and public computer centers. The Network Nebraska K-20 sub-network is one possible alternative for them to interconnect with each other and purchase less expensive Internet.

Network Nebraska has been made possible through a cooperative effort of the State of Nebraska Office of the CIO, University of Nebraska, and Nebraska Educational Telecommunications, with policy assistance from the Nebraska Department of Education, Public Service Commission, and the NITC. This partnership is known as the Collaborative Aggregation Partnership (CAP).

The first phase of the multipurpose backbone became operational in September 2003, serving Omaha, Lincoln, and Grand Island with the second phase following in February 2004 extending service to Norfolk, Kearney, North Platte, and the Panhandle. In October 2006, the original circuit from Scottsbluff to Grand Island to Lincoln which served as a pilot for Network Nebraska was upgraded, providing Scottsbluff with the same capabilities as Omaha and Lincoln. The benefits of this upgrade included the ability to incrementally increase bandwidth and cost savings of up to 30%. More recently, the Office of the CIO rebid the statewide Internet contract for Network Nebraska to negotiate a 50% lower Internet rate to begin July 1, 2014 out of Lincoln's Nebraska Hall location. This will benefit all current and new Network Nebraska schools, ESUs and colleges that purchase their Internet service from the statewide master contract. Network Nebraska has also stimulated investments in telecommunications infrastructure.

Network Nebraska is not a state-owned network. Facilities are leased from private telecommunications providers in the state. In this way, the state hopes to stimulate private investment into Nebraska's telecommunications infrastructure.

Additionally, the NITC has facilitated the coordination and development of a statewide telehealth network. The Nebraska Statewide Telehealth Network (NSTN) 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.   Members of CAP have provided technical assistance in the development of the Nebraska Statewide Telehealth Network. The telehealth network will also be able to obtain telecommunications services at the same rate negotiated by the Chief Information Officer for Network Nebraska.

Awards and Recognition

- The State of Nebraska Office of the CIO received the 2013 Cross Boundary Collaboration and Partnerships Award by the National Association of State Chief Information Officers (NASCIO) for its work with the Network Nebraska-Education Project.

- Governor Heineman was awarded the 2012 State Technology Innovator Award from the National Association of State Chief Information Officers.

- The State of Nebraska's Web portal, Nebraska.gov, ranked in the top 10 in the Center for Digital Government's "Best of the Web" awards for 2007, 2008 and, 2009, 2012, and 2014.

- Nebraska received a grade of "B" in the Center for Digital Government's Digital States Survey in 2014.

- Brenda Decker finished serving her one-year term as the President of the NASCIO organization in October 2013.

- The Office of the CIO and State Purchasing Bureau received the State Administrative Services "Pioneering Spirit" Award for competitively bidding and contracting over 150 telecommunications circuits for education entities totaling over $20 million over 4 years.

Fun Facts

- 6 advisory groups (Community Council, Education Council, eHealth Council, GIS Council, State Government Council, and Technical Panel) have assisted the NITC.

- Over 40 standards and guidelines have been adopted by the NITC.

- 25 work groups have been active during the past two years.

- 99.5% of Nebraskans having access to broadband services of greater than 10 Mbps down. Nebraska is tied for 12th on this measure.[9]

- 82% of Nebraska households have broadband service.[10]

- Over 60% of Nebraska businesses sell goods or services online.[11]

- Over 2.9 million patients from Nebraska and neighboring states have information in NeHII's master patient index.

- Nearly 4,000 physicians and health care providers are participating in NeHII.

- 274 education entities are currently served by Network Nebraska.

- The proportional reduction of the unit price of Internet since the State and University began cooperatively bidding the State's Internet (2002-2012) is 99%.

- The proportional increase in length and bandwidth capacity of the statewide education backbone, from 2011 to 2012 is 100%.

- Nebraska K-12 entities pay $. 39/Mbps/month for Internet access after E-rate discounts are applied.

- The Nebraska Statewide Radio System utilizes 51 towers owned by a variety of entities, including NPPD, the state, and local agencies to provide radio coverage across the state.

- The enterprise e-mail system has over 18,000 mailboxes and receives an average of 500,000 e-mails per weekday. Approximately 85% of e-mails from external senders are stopped by filtering to eliminate spam, virus, and other threats.

- Network Nebraska-Education daily serves over 375,000 students and staff with Internet and distance learning courses.

