

AGENDA
NEBRASKA INFORMATION TECHNOLOGY COMMISSION
Varner Hall - Board Room
3835 Holdrege Street
Lincoln, Nebraska
Thursday, March 8, 2018
10:00 a.m.

10:00 a.m. 1. Roll call; meeting notice; Open Meetings Act information.

2. Public comment.

3. **Approval of the November 9, 2017 meeting minutes.*** (*Attachment 3*)

4. Reports from the advisory councils and Technical Panel.

10:05 a.m.

a. Technical Panel report – Kirk Langer.

i. **Technical standards and guidelines. Request for Waiver 18-01; Dept. of Labor appeal of denial by the Technical Panel.***
(*Attachment 4-a-i*)

ii. Enterprise project status dashboard report. (*Attachment 4-a-ii*)

10:35 a.m.

b. eHealth Council report – Anne Byers. (*Attachment 4-b*)

10:50 a.m.

c. Community Council report – Anne Byers. (*Attachment 4-c*)

i. **Approval of council membership nomination.***

11:05 a.m.

d. Education Council report – Tom Rolfes.

i. **Approval of council membership nomination.*** (*Attachment 4-d-i*)

ii. Network Nebraska and digital education updates.

11:20 a.m.

e. GIS Council report – John Watermolen. (*Attachment 4-e*)

i. OCIO-GIO team.

11:35 a.m.

f. State Government Council report – Ed. Toner.

i. CIO Roadmap update.

11:50 a.m. 5. **Approval of Statewide Technology Plan.*** (*Attachment 5*)

12:00 p.m. 6. Adjourn.

*** Indicates an action item.**

The Commission will attempt to adhere to the sequence of the published agenda, but reserves the right to adjust the order and timing of items and may elect to take action on any of the items listed.

Meeting notice was posted to the [NITC website](#) and the [Nebraska Public Meeting Calendar](#) on February 23, 2018. The agenda was posted to the NITC website on March 5, 2018.

Nebraska Open Meetings Act

Future Meeting Dates:

- July 12, 2018
- November 8, 2018
- March 14, 2019

Attachment 3

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Thursday, November 9, 2017, 10:00 a.m. CT
Nebraska Educational Telecommunications Center
1800 North 33rd Street, Lincoln, Nebraska

Videoconference Sites:

Vocational Rehabilitation, 505 Broadway, Suite 500, Scottsbluff, Nebraska
Vocational Rehabilitation, 1212 West Benjamin Avenue, Norfolk, Nebraska

MINUTES

MEMBERS PRESENT:

Ed Toner, Chief Information Officer, Chair
Senator Bruce Bostelman, Nebraska Legislature
Shane Greckel, Greckel Farms, LLC
Dr. Terry Haack, Bennington Public Schools
Dorest Harvey, US Strategic Command/J84
Randy Meininger, City of Scottsbluff
Dan Spray, Precision Technologies, Inc.
Walter Weir, University of Nebraska
Gary Warren, Hamilton Telecommunications

MEMBERS ABSENT: Dan Shundoff, Intellicom

CALL TO ORDER; ROLL CALL; MEETING NOTICE; AND OPEN MEETINGS ACT INFORMATION

The Chair, Ed Toner, called the meeting to order at 10:02 a.m. Roll call was taken and found nine members present to achieve a quorum. The meeting notice was posted to the NITC website and the Nebraska Public Meeting Calendar on July 27, 2017. The agenda was posted to the NITC website on November 3, 2017. The Nebraska Open Meetings Act was posted on the west wall of the room.

PUBLIC COMMENT

There was no public comment.

APPROVE MINUTES OF THE MEETING ON JULY 12, 2017

Commissioner Harvey moved to approve the July 12, 2017 meeting minutes. Commissioner Haack seconded. Roll call vote: Toner-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Meininger-Abstain, Spray-Yes, Warren-Yes, and Weir-Yes. Results: Yes-7, No-0, Abstained-1. Motion carried.

REPORTS FROM THE ADVISORY COUNCILS AND TECHNICAL PANEL

EHEALTH COUNCIL REPORT

Anne Byers, eHealth IT Manager

ONC Grant Update--Anne Byers and Deb Bass. Nebraska's Advance Interoperable Health IT Services to Support Health Information Exchange grant from the Office of the National Coordinator for Health IT ended on July 26, 2017. The grant supported the adoption of health information exchange through NeHII in 47 facilities and health systems—including 21 Critical Access Hospitals (CAHs)—in 31 counties in Nebraska and in Montgomery County, Iowa. Through the grant, the number of hospitals and providers sharing data with NeHII increased from 28 to 53. Over 700 providers and clinical staff were added as users. New functionality implemented included population health analytics, the use of C-CDA exchange to provide information to NeHII, and an HIE to HIE gateway with the Missouri Health Exchange. Two Critical Access Hospitals were also successfully implemented to share syndromic surveillance data with the State's syndromic surveillance system.

Here are highlights:

- NeHII added 22 facilities as data sharing participants, including 15 Critical Access Hospitals (CAHs) and 5 clinics, through HL7 data exchange during the grant period. Prior to the grant, 9 CAHs out of 64 CAHs in Nebraska and 4 in Western Iowa were participating in NeHII. Over 600 users have been added at these facilities. Grant Target: 19 facilities
- NeHII added 2 independent ambulatory clinics and a provider network to NeHII through C-CDA data sharing. Prior to the grant, no NeHII facilities were exchanging data through C-CDA exchange. Grant Target: 5 facilities
- NeHII implemented Direct Secure messaging in 15 facilities with an emphasis on long-term care and post-acute care facilities. Grant Target: 50 facilities
- Team members from UNMC worked to increase the utilization and integration of HIE into the provider workflow by creating two integrated communities, developing use case-based training modules, conducting structured interviews of the recipients of Admission Discharge and Transfer (ADT) alerts, and conducting a quality improvement study of NeHII users.
- NeHII increased the ability to exchange data between HIEs by implementing 1 HIE to HIE gateway. NeHII currently has no HIE to HIE gateways in place. Grant Target: 5 Gateways
- NeHII increased interoperability by connecting 2 Critical Access Hospitals to the State of Nebraska's syndromic surveillance system. Prior to the grant, one Critical Access Hospital was submitting data to the syndromic surveillance system through NeHII. Grant Target: 8 Hospitals
- NeHII increased interoperability by implementing population health analytics for six facilities. Prior to the grant, population health analytics was not available through NeHII at baseline. Grant Target: 5 facilities
- NeHII and UNMC team members worked to increase interoperability by developing demonstration projects which integrated HIE data for comparative effectiveness research.

Ms. Bass stated that the partnership with University of Nebraska Medical Center was greatly appreciated. Mr. Toner has had a good experience with his own medical doctors, as evidence of the improved system. The Nebraska Health Information Initiative (NeHII) is now connected to eight other states health information systems. A zip code event notification has been implemented which can send a summary of care to a medical facility. NeHII is providing the following services:

- Health Information Exchange
- Qualified Clinical Data Registry (QCDR)
- Transforming Clinical Practice Initiative
- Quality Payment Program (QPP) and (Merit-based Incentive Payment System (MIPS) Alignment and Success
- Prescription Drug Monitoring
- Population Health Analytics

Ms. Byers and Ms. Bass entertained questions from the Commission.

Approve Statewide Technology Plan action items. Ms. Byers presented the eHealth Council's action items for approval. There were no questions.

Commissioner Haack moved approval of the eHealth Council's action items for the Statewide Technology Plan. Commissioner Weir seconded. Roll call vote: Haack-Yes, Harvey-Yes, Meininger-Yes, Spray-Yes, Warren-Yes, Weir-Yes, Toner-Yes, and Greckel-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

COMMUNITY COUNCIL REPORT

Anne Byers, Community IT and eHealth Manager

Approve Council Membership Nomination. The Community Council has an opening for a representative of the Public Service Commission (PSC). The PSC has nominated Commissioner Mary Ridder to replace Jerry Vap on the Community Council.

Commissioner Warren moved to approve the nomination of Mary Ridder to serve on the Community Council. Commissioner Greckel seconded. Roll call vote: Spray-Yes, Meininger-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, Toner-Yes, Weir-Yes, and Warren-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

Broadband Update. Approximately 135 individuals attended the Nebraska Broadband Today Conference on October 26 at the Marriott Cornhusker in Lincoln. The Broadband 101 and 102 sessions were recorded and are being edited.

Both Anne Byers (Community Council) and Commissioner Greckel were invited to serve on the PSC Broadband Task Force. The NITC Commissioners were forwarded the five questions posed the task force. The Community Council discussed the following five questions posed by the Broadband Task Force. The responses were shared with the Broadband Task Force on October 10.

1. Should there be a Nebraska-specific definition of broadband? Should it be based on minimum speeds or some other measurement?

The Council did not make a recommendation on this question. The Council needed more information on how the definition would be used, how it would be adjusted, etc. in order to make an informed recommendation.

2. Should Nebraska formally adopt a policy goal of ensuring ubiquitous broadband availability, regardless of cost?

The Council felt that Nebraska should adopt a policy goal of ensuring ubiquitous broadband availability, but that cost should be a consideration.

3. Should there be technology preferences for the means by which broadband availability is deployed?

The Council did not recommend establishing a technology preference. The Council recognized that while fiber offers the best performance, it may not be cost-effective to deploy fiber in all areas. Wireless technologies may be the most cost-effective method of deploying broadband in some areas. Since wireless technologies require fiber to the tower, small cell or other transmitting device, consideration should be given to getting fiber further out.

4. Should the State of Nebraska maintain restrictions on the provision of broadband services by political subdivisions of the state? In the alternative, should exception be allowed that would enable the formation and operation of public-private partnerships that enable broadband deployment?

Council members supported maintaining restrictions on the provision of broadband services by political subdivisions of the state. Council members were very supportive of private-public partnerships. The City of Lincoln provides a good model for public-private partnerships. Public power may be a potential partner.

5. Are existing cost recovery mechanisms adequate to ensure that all Nebraskans will have access to broadband services that are reasonably comparable in cost and service quality?

Council members felt that the PSC and those in the industry would be better able to answer this question. Council members felt that if existing cost recovery mechanisms were adequate to ensure that all Nebraskans will have access to broadband services that are reasonably comparable in cost and service quality, we probably would not be having these conversations.

LR 176 Interim Study to Examine the Provision of Broadband Telecommunications Services in the State. Hearings will be held:

- November 28, 2017 1:30 PM McCook Community College, 1205 E 3rd St., McCook, NE
- November 30, 2017 1:30 PM City Council Chambers, 1702 31st St., Central City, NE
- December 1, 2017 1:00 PM Room 1113, State Capitol, Lincoln, NE

Ms. Byers presented information showing the status of the goals included in the broadband plan.

Nebraska Broadband Goals

Measure	Baseline	Most Recent	2020 Target	On Track
Subscription to broadband service by households in Nebraska	82% <i>(2014, University of Nebraska Survey)</i>	78% <i>(2015, ACS, included phone access)</i> U.S.: 76.7% <i>(2015, ACS, included phone access)</i>	Over 90%	 <i>If we include mobile access and had University of Nebraska data, we are probably close to meeting this.</i>
Subscription to broadband service by households in nonmetropolitan Nebraska	73.6% <i>(2014, University of Nebraska Survey)</i>	82% <i>(2016, Rural Poll-University of Nebraska)</i> Note: Another 6% had only a cell phone data plan	85%	 <i>If we include mobile access, we have already met this</i>
% of households with broadband service of at least 25 Mbps down available	74.9% <i>(Dec. 2013 Form 477 data, broadbandmap.gov)</i>	83% <i>(2016 Form 477 data, PSC)</i> U.S.: 89% <i>(U.S. 2016 Form 477 Data, US Telecom)</i>	90%	 <i>We are making progress, but still have a ways to go.</i>
% of households with broadband service of 1 gbps down available	11.5% <i>(Dec. 2013 Form 477 data, broadbandmap.gov)</i>	49.7 % <i>(2016 Form 477 data, @100 Mbps, PSC)</i> U.S.: 68% <i>(U.S. 2016 Form 477 Data, US Telecom)</i>	25%	 <i>If we assume that areas with 100 Mbps available are also capable of 1 Gbps, we have met this.</i>

Commissioners expressed concerns about broadband availability and connectivity in rural parts of Nebraska. The increasing availability of broadband at 100 Mbps or 1 Gbps in Omaha, Lincoln, and some other areas of Nebraska is increasing the divide between those with very fast broadband available and those without broadband at all, and those with broadband availability at much slower speeds. The last mile issue was also discussed, as well as the need to update maps to determine what fiber is available in the state.

Approve Statewide Technology Plan Action Items. Ms. Byers presented the Community Council action plans for approval by the NITC.

Commissioners Haack made a motion to direct the Community Council to develop an action item to develop a statewide broadband activities plan with the goal of increasing the speed, availability and affordability to residential, commercial, and agricultural customers. Commissioner Greckel seconded the motion. Roll call vote: Meininger-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, Toner-Yes, Weir-Yes, Warren-Yes, and Spray-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

Commissioner Spray moved to approve the Community Council's action items as presented. Commissioner Haack seconded. Roll call vote: Meininger-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, Toner-Yes, Weir-Yes, Warren-Yes, and Spray-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

EDUCATION COUNCIL REPORT

Tom Rolfes, Education IT Manager

Mr. Rolfes reported that the Education Council last met on October 20, and unanimously voted to recommend for the NITC's consideration, the Network Nebraska and Digital Education action items. He then shared some of the events and activities that staff have been involved that relate to, or support the Statewide Technology Plan's Strategic Initiatives of Digital Education and Network Nebraska.

The Collaborative Aggregation Partnership (CAP) and the Network Nebraska Advisory Group (NNAG) both met on November 8, and discussed operational topics affecting Network Nebraska. Among them, three State RFPs will be released soon, one dealing with Omaha Internet access, one bidding for a couple dozen Wide Area Network (WAN) circuits to reach the Network Nebraska backbone, and thirdly, an RFP to extend the statewide backbone to northeast Nebraska.

In addition, Mr. Rolfes reported that the USDA Rural Utilities Services grant that was submitted by the OCIO for distance learning that included 16 nonprofit content providers and 13 high poverty schools will probably not get funded this year. The OCIO also partnered with the Nebraska Library Commission on an Institute for Museum and Library Services (IMLS) grant for early 2018 that would incentivize schools and libraries to work together for faster Internet and better technical support.

Nebraska data reveals that only about one-third of our public libraries apply for any E-rate and only 4% have applied for E-rate funding (\$4.3 million) for Wi-Fi upgrades that may expire in the year 2020. In addition, over 200 of the 270 public libraries have only 12Mbps download speeds or less. These are many of the same rural libraries who have several cars sitting out in their parking lots after hours because students and their parents are attempting to access the only source of public Internet in the community. This is a striking example of the "homework gap" that exists in rural and urban areas, where 10-15% of the students go home each night to no Internet, many of whom are carrying taxpayer funded devices.

Approve Statewide Technology Plan Action Items. Mr. Rolfes handed out the most recent action item status report from the Education Council and provided a brief overview of the Digital Education and Network Nebraska action item changes, and offered to respond to questions from the Commissioners. There were no questions.

Commissioner Harvey moved to approve the Education Council's Network Nebraska and Digital Education action items for the Statewide Technology Plan. Commissioner Haack seconded. Roll call vote: Spray-Yes, Warren-Yes, Weir-Yes, Toner-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, and Meininger-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

GIS COUNCIL REPORT

John Watermolen, State GIS Coordinator

Approve Council Membership Nominations. The council has several memberships up for renewal. Some memberships have expired.

- Federal Agency Representative
 - James Langtry. Mr. Langtry has held the position since 2007; National Map Liaison@DOI/US Geographical Survey; previously GIS Manager @ Lancaster County Engineering Department; member of the Mid America GIS Consortium and served as Chair and Board Member; and participates in similar boards in Kansas and Iowa as the Federal Representative.
- At-Large Members
 - Michael Schonlau. Mr. Schonlau is the Douglas County GIS Coordinator and is currently an at-large member.
 - Michael Preston. Mr. Preston is the Omaha GIS Manager@Velosys and previously served on the Council.
- County (NACO nominated) Representatives

- Jennifer Myers. Ms. Meyers is from Palmer and is the Administrator/GIS@ Merrick County Assessor's Office; NACO Planning and Zoning Affiliate President 2010-2016; NACO Institute of Excellence Graduate; served on OJJDP Train the Trainers for Disproportionate Minority Contact, NE Crime Commission Grant Reviewer, etc.
- Danny Pitman. Mr. Pitman is from Papillion and is the Sarpy County Assessor. Past NACO Board Member; Past President of NE Assessor's Association; Past President of Southeast District Assessor's Association; served in the U.S. Navy; elected Sarpy County Assessor in 1999, Licensed Real Estate Appraiser

Commissioner Weir moved to approve the GIS Council's membership nominations. Commissioner Harvey seconded. Roll call vote: Toner-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Meininger-Yes, Spray-Yes, Warren-Yes, and Weir-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

GIS Consolidation and Integration Update. OCIO and ESRI: We have been building the infrastructure and architecture to be able to support the agencies. We are working on an agreement with ESRI to provide us higher level technical support for our GIS Ecosystem. We have consolidated three agencies' server licenses to OCIO via the ESRI-GIS License Consolidation. Any agencies that are new to using GIS and wanting the software, the OCIO is providing the licenses to them from the OCIO account as part of a cost rate. We have developed a cost recovery rate and have been sharing with the various agencies for feedback and sustainability.

Department of Transportation (DOT) Consolidation and Integration. This is an ongoing process. The OCIO has met with all the divisions at DOT and have an understanding of their data needs and workflows. We are at the point of starting to migrate data and review the licensing needs of the agency. DOT hired a GIS manager to help them organize and migrate to the Enterprise GIS Ecosystem.

Department of Natural Resources (DNR). The OCIO GIS team is starting the GIS consolidation process with DNR. Several meetings have occurred. They have completed their data inventory and have recently discussed the next steps in consolidation and to address any concerns.

OCIO Geospatial/GIS Enterprise Public Service Commission (PSC) Agreement. The agreement has been extended. Work has begun with PSC on the next phase of the data collection and repository needs as NG911 progresses. PSC has made the data from the repository available to the public.

Mr. Toner commended Mr. Watermolen on his progress with GIS and the OCIO's consolidation efforts.

Approve Statewide Technology Plan Action Items. At the GIS Council meeting last week, the Council voted to approve the action items "as is" and to have the work groups meet to further review and revise. One of the items of discussion was the cost of imagery. An alternative is Google imagery which does not have leaf off or leaf on but is available at 1/3 of the OCIO's costs but it does not meet the state's standards. In addition to further review of the action items, the council decided to review the GIS standards as well.

Commissioner Greckel moved to approve the GIS Council's action items for the Statewide Technology Plan. Commissioner Harvey seconded. Roll call vote: Spray-Yes, Meininger-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, Toner-Yes, Weir-Yes, and Warren-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

TECHNICAL PANEL REPORT

Walter Weir, Chair

Approve Proposal 17-03, relating to state government web pages. The Technical Panel received Proposal 17-03 from the State Government Council. The proposal amends section 4-201; removes the requirements relating to a header brand graphic; revises the footer requirements and adopts as guidelines; and repeals the original section.