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[9] Data from broadbandmap.gov.   Data is from Dec. 31, 2013 broadband mapping submission.
[10]Vogt, R., Byers, A., Hancock, C., Narjes, C., & Terry, R. (April 2014). Internet connectivity and use in Nebraska: A follow up study. Retrieved from http://broadband.nebraska.gov
[11] Strategic Networks Group. (Jan. 31, 2014). Nebraska broadband eSolutions benchmarking report. Retrieved from http://broadband.nebraska.gov

Advisory Group Members

Technical Panel	Community Council	Education Council
Walter Weir, Chair, University of Nebraska Computer Services Network **Michael Winkle**, Nebraska Educational Telecommunications **Brenda Decker**, Office of the CIO **Christy Horn**, University of Nebraska Central Administration **Kirk Langer**, Lincoln Public Schools	**Rod Armstrong, Co-Chair**, AIM, Lincoln **Phil Green, Co-Chair**, City of Blair **Pam Adams, American Broadband** **Chris Anderson, City of Central City** **Jay Anderson**, NebraskaLink **Brett Baker**, City of Seward **Randy Bretz**, TEDxLincoln Curator **Jessica Chamberlain**, Norfolk Public Library **Norene Fitzgerald**, Community Developer (retired) **Steve Fosselman**, Grand Island Public Library **Dave Hahn,** Nebraska Information Network **Connie Hancock**, University of Nebraska-Lincoln Extension **Darla Heggem**, Twin Cities Development **Steve Henderson**, City of Lincoln **Jacob Knutson**, Department of Economic Development **David Lofdahl,** IT Consultant **Monica Lueking-Crowe**, Furnas Harlan Partnership **Marion McDermott**, Kearney Area Chamber of Commerce **Megan McGown**, City of Sidney **Joan Modrell**, Department of Labor **Holly Woldt**, Nebraska Library Commission	**Derek Bierman,** Northeast Community College **Burke Brown**, District OR-1 Palmyra/Bennet **Mike Carpenter,** Doane College **Matt Chrisman**, Mitchell Public Schools **Brenda Decker,** Office of the CIO, Nebraska Department of Administrative Services **John Dunning**, Wayne State College **Brent Gaswick**, Nebraska Department of Education **Stephen Hamersky**, Daniel J. Gross Catholic High School **Dr. Dan Hoesing**, Schuyler Community Schools **Yvette Holly**, University of Nebraska Medical Center **Steve Hotovy**, Nebraska State College System **Dr. Mike Lucas**, York Public Schools **Greg Maschman**, Nebraska Wesleyan University **Gary Needham**, ESU 9-Hastings **Mary Niemiec**, University of Nebraska **Darren Oestmann**, Johnson Brock Public Schools **Dr. Carna Pfeil**, Coordinating Commission for Postsecondary Education **Randy Schmailzl**, Metropolitan Community College **Gary Targoff**, Nebraska Educational Telecommunications Commission **Dr. Bob Uhing,** ESU 1