Commissioner Warren moved to approve Proposal 17-03 relating to state government web pages. Commissioner Haack seconded. Roll call vote: Haack-Yes, Harvey-Yes, Meininger-Yes, Spray-Yes, Warren-Yes, Weir-Yes, Toner-Yes, and Greckel-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

Enterprise Project Status Dashboard Report. Commissioners received the report in their meeting materials. At the last Technical Panel meeting concerns were expressed regarding two of the Enterprise Projects: Enterprise Resource Management Consolidation Project, Department of Administrative Services and the Nebraska State Accountability (NeSA) project.

Enterprise Resource Management Consolidation Project, Department of Administrative Services. This project's goal is to migrate five current disparate IT systems individually supporting human resources and benefits management, employee recruiting and development, payroll and financial functions, and budget planning to a cloud-based single enterprise platform. The Technical Panel concerns relate to: Number of systems to be replaced; the existing multiple interfaces; existing hardware and software issues, and disaster recovery.

The Commission advised the panel to have continued discussions.

Nebraska State Accountability (NeSA), Department of Education. When the project began, school districts were experiencing connectivity issues during testing. The project is now with a different vendor, NWEA. DRC was the former vendor that was located out of state and so was the server array. The Technical Panel would like to see server hardware be located within the state, if possible. After speaking with some school administrators, there seems to be fewer testing errors in the larger districts.

Medicaid Management Information Systems Replacement and the Medicaid Eligibility Projects. The concerns for both these projects are that the risks and issues are tied together and there are a lack of resources and knowledge of the systems. In addition, the old platforms must continue to run while the new is under development. This could take up to 10 years to transition.

Commissioner Toner recognized Commissioner Weir for serving as Technical Panel Chair, and for his assistance since becoming CIO. Commissioner Weir will be retiring from his current position in December but will be teaching at the Raikes Center.

STATE GOVERNMENT COUNCIL REPORT

Ed Toner, Chair

The Office of the CIO has hired 40 interns from Southeast Community College and the University of Nebraska for a two-year appointment. Approximately 24 of them have become full-time employees.

Approve Council Charter Amendments. At their last meeting, the council recommended approval of the amendments to the council charter.

Commissioner Haack moved to approve the State Government Council charter amendments. Commissioner Spray seconded. Roll call vote: Warren-Yes, Weir-Yes, Toner-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Meininger-Yes, Spray-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

Approve Statewide Technology Plan Action Items. Mr. Becker reported that the State Government Council members have aligned their action items with the CIO's road map. The action items were also voted on at the last council meeting, for the Commission's consideration for inclusion in the Statewide Technology Plan.

Commissioner Harvey moved to approve the State Government Council action items. Commissioner Greckel seconded. Roll call vote: Weir-Yes, Warren-Yes, Toner-Yes, Greckel-Yes,

Haack-Yes, Harvey-Yes, Meininger-Yes, and Spray-Yes. Results: Yes-8, No-0, Abstained-0. Motion carried.

PRESENTATION: BROADBAND UPDATE

Cullen Robbins, Public Service Commission

Mr. Robbins shared updated maps from the state broadband map (broadbandmap.nebraska.gov) which showed how broadband availability has improved since 2010. He also shared a series of maps showing which areas of the state currently have broadband service at 25 Mbps down/3 Mbps up, areas which are eligible for CAF-II support, areas eligible for A-CAM support, and areas in which the PSC has provided support for broadband service. He also showed a composite map with all of these areas. The areas not shaded on the composite map indicate those areas of the state that are most likely to remain underserved. Mr. Robbins also briefed Commissioners on the status of the broadband task force organized by PSC Commissioner Mary Ridder and provided an update on the PSC's docket (NUSF 100) to modernize the contribution method of the Nebraska Universal Service Fund. Mr. Robbins entertained questions from Commissioners.

ADJOURNMENT

Commissioner Weir moved to adjourned. Commissioner Haack seconded. All were in favor. Motion carried.

The meeting was adjourned at 12:53 p.m.

Meeting minutes were taken by Lori Lopez Urdiales and reviewed by the NITC IT Managers.

**State of Nebraska
Nebraska Information Technology Commission
Technical Standards and Guidelines**

Request for Waiver 18-01

Contents.

1. Request for Waiver from the Dept. of Labor
2. Excerpt from Draft Technical Panel Minutes for February 13, 2018
3. NITC 5-101: Enterprise Content Management System for State Agencies
4. NITC 1-103: Waiver Policy

NEBRASKA

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DEPARTMENT OF LABOR



Pete Ricketts, Governor

February 2, 2018

TO: Members of the Nebraska Information Technology Commission and Technical Panel

FROM: John H. Albin, Commissioner
Nebraska Department of Labor
john.albin@nebraska.gov
402-471-9912

RE: Request for Waiver

The Nebraska Department of Labor (NDOL) requests a Waiver from compliance with NITC 5-101: Enterprise Content Management System for State Agencies on a limited basis for certain programs funded through the US Department of Labor Employment and Training Administration (ETA). NDOL does not seek a waiver for any other program or agency function.

Even prior to the implementation of NITC 5-101 in April 2012, NDOL was an active and supportive participant in the enterprise solution, signing the Services Agreement for ECM Applications on January 26, 2011. As one of the early adopters of the technology solution, NDOL has worked with OnBase and OCIO to develop applications for the management of content and automation of business processes through workflow. Applications were developed for almost all departments within NDOL and are either stand-alone OnBase applications or integrate with our systems. NDOL also migrated thousands of documents in PaperVision to OnBase. The OnBase solution moved NDOL forward, digitizing documents and automating processes. Table I shows the department, program, and system integration for NDOL applications. Table II provides information on the expenditures made by NDOL in support of the enterprise solution.

In 2016, NDOL presented a proposal to NITC for a new Information Technology system for UI Tax and Benefits. The project, included in the Report to the Governor and Legislature dated November 15, 2016, was recommended as a Tier 1 project. Implementation of the new UI Tax and Benefits system is underway. The new UI Tax and Benefits system will be added to the existing Employment & Training (E&T) application for employment and reemployment programs on NEworks so all workforce programs for employment, training, reemployment, and unemployment are on a single platform. All of the programs described above are funded solely by ETA. NEworks is a fully-managed COTS product provided by Geographic Solutions, Inc. (GSI). The core system is called Virtual One Stop (VOS), the reemployment module is called Reemployment Exchange (REX), and the proposed UI module is called Geographic Solutions Unemployment System (GUS).

John H. Albin, Commissioner
Department of Labor
550 S. 16th Street
P.O. Box 94600
Lincoln, Nebraska 68509
dol.nebraska.gov

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Re: Request for Waiver

NDOL contracted with GSI in July 2017 to add UI Benefits and Tax onto the existing NEworks applications. The UI project was kicked off in August 2017. The UI Benefits phase will go into production in April 2018 and UI Tax will be prior to December 2020.

The advantages of the project were discussed in detail with NITC:

- All existing GSI contracts with varied contract end dates were consolidated into a single contract. Additional 5% discounts were negotiated, saving \$48,034/year. The GUS module was added into the contract, it was negotiated that the REX module would be included at no cost once UI Benefits went live, saving an additional \$494,825/year.
- The solution is fully managed and includes all application development, support, and hardware and software maintenance. It is fully redundant and does not require NDOL to manage a separate DR site.
- The UI program will save over \$3M per year in infrastructure and IT staff costs.
- The UI program applications will be on NEworks replacing multiple complex systems (BPS, TMS, UIConnect), integrations, hardware and software components, and providing a single solution on one platform for all workforce programs.
- Jobseekers, claimants and employers already use NEworks. Adding the UI Benefits and Tax modules will provide a one-stop solution.

NDOL requests a Waiver from compliance with NITC 5-101 for the programs supported by the GSI system because the GSI system includes a document management program in its base system *at no additional cost* to the purchaser. The document management system:

- Captures and stores all content.
- Converts content and system data into required program and USDOL forms.
- Stores forms where they should logically be presented within the application.
- Presents documents and images to the public and staff within the application.
- Facilitates search, retrieval, uploading, and scanning of documents.
- Securely associates the document with a claimant or employer.
- Retains documents according to NDOL retention schedules.
- Incorporates workflows.
- Includes all infrastructure, storage, development and maintenance.
- Allows staff to retrieve documents without logging into another system.
- Allows documents to be shared between programs within the same application.
- Provides significant savings to the E&T and UI programs when funding is decreasing.

Understanding that Table II includes costs for the initial development of the applications, NDOL estimates that the E&T and UI programs will save \$143,634 per year for current applications. This estimate is based on an average of FY 2016-17 and FY 2017-18 YTD expenditures and does not include estimates for development required for enhancements. If the waiver is not granted, NDOL will be in the position of paying \$143,634 to

Members of the Nebraska Information Technology Commission
and Technical Panel
February 2, 2018
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Re: Request for Waiver

continue using the enterprise system when it could receive the same services and benefits from the GSI document system at no additional cost.

NDOL requests a waiver for the E&T and UI programs on the GSI supported Neworks platform only. Documents currently in OnBase for E&T and UI will be retained and cycled through until they can be deleted per retention schedules. NDOL understands that this may require timers to be built into the applications, and applications may require ongoing support until such time. NDOL will continue to participate in the enterprise solution for applications listed in Table III.

NDOL feels it has demonstrated good cause and requests that the waiver be approved by the Nebraska Information Technology Commission and Technical Panel. We request that the waiver cover any document management requirements for programs utilizing the Neworks system and that there be no end date, unless requested by NDOL. The UI component of the waiver will start April 2019 for Benefits and before December 2020 for Tax.

Thank you for your consideration.

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Attachments (Tables I-III)

pc: Matt Miltenberger

Re: Request for Waiver

Table I – NDOL Applications

Department	Program	System Integration or OnBase
Employment & Training	WIOA	NEworks (Geographic Solutions VOS)
	Wagner-Peyser	NEworks (Geographic Solutions VOS)
	NERes	NEworks (Geographic Solutions VOS)
	Rapid Response	OnBase
	Worker Training	OnBase
	Worker Opportunity Tax Credit	OnBase
Unemployment Insurance	Batch/Adjudication	Benefit Payment System (BPS)
	Benefit Payment Control Unit	BPS
	Benefit Accuracy Measurement	BPS
	Short Term Compensation	BPS
	Re-employment Portal	NEworks (Geographic Solutions REX)
	Tax	Tax Management System (TMS), UIConnect
	Treasury	BPS
General Counsel	Appeals Tribunal	BPS and TMS
Safety	Elevators	OnBase
	Boilers	OnBase
Administrative Services	Access Request Process (ARP)	OnBase
	Variable Data Intelligent PostScript Printware (VIPP)	BPS, TMS, UIConnect
	Human Resources	OnBase

Re: Request for Waiver

Table II – Expenditures for Professional Services and Enterprise Participation Fees

Department	Program	Professional Services*
Employment & Training	WIOA	\$62,332.50
	Wagner-Peyser	Included in WIOA
	NERes	\$170.00
	Rapid Response	\$29,640.25
	Worker Training	\$2,988.50
	Worker Opportunity Tax Credit	\$84,461.50
Unemployment Insurance	Batch/Adjudication	\$565,748.00
	Benefit Payment Control Unit	\$10,783.75
	Benefit Accuracy Measurement	\$3,424.75
	Re-employment Portal	\$9,866.00
	Short Term Compensation	\$8,479.00
	Tax	\$20,259.25
	Treasury	\$3,772.25
General Counsel	Appeals Tribunal	\$627,845.25
Safety	Elevators	\$104,806.00
	Boilers	\$2,356.75
Administrative Services	Access Request Process (ARP)	\$5,047.25
	Variable Data Intelligent PostScript Printware (VIPP)	\$6,417.25
	Human Resources	\$13,227.00
	Agency Support	\$4,517.50
Subtotal		\$1,566,142.75
		Enterprise Participation Fee
Subtotal	Life to Date	\$535,654.06
Total		\$2,101,796.81

* The above figures are Life to Date through January 31, 2018 and do not include costs for NDOL staff or contractor services used to develop requirements for or support applications. NDOL currently has 1 FTE IT Application Developer, Sr. providing support.

Re: Request for Waiver

Table III – ECM Enterprise Applications Not Included in Waiver

Department	Program	System Integration or OnBase
Employment & Training	Rapid Response	OnBase
	Worker Training	OnBase
	Worker Opportunity Tax Credit	OnBase
Safety	Elevators	OnBase
	Boilers	OnBase
Administrative Services	Access Request Process (ARP)	OnBase; enhancement project in process
	Human Resources	OnBase

EXCERPT FROM DRAFT TECHNICAL PANEL MINUTES FOR FEBRUARY 13, 2018

TECHNICAL STANDARDS AND GUIDELINES; REQUEST FOR WAIVER

Request for Waiver 18-01, Department of Labor

John Albin and Terri Slone

The Nebraska Department of Labor (NDOL) requests a waiver from compliance with NITC 5-101: Enterprise Content Management System for State Agencies. NDOL has contracted for an information technology system provided by Geographic Solutions, Inc. (GSI) which includes multiple modules. This request is limited to the system provided by GSI. NDOL does not seek a waiver for any other program or agency function. The GSI system includes a document management program in its base system at no additional cost to the purchaser. NDOL estimates an annual savings of \$143,634 if the waiver is granted.

Members had questions relating to the following: accessing the data; storage costs; annual license fee; and security issues. Members discussed similar requests by other agencies and the purpose of the standard. Mr. Toner noted that this requirement was known prior to the signing of the contract and that would have been the appropriate time to seek a waiver.

Mr. Winkle moved to deny the request for waiver. Roll call vote: Langer-No, Askren-Yes, Winkle-Yes, and Toner-Yes. Results: Yes-3, No-1, Abstained-0. Motion carried.

NITC 5-101: Enterprise Content Management System for State Agencies

Category: Groupware Architecture

Applicability: Standard for all State government agencies, excluding higher education

History: Adopted on April 11, 2012.

1. Standard

1.1 State agencies managing content and creating workflow as described in Section 2 shall use the Enterprise Content Management System (ECM) that is provided through the Office of Chief Information Officer (OCIO).

1.2 Agencies must consider, through consultation with the OCIO, using the ECM's E-Forms software for any new electronic forms applications.

2. Managing content and creating workflow includes the following

- Capturing paper documents through the use of scanners and storing them in electronic form;
- Capturing all type of content (audio, video, e-faxes, emails, MS Office documents, etc) and storing them in electronic form;
- Electronic searching and retrieval of captured content;
- Automating records retention and archiving;
- Automating business processes through workflow;
- Reducing and/or eliminating paper document storage.

3. Purpose

The purpose of this standard is to provide, to the extent possible, a single technical solution for State agencies:

- Capturing all types of content and storing content electronically;
- Converting and minimizing the number of paper documents the State maintains;
- Facilitate searching and retrieval of electronic documents;
- Retain and dispose of electronic documents based on established document retention policies;
- Improve efficiency and accuracy of exchanging information; and
- Unify document management in a single system to take advantage of economies of scale.

4. Exception

This standard does not apply to systems already in use by an agency, unless:

- The agency intends to buy significant upgrades;
- The agency intends to buy a significant amount of new modules; or

- The agency intends to do a significant amount of custom development

For guidance on these points, contact the OCIO.

5. Definitions

Documents: The State currently utilizes a great deal of paper-based documents. These documents are generated internally from both manual and automated processes. Paper documents also come from external businesses and citizens. Additionally, each paper document is read by a person to determine its purpose, what information it contains, what it is associated with and what should be done with it.

Indexing is a process of extracting the key content of the document and storing that information with the electronic version of the document. The purpose of the index information is to facilitate searching and retrieval of the document and facilitate automating processes using workflow in an agency. The index information can also be used for securing the document as well as to associate multiple documents together.

The ECM will consume paper documents by either using scanners and/or electronic document uploads. The documents can be indexed by automated means using Optical Character Recognition (OCR), Intelligent Character Recognition (ICR) and/or bar codes. The ECM facilitates both automated and manual indexing.

Processes (Workflow): For those paper documents that are processed manually, (i.e. from one desk to another, one agency to another, and are dependent on individual organizational skill sets to insure documents are not lost, processed timely, processed accurately and filed correctly) can be greatly improved with automated workflow. Even automated processes that were previous built with little or no integration to other processes can be improved and enhanced as well.

The ECM supplies a framework to allow agencies to easily create flexible automated workflows that can utilize documents or work as independent processes. These automated workflows readily integrate with existing processes.

NITC 1-103: Waiver Policy

Category: General Provisions

Applicability: General applicability

History: Adopted on March 4, 2008.

1. Purpose

Some agencies may have special circumstances or requirements that justify non-compliance with a standard issued by the NITC. This document authorizes the Technical Panel to issue waivers relating to the requirements contained in any of the NITC Standards and Guidelines documents and establishes the procedures for the submission and review of waiver requests.

2. Policy

Upon a determination of good cause shown, the Technical Panel may grant a waiver from any requirement contained in any NITC Standards and Guidelines document. Section 3 establishes the procedures for the submission and review of waiver requests.

3. Waiver Process

3.1 Submitting a Request for Waiver

Any agency may apply for a waiver by submitting a Request for Waiver.

The Request for Waiver should include the following information:

- Agency name
- Name, title, and contact information for the agency contact person regarding the request
- Title of the NITC Standards and Guidelines document at issue
- Description of the problem or issue
- Description of the agency's preferred solution, including a listing of the specific requirement(s) for which a waiver is requested
- Any additional information and justification showing good cause for the requested waiver

Requests should be submitted via email: ocio.nitc@nebraska.gov

3.2 Technical Panel Review and Decision

The Technical Panel will consider the Request for Waiver at their next regularly scheduled public meeting. The panel may request additional information from the submitting agency and may table their decision for one meeting. After reviewing the request, and any comments received, the panel may approve the request, approve the request with conditions, or deny the request.

3.3 Appeal to the NITC

A denial or an approval with conditions by the Technical Panel may be appealed to the NITC.

Project Storyboard: Medicaid Eligibility & Enrollment System

Project Manager	Spaulding, Don	Status Report Date	2/5/18
Project Type		Status	Approved
Stage	Build	Progress	Started
Total Estimated Cost	\$57,741,564.00	Estimate to Complete	36.89%
Actual Cost To Date	\$21,301,064.00		

Project Dates		
	Start	Finish
Plan	10/28/14	2/2/19
Baseline	10/28/14	12/31/18
Days Late	33	33

Status Report Indicators		
Overall		
Schedule		
Scope		
Cost and Effort		

Project Description

The Affordable Care Act (ACA) included numerous provisions with significant information systems impacts. One of the requirements was to change how Medicaid Eligibility was determined and implement the changes effective 10/1/2014. As a result of the lack of time available to implement a long-term solution, the Department of Health and Human Services implemented a short-term solution in the current environment to meet initial due dates and requirements. This solution did not meet all Federal technical requirements for enhanced Federal funding but was approved on the assumption that a long-term solution would be procured. An RFP was developed and procurement has been completed with Wipro selected as the Systems Integrator for the IBM/Curam software.