eHealth Council	GIS Council	State Government Council
Dr. Delane Wycoff, Co-Chair, Pathology Services, PC	**Josh Lear**, Chair, Department of Natural Resources	**Brenda Decker, Chair,** Office of the CIO
Marsha Morien, Co-Chair, UNMC College of Public Health	**Bill Wehling,** Vice-Chair, Department of Roads	**John Albin**, Department of Labor
Wende Baker, Electronic Behavioral Health Information Network	**Chad Boshart**, Nebraska Emergency Management Agency	**Beverlee Bornemeier**, Office of the CIO, Enterprise Computing Services
Kevin Borcher, Nebraska Methodist Health System	**Karis Bowen**, Department of Health and Human Services	**Dennis Burling**, Department of Environmental Quality
Kevin Conway, Nebraska Hospital Association	**Lash Chaffin,** League of Nebraska Municipalities	**Mike Calvert**, Legislative Fiscal Office
Susan Courtney, Blue Cross Blue Shield	**Timothy Cielocha**, Nebraska Public Power District	**Kimberly Conroy**, Department of Revenue
Joel Dougherty, OneWorld Community Health Centers	**Dick Clark**, Governor's Policy Research Office	**Darrell Fisher**, Crime Commission
Senator Annette Dubas, Nebraska Legislature	**Steve Cobb**, State Surveyor	**Pat Flanagan**, Private Sector
Marty Fattig, Nemaha County Hospital	**Nancy Cyr**, Clerk of the Legislature	**John Gale**, Secretary of State of Nebraska
Congressman Jeff Fortenberry, represented by Marie Woodhead	**Eric Herbert**, Sarpy County GIS	**Brent Gaswick**, Department of Education
Kimberly Galt, Creighton University School of Pharmacy and Health Professions	**Les Howard**, Conservation and Survey Division – UNL	**Rex Gittins**, Department of Natural Resources
Harold Krueger, Western Nebraska Health Information Exchange and Chadron Community Hospital	**Brittny King**, Dodge County Assessor's Office	**Dorest Harvey**, Private Sector
Sharon Medcalf, UNMC College of Public Health	**Cullen Robbins**, Public Service Commission	**Eric Henrichsen**, Department of Health and Human Services
Kay Oestmann, Southeast District Health Department	**James Langtry**, US Geological Survey	**Rhonda Lahm**, Department of Motor Vehicles
John Roberts, Nebraska Rural Health Association	**Pat Larson,** Grand Island Public Schools	**Glenn Morton**, Workers' Compensation Court
Jenifer Roberts-Johnson, Nebraska Department of Health and Human Services, Division of Public Health	**Jeff McReynolds**, City of Lincoln, Lancaster County	**Gerry Oligmueller**, DAS—Budget Division
Greg Schieke, CIMRO of Nebraska	**John Miyoshi**, Lower Platte North Natural Resources District	**Ray Pont**, Department of Banking and Finance
Max Thacker, UNMC	**James W. Ohmberger,** Office of the CIO	**Col. David Sankey**, Nebraska State Patrol
Patrick Werner, Department of Correctional Services	**Kyle Otte**, Nebraska State Patrol	**Jayne Scofield**, Office of the CIO, Network Services
	Sudhir Ponnappan, Nebraska Game and Parks Commission	**Robin Spindler**, Department of Correctional Services
	Mike Preston, Nebraska Geospatial Professional Association	**Corey Steel**, Supreme Court
	Mike Schonlau, Omaha/Douglas County	**Rod Wagner**, Library Commission
	Ruth Sorensen, Department of Revenue	**Bill Wehling**, Department of Roads
	Tom Lamberson, Department of Environmental Quality	Department of Administrative Services
	Todd Whitfield, Lamp, Rynearson and Associates	Governor's Policy Research Office
	Greg Youell, Metropolitan Area Planning Agency	

Appendix

Policy Objectives and Review Criteria

Section 86-518 directs the NITC to submit a progress report to the Governor and Legislature by November 15 of each even-numbered year. This report is offered in fulfillment of that requirement.

Section 86-524 further directs the Appropriations Committee and Transportation and Telecommunications Committee to conduct a joint review of the activities of the NITC by the end of the calendar year of every even-numbered year. Section 86-524 also provides three objectives and a list of criteria for evaluating progress.   This report is intended to provide information to assist the Legislature in conducting its review.

Policy Objectives

Section 86-524 states: "It shall be the policy of the state to:

1. Use information technology in education, communities, including health care and economic development, and every level of government service to improve economic opportunities and quality of life for all Nebraskans regardless of location or income;

2. Stimulate the demand to encourage and enable long-term infrastructure innovation and improvement; and

3. Organize technology planning in new ways to aggregate demand, reduce costs, and create support networks; encourage collaboration between communities of interest; and encourage competition among technology and service providers."

Review Criteria

Section 86-524 states: "In the review, the committees shall determine the extent to which:

1. The vision has been realized and short-term and long-term strategies have been articulated and employed;

2. The statewide technology plan and other activities of the commission have improved coordination and assisted policymakers;

3. An information technology clearinghouse has been established, maintained, and utilized of Nebraska's information technology infrastructure and of activities taking place in the state involving information technology, and the information flow between and among individuals and organizations has been facilitated as a result of the information technology clearinghouse;

4. Policies, standards, guidelines, and architectures have been developed and observed;

5. Recommendations made by the commission to the Governor and Legislature have assisted policy and funding decisions;

6. Input and involvement of all interested parties has been encouraged and facilitated; and

7. Long-term infrastructure innovation, improvement, and coordination has been planned for, facilitated, and achieved with minimal barriers and impediments."