Key Accomplishments

The master client index (MCI) implementation system documentation has been submitted to our federal partners for review. A data center audit by the Social Security Administration (SSA) is planned for the week of 3/26/18.

The Omaha dedicated and secured network connections between the state and Wipro data centers has been established.

The first draft of the maintenance and operations documents have been created and are under review. The incident management process will include direct interaction between the state and Wipro support teams.

Development has transitioned from MAGI (Modified Adjusted Gross Income) to non-MAGI coding and rules construction.

The State's train the trainer staff has been on boarded to the project. The team is executing the projects training plan.

Status Report Update

The project team is currently working to implement the master client index (MCI) function April 15th 2018. This will be a key component implementation as a step to the full NTRAC implementation first quarter of 2019. The MCI will sync person demographic information between the new NTRAC system and legacy NFOCUS system. The project team has moved into the MCI testing phase.

- Initiation and Planning - 100%
- Requirements - 100%
- Architecture - 100%
- Design Phase - 95%
- Data Conversion & Migration – Design - 95%
- MCI Development - 100%
- MCI Data Conversion - 100%
- MCI – testing - 10%
- NTRAC Data Conversion & Migration – Dev & Test - 37%
- NTRAC Development - 54%
- NTRAC Testing - 20%
- Training preparation - 23%
- Implementation - 0%

Upcoming Activities

The project will be launching the testing program for NTRAC that will cover the depth and breadth of testing needed to deliver a quality solution.

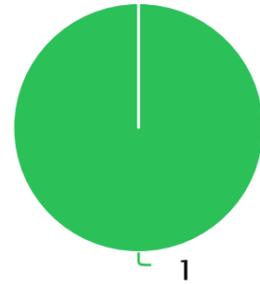
A team of project resources will be creating testing scripts which will include alternate paths and error processing.

The delivery of the NTRAC production environment is scheduled for 3/1/18.

Go live preparations for the MCI. The team will be creating a go live playbook and sequence of go live events.

Issues by Priority

Risks by Priority



Current Risks

More Risks...

Risk	Probability	Impact	Priority	Status	Target Resolution	Owner
Project RAID Board (Risks, Actions, Issues, Decisions)	◆	◆	◆	Open	2/28/19	Znamenacek, Brad

Project Storyboard: Medicaid Management Information System Replacement Project (MMIS)

Project Manager	Spaulding, Don	Status Report Date	2/1/18
Project Type		Status	Approved
Stage	Design	Progress	Started
Total Estimated Cost	\$113,600,000.00	Estimate to Complete	7.97%
Actual Cost To Date	\$9,055,656.00		

Project Dates		
	Start	Finish
Plan	7/1/14	9/30/22
Baseline	7/1/14	9/30/22
Days Late	0	0

Status Report Indicators		
Overall		
Schedule		
Scope		
Cost and Effort		

Project Description

Nebraska's current Medicaid Management Information System (MMIS) has supported DHHS Medicaid operations since 1977. Medicaid is an ever-changing environment where program updates occur quickly. The need for access to data is increasing and technological enhancements are necessary to keep pace with program changes. Recognizing the need to implement new technology, and with the support of the Legislature, DHHS embarked on the planning phase for replacement of MMIS functionality.

- Key Accomplishments**
- Completed the DAS contract posting.
 - Commenced readiness planning and project preparation activities with Deloitte Consulting LLP.
 - Finalized and submitted Truven contract extension OAPD to CMS.
 - Conducted Deloitte DMA Key Staff Replacement on-site interviews.
 - Completed DMA Deliverable Review and Approval Process.
 - Deloitte SharePoint and Project Management Center Tools were installed and configured.
 - MECL R1 Checklist Requirements broadened evidence population is in progress. Medicaid Enterprise Certification Lifecycle (MECL) R1 is targeted for March 2018.
 - Published DMA Newsletter, Issue 3.
 - Prepared and submitted Q2 Legislative Report.
 - Completed the Medicaid Management Information System (MMIS) Report Index discovery.
 - Completed Encounter Processing current state discovery.
 - Readiness activities including facilities, resource and risk planning are ongoing.
 - Conducted the Feb 1, 2018 Kickoff and started the Design, Development, and Implementation (DDI) activities.

Status Report Update

The Data Management and Analytics (DMA) RFP posted an Intent to Award to Optum Government Solutions, Inc. on December 30, 2016. Due to an upheld protest, a revised Intent to Award contract to Deloitte Consulting LLP was posted on February 1, 2017. All protests have been closed.

The Implementation Advanced Planning Document – Update (IAPD-U) and contract were formally approved by the Centers for Medicare & Medicaid Services (CMS) on 9/21/17. The DMA Proof of Need was finalized and submitted to the Department of Administrative Services (DAS) on 11/02/2017. The contract package was finalized and signatures obtained on 11/03/2017. The DMA Proof of Need certificate of receipt was received from DAS and filed with the Legislative Fiscal Office on 12/01/2017. The DMA contract was fully executed on 12/5/2017 and DAS has posted the contract.

Readiness planning commenced with Deloitte during the month of January. Project planning and discussion on the expectations of the early DDI deliverables, facilities, and preparation for the formal kick-off were major activities.

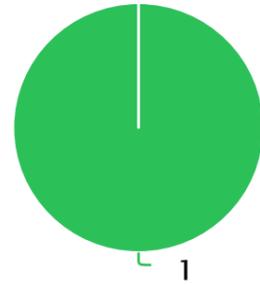
The formal kick-off for the project DDI was conducted on 2/1/18 with the project team members and stakeholders. The project implementation timeframe of June 2019 extends beyond the original contract end date for the existing Truven contract. The existing Truven contract is being extended to mitigate the schedule risk and Truven Operational Advanced Planning Document (OAPD) was finalized and submitted to CMS in late December 2017.

Federally required certification activities for CMS Medicaid Enterprise Certification Lifecycle (MECL) Project Initiation Milestone Review 1 (R1) continue including CMS required artifact preparation and checklist evidence population.

- Upcoming Activities**
- Prepare for requirements validation activities with Deloitte Consulting LLP.
 - Finalize the initial Deliverables including Health Interactive Suite Install, Project Mgmt Tool Suite Install, Integrated Master Schedule (IMS), Project Management Plan (PMP), Change Management Plan (CMP) and Status Reports.
 - Create Privacy and Security Mgmt Plan and Data Governance deliverables.
 - Submit revised DMA Project Partnership Understanding (PPU) document to CMS.
 - Complete MECL R1 Checklist Requirements broadened evidence population
 - Draft formal MECL R1 request letter.
 - Submit the final package to CMS for 2018 MECL R1.
 - Draft DMA Newsletter, Issue 4.

Issues by Priority

Risks by Priority



Current Risks

More Risks...

Risk	Probability	Impact	Priority	Status	Target Resolution	Owner
Claims Broker Services	◆	◆	◆	Open	11/30/16	Spaulding, Don

Project Storyboard: Nebraska Regional Interoperability Network (NRIN)

Project Manager	Krogman, Sue	Status Report Date	2/6/18
Project Type		Status	Approved
Stage	Build	Progress	Started
Total Estimated Cost	\$12,500,000.00	Estimate to Complete	83.24%
Actual Cost To Date	\$10,405,204.00		

Project Dates		
	Start	Finish
Plan	10/1/10	8/31/18
Baseline	10/1/10	8/31/18
Days Late	0	0

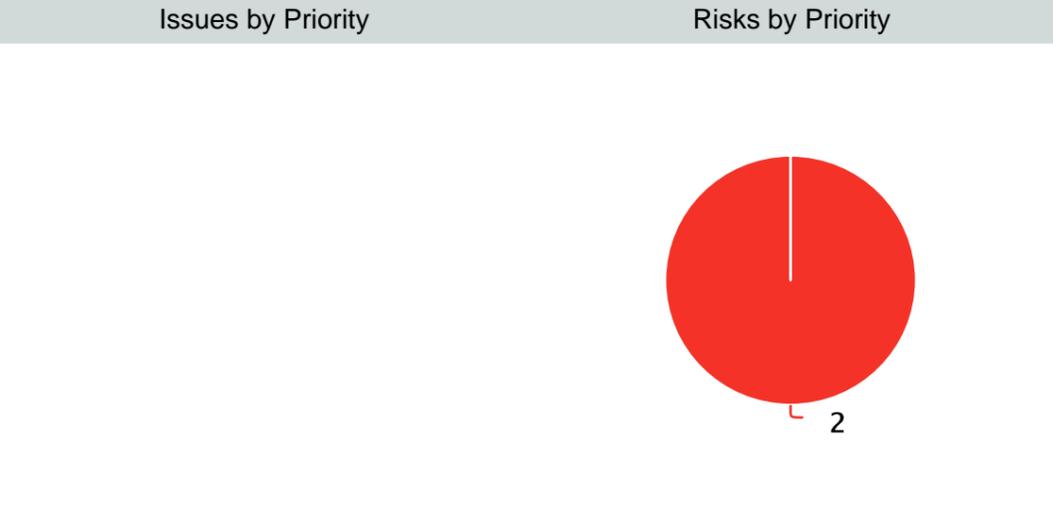
Status Report Indicators		
Overall		
Schedule		
Scope		
Cost and Effort		

Project Description
 The Nebraska Regional Interoperability Network (NRIN) is a project that will connect a majority of the Public Safety Access Points (PSAP) across the State by means of a point to point microwave system. The network will be a true, secure means of transferring data, video and voice. Speed and stability are major expectations; therefore there is a required redundant technology base of no less than 100 mbps with 99.999% availability for each site. It is hoped that the network will be used as the main transfer mechanism for currently in-place items, thus imposing a cost-saving to local government. All equipment purchased for this project is compatible with the networking equipment of the OCIO.

Key Accomplishments
 All but one site in Cass County has now been installed, this includes the 800 MHz for Motorola

Status Report Update
 Much work on the installation has been completed since the last update on this report. All but one site in Cass County has now been installed, this includes the 800 MHz for Motorola. The linear line from Hebron to Burchard is not running – testing on it is being done this week.

Upcoming Activities
 Testing continues on the linear line from Hebron to Burchard.



Current Risks More Risks...

Risk	Probability	Impact	Priority	Status	Target Resolution	Owner
Finding adequate towers to locate the NRIN system on				Open	5/6/16	Weekly, Andy
MOUs and Lease Agreements				Open	5/6/16	Weekly, Andy

Project Storyboard: Nebraska State Accountability (NeSA- Reading, Math, Science and Writing)

Project Manager	Mall, Swathi	Status Report Date	2/2/18
Project Type		Status	Approved
Stage	Launch	Progress	Started
Total Estimated Cost	\$9,781,606.00	Estimate to Complete	19.84%
Actual Cost To Date	\$1,940,416.42		

Project Dates		
	Start	Finish
Plan	7/1/17	12/31/18
Baseline	7/1/17	11/30/18
Days Late	31	31

Status Report Indicators		
Overall		
Schedule		
Scope		
Cost and Effort		

Project Description

Legislative Bill 1157 passed by the 2008 Nebraska Legislature required a single statewide assessment of the Nebraska academic content standards for reading, mathematics, science, and writing in Nebraska's K-12 public schools. The new assessment system was named Nebraska State Accountability (NeSA), with NeSA-R for reading assessments, NeSA-M for mathematics, NeSA-S for science, and NeSA-W for writing. The assessments in reading and mathematics were administered in grades 3-8 and 11; science was administered in grades 5, 8, and 11; and writing was administered in grades 4, 8, and 11.

Key Accomplishments

As NWEA MAP growth testing is included as part of the scope of the NWEA grades 3-8 contract, NWEA has been working on technology with districts that have not participated in MAP in former years or that expanded the grades in which they were administering MAP

Status Report Update

As NWEA MAP growth testing is included as part of the scope of the NWEA grades 3-8 contract, NWEA has been working on technology with districts that have not participated in MAP in former years or that expanded the grades in which they were administering MAP

NWEA found an issue in its secure test engine and functionality with WIndows 10 and NWEA fixed the issue and pushed out access to the new upload. NWEA is also checking the functionality of its test engine with Max to determine if an update is needed before State Summative testing.

Districts personnel are in the process of preparing for upcoming spring test windows.

Upcoming Activities

NWEA found an issue in its secure test engine and functionality with WIndows 10 and NWEA fixed the issue and pushed out access to the new upload. NWEA is also checking the functionality of its test engine with Max to determine if an update is needed before State Summative testing.

Districts personnel are in the process of preparing for upcoming spring test windows.

Issues by Priority Risks by Priority

Current Issues

No matching records were found

Project Storyboard: Oracle Fusion (Enterprise Resource Management Consolidation)

<table border="1"> <tr> <td>Project Manager</td> <td>Rasmussen, Michael</td> <td>Status Report Date</td> <td>2/8/18</td> </tr> <tr> <td>Project Type</td> <td></td> <td>Status</td> <td>Approved</td> </tr> <tr> <td>Stage</td> <td>Design</td> <td>Progress</td> <td>Started</td> </tr> <tr> <td>Total Estimated Cost</td> <td>\$17,758,000.00</td> <td>Estimate to Complete</td> <td></td> </tr> <tr> <td>Actual Cost To Date</td> <td></td> <td></td> <td></td> </tr> </table>		Project Manager	Rasmussen, Michael	Status Report Date	2/8/18	Project Type		Status	Approved	Stage	Design	Progress	Started	Total Estimated Cost	\$17,758,000.00	Estimate to Complete		Actual Cost To Date				<table border="1"> <thead> <tr> <th colspan="3">Project Dates</th> </tr> <tr> <th></th> <th>Start</th> <th>Finish</th> </tr> </thead> <tbody> <tr> <td>Plan</td> <td>7/13/17</td> <td>1/15/20</td> </tr> <tr> <td>Baseline</td> <td></td> <td></td> </tr> <tr> <td>Days Late</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		Project Dates				Start	Finish	Plan	7/13/17	1/15/20	Baseline			Days Late	0	0	<table border="1"> <thead> <tr> <th colspan="3">Status Report Indicators</th> </tr> </thead> <tbody> <tr> <td>Overall</td> <td></td> <td></td> </tr> <tr> <td>Schedule</td> <td></td> <td></td> </tr> <tr> <td>Scope</td> <td></td> <td></td> </tr> <tr> <td>Cost and Effort</td> <td></td> <td></td> </tr> </tbody> </table>		Status Report Indicators			Overall			Schedule			Scope			Cost and Effort		
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Issues by Priority

Risks by Priority

Current Issues

No matching records were found

Attachment 4-b

March 1, 2018

To: NITC Commissioners
From: Anne Byers
Subject: eHealth Council Report

eHealth Council Meetings. The eHealth Council will meet on March 13 and April 12. On March 13, the Genevieve Morris, Principal Deputy National Coordinator for Health IT, will be calling in to give a presentation on the proposed Trusted Exchange Framework and Common Agreement. The aim of the framework is to standardize the requirements for the exchange of health information among networks. The Council will also discuss IT governance and the role of the Council in addressing this issue. On April 12, the eHealth Council will focus on how health IT can support public health.

Prescription Drug Monitoring Program. As of Jan. 1, 2018, all dispensers are required to report all medications dispensed to the PDMP, improving patient safety as well as reducing opioid overdoses. There are 5,847 prescribers and pharmacists provisioned to access the PDMP as of Feb. 2018. Additional enhancements have been implemented, including a Morphine Milligram Equivalent Alert. Nebraska's PDMP is receiving attention nationally, with other states looking at Nebraska's model.

eHealth Strategic Initiative and Action Items. The eHealth Council is addressing two action items:

1. Learn more about data governance and discuss follow-up steps including possibly forming a Data Governance Work Group.
2. Learn more about how health IT can support public health, including the priorities identified in the 2017-2021 Nebraska State Health Improvement Plan, and discuss follow-up steps.

Attachment 4-c

March 1, 2018

To: NITC Commissioners
From: Anne Byers
Subject: Community Council Report

Community Council. The Community Council met on Feb. 28 and discussed the items included in this report.

New Member Nomination: Johnathan Hladik. The Community Council recommended Johnathan Hladik's nomination to serve on the Council. I will be asking for your approval of his nomination.

Johnathan Hladik is Policy Director at the Center for Rural Affairs. His work involves analysis and advocacy at the state and federal level. Focus areas include renewable energy, farm policy, economic development, and income inequality. Mr. Hladik holds a JD and Masters of Environmental Law and Policy from Vermont Law School, and a BS in Natural Resource Economics from the University of Nebraska.

Nebraska Broadband Partnership. The Nebraska Broadband Initiative was formed to implement the planning component of the PSCs' Broadband Mapping and Planning Grant from the NTIA. The partnership has continued since the end of the grant on a very part-time basis. It may be time to re-visit and re-energize the initiative by broadening the stakeholder base.

Newsletter. The new Broadband Nebraska newsletter will include articles about how two communities are addressing broadband development. One article highlights how Seward County has utilized public-private partnerships to attract investments in broadband infrastructure. Seward County has utilized LB 840 and philanthropic funds to incentive investments in broadband infrastructure.

The second article looks at Ravenna and Prairie Hills Wireless. Prairie Hills Wireless was recently recognized as Wireless Internet Service Provider (WISP) of the Year at the Wireless Internet Service Providers Association's 2017 WISPALOOZA and is providing residential broadband of up to 150 Mbps down. Community leaders in Ravenna also understand the importance of broadband and the need to effectively use new technologies. The local economic development community is using social media marketing to attract visitors and to engage members of the community. Through social media marketing, Ravenna was able to draw an estimated 20,000-30,000 people to Ravenna for the solar eclipse.

Legislation. Here are the bills that the Community and eHealth Council are following:

[LB 389](#) Adopt the Small Wireless Facilities Act (Low Priority Bill)

[LR 701](#) Provide for telehealth practice by physicians and physician assistants

[LB 856](#) Adopt the Internet Neutrality Act, change communications provider requirements under the Nebraska Telecommunications Regulation Act, and change financial assistance provisions relating to the Nebraska Internet Enhancement Fund

[LB 966](#) Provide a sales and use tax exemption relating to dark fiber

[LB 989](#) Authorize testing of autonomous vehicles by a city of the primary class on its roadways (Wishart Priority Bill)

[LB 993](#) Create the 911 Service System Advisory Committee and change the 911 Service System Act and eliminate the act's termination date (Geist Priority Bill)

[LB 994](#) Create the Rural Broadband Study Task Force, change provisions relating to the Nebraska Telecommunications Universal Service Fund, and change powers and duties of the Public Service Commission as prescribed (Transportation and Telecommunications Committee Priority Bill)

[LB 1031](#) Change excavation notification and marking requirements and provide for large project planning meetings, rulemaking authority, and cost allocation under the One-Call Notification System Act

[LB 1057](#) Change provisions relating to prescription drug monitoring

[LB 1113](#) Provide an exception for leasing dark fiber or providing broadband, Internet, telecommunications, or video services by an agency or political subdivision of the state (Walz Priority Bill)

[LB 1114](#) Provide for creation and maintenance of a statewide geographic information system map under the Nebraska Telecommunications Regulation Act

[LB 1122](#) Authorize testing of automated motor vehicles as prescribed

Rural Broadband and Community Development Strategic Initiative and Action Items. The Council reviewed and approved the Rural Broadband and Community Development Strategic Initiative along with the following action items:

1. **Action:** Support the efforts of communities to address broadband-related development by sharing broadband-related news and highlighting exemplary programs through the Broadband Nebraska newsletter, social media, and other activities through **an expanded** Nebraska Broadband Initiative.
2. **Action:** Expand awareness and address the need for digital inclusion and equitable broadband access through educational materials, best practices and community outreach.
3. **Action:** Support the efforts of Network Nebraska and the Education Council to address digital equity and to explore partnerships to improve library broadband access.

Broadband Reports

Broadband Availability. Broadband availability in Nebraska improved in 2016 with 88.9% of Nebraskans and 65.5% of rural Nebraskans having access to broadband at 25 Mbps down and 3 Mbps up. Nebraska lags the U.S. with 92.3% of Americans and 69.3% of rural Americans having broadband access according to the FCC's [2018 Broadband Deployment Report](#). A more detailed summary of the data, including county level data, is included in the meeting documents.

Household Adoption/Subscription. In 2016, 82% of U.S. households and 78% of Nebraska households subscribed to fixed internet service of at least 200 kbps according to the FCC's newly released [Internet Access Services Report](#). At higher speed tiers, the gap in subscription rates between Nebraska and the U.S. average widens. In 2016, 50% of U.S. households, but only 38% of Nebraska households subscribed to broadband of at least 25 Mbps down and 3 Mbps up. Nebraska ranked in the middle of our neighboring state on this measure—behind Colorado (60%), South Dakota (47%) and Wyoming (45%)

but tightly clustered with Iowa (38%), Missouri (37%), and Kansas (36%). A more detailed summary of the data is included in the meeting documents.

Updated Broadband Map. The FCC recently announced the release of a new broadband map with 2016 data. The map is available at <https://broadbandmap.fcc.gov> . Commissioner Rosenworcel has set up a mailbox, BROADBANDFAIL@FCC.GOV, to report inaccuracies in the map.

Broadband in Nebraska: Availability

Broadband Available to 88.9% of Nebraskans, 65.5% of Rural Nebraskans

Broadband availability in Nebraska improved in 2016 with 88.9% of Nebraskans and 65.5% of rural Nebraskans having access to broadband at 25 Mbps down and 3 Mbps up. Nebraska lags the U.S. with 92.3% of Americans and 69.3% of rural Americans having broadband access according to the FCC's [2018 Broadband Deployment Report](#).

Nebraska ranked 32nd out of the 50 states and the District of Columbia on broadband availability—up two spots from 2015. Nebraska ranked in the middle of our neighboring states in broadband availability of 25 Mbps/3Mbps. (See Table 1.)

Table 1
% Population with Access to Fixed 25 Mbps/3 Mbps Service (2016)
Ranked By Statewide Average

	U.S./State (Urban and Rural)	Rural Areas	Urban Areas
United States	92.3%	69.3%	97.9%
Colorado	94.9%	72.1%	99.0%
Iowa	90.5%	77.4%	97.9%
Kansas	89.2%	66.5%	97.2%
Nebraska	88.9%	65.5%	97.5%
South Dakota	88.3%	75.1%	98.9%
Missouri	83.5%	49.5%	97.9%
Wyoming	78.2%	45.5%	97.6%

Table 2 shows data on fixed and mobile broadband availability for Nebraska counties. An analysis of the data shows that the gap in availability between rural and urban counties in Nebraska exists, but has narrowed since 2015. In 2016, over one-quarter (25 out of 93 counties) of Nebraska's counties had broadband of at least 25 Mbps down and 3 Mbps up available to over 90% of residents, up from 12 counties in 2015.¹ Approximately 1,460,000 people live in these 25 counties.

On the other side of the Digital Divide, broadband of at least 25 Mbps down and 3 Mbps up was **not** available to over 95% of residents in 10 Nebraska counties, down from 18 counties in 2015. Approximately 53,000 people live in these 10 counties.

Table 2
Nebraskans with Access to Fixed Terrestrial 25 Mbps/3 Mbps Services
and/or Mobile LTE with a Minimum Advertised Speed of 5 Mbps/1 Mbps by State and County
Ranked by % of Population with Fixed Broadband (Data as of December 2016)

State, County or County Equivalent	Population Evaluated	% of Pop. with Fixed 25 Mbps/3 Mbps	% of Pop. with Mobile 5 Mbps /1 Mbps	% of Pop. with Fixed & Mobile	Population Density	Per Capita Income (\$2016)
Nebraska	1,903,270	88.90%	99.90%	88.90%	24.774	.
Nance County	3,578	99.90%	99.80%	99.70%	8.102	\$26,179
Polk County	5,221	99.90%	100.00%	99.90%	11.911	\$30,947
Kearney County	6,557	99.30%	100.00%	99.30%	12.701	\$31,563
Boyd County	1,978	99.20%	91.40%	90.60%	3.663	\$25,507
Buffalo County	49,302	99.20%	100.00%	99.20%	50.926	\$27,218
Phelps County	9,267	99.20%	100.00%	99.20%	17.168	\$27,882
Madison County	34,955	98.90%	100.00%	98.90%	61.031	\$24,458
Douglas County	553,394	98.80%	100.00%	98.80%	1,684.84	\$30,548
Dawson County	23,632	98.40%	99.90%	98.30%	23.327	\$24,042
Lancaster County	308,802	98.20%	100.00%	98.20%	368.697	\$28,600
Hall County	61,494	98.10%	100.00%	98.10%	112.567	\$24,617
Howard County	6,434	97.70%	100.00%	97.70%	11.301	\$28,301
Saunders County	20,959	97.60%	100.00%	97.60%	27.937	\$30,348
Keya Paha County	794	96.90%	93.10%	90.80%	1.027	\$28,086
Platte County	32,800	96.20%	100.00%	96.20%	48.66	\$27,052
Lincoln County	35,576	95.70%	99.80%	95.50%	13.875	\$27,474
Sarpy County	178,092	94.80%	100.00%	94.80%	745.185	\$31,906
Adams County	31,703	93.90%	100.00%	93.90%	56.284	\$27,609
Box Butte County	11,226	93.90%	100.00%	93.90%	10.44	\$27,751
Butler County	8,072	93.30%	100.00%	93.30%	13.8	\$28,045
York County	13,805	93.00%	100.00%	93.00%	24.113	\$27,962

State, County or County Equivalent	Population Evaluated	% of Pop. with Fixed 25 Mbps/3 Mbps	% of Pop. with Mobile 5 Mbps /1 Mbps	% of Pop. with Fixed & Mobile	Population Density	Per Capita Income (\$2016)
Richardson County	8,061	92.00%	99.90%	91.90%	14.607	\$26,638
Seward County	17,232	90.80%	100.00%	90.80%	30.156	\$28,491
Dakota County	20,436	90.40%	100.00%	90.40%	77.335	\$21,710
Keith County	8,021	90.40%	100.00%	90.40%	7.556	\$26,699
Valley County	4,181	88.90%	99.90%	88.80%	7.36	\$26,384
Cheyenne County	10,078	87.90%	100.00%	87.90%	8.424	\$30,929
Stanton County	5,939	87.90%	100.00%	87.90%	13.878	\$29,282
Dodge County	36,785	85.90%	100.00%	85.90%	69.576	\$26,141
Scotts Bluff County	36,318	85.90%	100.00%	85.90%	49.118	\$25,863
Burt County	6,558	84.10%	100.00%	84.10%	13.341	\$24,613
Saline County	14,306	83.50%	100.00%	83.50%	24.923	\$21,880
Washington County	20,557	82.10%	100.00%	82.10%	52.716	\$31,776
Harlan County	3,478	81.90%	99.90%	81.90%	6.284	\$25,997
Brown County	2,956	80.80%	96.20%	79.90%	2.42	\$30,135
Dundy County	1,830	78.70%	87.70%	67.50%	1.99	\$28,161
Clay County	6,164	78.50%	100.00%	78.50%	10.771	\$25,472
Cass County	25,737	76.70%	100.00%	76.70%	46.169	\$30,637
Wayne County	9,351	74.20%	100.00%	74.20%	21.112	\$26,732
Pierce County	7,172	73.90%	99.90%	73.80%	12.511	\$27,386
Otoe County	16,055	73.60%	99.90%	73.60%	26.079	\$27,251
Gage County	21,814	72.80%	100.00%	72.80%	25.619	\$26,347
Antelope County	6,347	72.00%	100.00%	72.00%	7.404	\$27,048
Dixon County	5,785	71.10%	100.00%	71.10%	12.147	\$24,983
Nemaha County	6,972	69.40%	100.00%	69.40%	17.114	\$28,690
Kimball County	3,680	68.80%	99.90%	68.80%	3.866	\$23,727
Colfax County	10,393	66.80%	100.00%	66.80%	25.247	\$23,619
Johnson County	5,167	62.70%	100.00%	62.70%	13.74	\$21,890

State, County or County Equivalent	Population Evaluated	% of Pop. with Fixed 25 Mbps/3 Mbps	% of Pop. with Mobile 5 Mbps /1 Mbps	% of Pop. with Fixed & Mobile	Population Density	Per Capita Income (\$2016)
Cedar County	8,703	62.20%	99.90%	62.20%	11.756	\$28,663
Holt County	10,236	58.90%	99.20%	58.80%	4.243	\$26,267
Jefferson County	7,208	58.70%	99.70%	58.70%	12.642	\$26,305
Sherman County	3,057	55.50%	100.00%	55.50%	5.403	\$26,348
Cuming County	9,000	55.10%	100.00%	55.10%	15.772	\$26,061
Fillmore County	5,731	55.10%	100.00%	55.10%	9.961	\$29,361
Franklin County	3,007	55.00%	98.90%	54.50%	5.222	\$28,373
Morrill County	4,791	54.40%	98.90%	54.40%	3.365	\$24,216
Wheeler County	769	52.40%	99.60%	52.40%	1.337	\$30,800
Nuckolls County	4,259	51.60%	100.00%	51.60%	7.405	\$24,096
Cherry County	5,841	50.70%	92.70%	49.40%	0.98	\$27,891
Pawnee County	2,655	50.30%	100.00%	50.30%	6.159	\$27,039
Perkins County	2,888	48.60%	99.90%	48.60%	3.269	\$30,429
Deuel County	1,876	48.20%	100.00%	48.20%	4.265	\$28,640
Arthur County	465	47.70%	100.00%	47.70%	0.65	\$21,174
Thayer County	5,109	45.40%	99.80%	45.40%	8.904	\$30,057
Boone County	5,335	42.80%	100.00%	42.80%	7.771	\$28,288
Webster County	3,600	41.90%	99.60%	41.60%	6.262	\$24,534
Furnas County	4,794	40.60%	98.50%	40.60%	6.666	\$23,307
Gosper County	1,970	39.90%	100.00%	39.90%	4.3	\$29,393
Hitchcock County	2,838	33.60%	100.00%	33.60%	3.998	\$23,967
Blaine County	490	33.50%	82.40%	25.90%	0.689	\$23,001
Frontier County	2,621	32.10%	98.80%	31.70%	2.689	\$26,798
Greeley County	2,396	29.60%	100.00%	29.60%	4.205	\$25,054

State, County or County Equivalent	Population Evaluated	% of Pop. with Fixed 25 Mbps/3 Mbps	% of Pop. with Mobile 5 Mbps /1 Mbps	% of Pop. with Fixed & Mobile	Population Density	Per Capita Income (\$2016)
Thomas County	713	26.20%	100.00%	26.20%	1	\$30,746
Grant County	642	22.90%	98.10%	21.20%	0.827	\$21,925
Hamilton County	9,188	22.30%	100.00%	22.30%	16.925	\$31,565
Thurston County	7,097	18.90%	100.00%	18.90%	18.032	\$19,100
Hayes County	910	17.50%	99.10%	17.50%	1.276	\$27,080
Chase County	3,939	17.20%	99.60%	17.20%	4.404	\$29,239
Rock County	1,404	16.00%	94.70%	11.90%	1.392	\$30,247
Sioux County	1,240	8.70%	84.50%	7.20%	0.6	\$27,279
Red Willow County	10,725	7.20%	99.00%	6.80%	14.958	\$24,529
Garfield County	2,019	6.00%	97.50%	6.00%	3.543	\$24,379
Hooker County	709	3.90%	99.40%	3.90%	0.983	\$22,094
Dawes County	8,986	3.20%	100.00%	3.20%	6.435	\$23,307
Loup County	597	3.20%	98.50%	2.80%	1.051	\$28,063
Sheridan County	5,248	3.20%	96.50%	3.20%	2.15	\$25,077
Garden County	1,907	2.30%	97.30%	2.30%	1.119	\$30,900
Knox County	8,595	2.10%	98.00%	1.40%	7.755	\$26,675
Custer County	10,831	2.00%	99.90%	2.00%	4.205	\$29,986
Logan County	765	0.40%	100.00%	0.40%	1.341	\$24,693
Banner County	792	0.00%	99.40%	0.00%	1.061	\$30,095
McPherson County	495	0.00%	95.20%	0.00%	0.576	\$25,352

ⁱ The 2015 figure was calculated from the Digital Divide Index county dataset 2015 which was obtained using the FCC Form 477 December v2 data set. See the Nebraska Broadband Special Report: Nebraska and the Digital Divide Index available at http://nitc.ne.gov/community_council/documents/newsletters/Nebraska_and_DDIApril2017.pdf

Broadband in Nebraska: Adoption/Subscription

FCC report finds 78% of Nebraska households subscribe to fixed Internet service

Household Adoption/Subscription. In 2016, 82% of U.S. households and 78% of Nebraska households subscribed to fixed internet service of at least 200 kbps according to the FCC's newly released [Internet Access Services Report](#). At higher speed tiers, the gap in subscription rates between Nebraska and the U.S. average widens. In 2016, 50% of U.S. households, but only 38% of Nebraska households subscribed to broadband of at least 25 Mbps down and 3 Mbps up. Nebraska ranked in the middle of our neighboring state on this measure—behind Colorado (60%), South Dakota (47%) and Wyoming (45%) but tightly clustered with Iowa (38%), Missouri (37%), and Kansas (36%). (See Table 1).

Table 1
% of Households with Fixed Connections at Various Speeds by State as of Dec. 2016

State	At least 200 kbps in at least one direction	At least 10 Mbps Down and 1 Mbps Up	At least 25 Mbps Down and 3 Mbps Up	At least 100 Mbps Down and 10 Mbps Up
U.S. Total	82%	66%	50%	15%
Colorado	89%	66%	60%	*
Iowa	74%	47%	38%	7%
Kansas	79%	59%	36%	16%
Missouri	75%	55%	37%	10%
Nebraska	78%	55%	38%	7%
South Dakota	76%	64%	47%	4%
Wyoming	77%	54%	45%	0%

**Data withheld to maintain firm confidentiality*

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

Adoption of higher speed internet service is growing. Between December 2015 and December 2016, the percent of Nebraska households subscribing to internet service of at least 25 Mbps down and 3 Mbps up increased from 33% to 38%. During the same time period, the percent of Nebraska households subscribing to broadband internet service of at least 100 Mbps down and 10 Mbps up increased from 5% to 7%. (See Tables 2 and 3).

Table 2
% of Households with Fixed Connections at 25 Mbps/3 Mbps by State (Dec. 2015- Dec. 2016)

State	Dec. 31, 2015	June 30, 2016	Dec. 31, 2016
U.S. Total	44%	47%	50%
Colorado	55%	57%	60%
Iowa	10%	24%	38%
Kansas	32%	34%	36%
Missouri	30%	33%	37%
Nebraska	33%	35%	38%
South Dakota	43%	47%	47%
Wyoming	42%	43%	45%

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

Table 3
% of Households with Fixed Connections at least 100 Mbps/10 Mbps Up (Dec. 2015- Dec. 2016)

State	Dec. 31, 2015	June 30, 2016	Dec. 31, 2016
U.S. Total	11%	13%	15%
Colorado	*	*	*
Iowa	1%	5%	7%
Kansas	12%	14%	16%
Missouri	7%	9%	10%
Nebraska	5%	6%	7%
South Dakota	4%	5%	4%
Wyoming	0	0%	0%

**Data withheld to maintain firm confidentiality*

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

Internet Connections. The total number of internet connections (residential and business) in the United States increased from 369.4 million in 2015 to 376.2 million in 2016, an increase of about 6% according to the FCC's newly released [Internet Access Services Report](#). Mobile internet connections accounted for 72% of all internet connections in the United States in 2016. Mobile internet connections increased from 265.4 million in 2015 to 270.5 million in 2016, an increase of 7%. The number of fixed connections grew from 104.1 million to 105.7 million, an increase of 3%.

In December 2016, 60% of fixed connections had a downstream speed of at least 25 Mbps, with 27% of fixed connections having a downstream speed of at least 100 Mbps. In Nebraska, 48% of fixed connections had a downstream speed of at least 25 Mbps down. Only 9.5% of fixed internet connections in Nebraska had a downstream speed of at least 100 Mbps down. Nebraska lagged behind four of our neighboring states on this measure: Colorado (41.9%), Missouri (35.0%), Kansas (19.9%), and Iowa (11.0%). (See Table 4.)

Table 4
% of Fixed Connections (Residential and Business) at Various Speeds By State as of Dec. 2016

State	At least 200 kbps Down	At least 3 Mbps Down	At least 10 Mbps Down	At least 25 Mbps Down	At least 100 Mbps Down
U.S. Total	99.6%	96.3%	82.2%	60.0%	23.2%
Colorado	99.7%	95.1%	86.0%	65.5%	41.9%
Iowa	99.6%	92.6%	72.4%	49.5%	11.0%
Kansas	99.7%	95.4%	75.4%	44.1%	19.9%
Missouri	99.4%	94.0%	76.8%	48.8%	35.0%
Nebraska	99.6%	95.7%	74.7%	48.5%	9.5%
South Dakota	99.6%	96.6%	84.9%	61.2%	6.3%
Wyoming	99.6%	91.8%	76%	57.1%	1.2%

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

Nebraska also has a smaller percent of fiber connections than the U.S. and five out of six neighboring states. In 2016, 8 percent of internet connections in Nebraska were fiber, compared to 11% in the United States. Iowa (16%), Kansas (18%), and South Dakota (19%) had a higher percent of fiber connections than the U.S. Nebraska and all of our neighboring states have a higher percent of fixed wireless connections than the U.S. (See Table 5.)

Nebraska and our neighboring states also have a higher percentage of fixed wireless connections than the U.S. In Nebraska, 3.7% of fixed internet connections were fixed wireless, compared to 1.2% in the U.S. (See Table 5.)

Table 5
Connections by Technology by State as of Dec. 31, 2016 (in thousands) and by % of Non-Mobile Connections

State	# ADSL	% ADSL	# Cable	% Cable	# Fiber	% Fiber	# Fixed Wireless	% Fixed Wireless	# Mobile Connections	Total Connections	Total Non-Mobile Connections
Total U.S.	26,526	25%	63,352	60%	12,041	11%	1,230	1.2%	270,494	376,221	105,727
Colorado	*	*	1,155	59%	203	10%	63	3.2%	4,574	6,540	1,966
Iowa	305	30%	469	47%	165	16%	31	3.1%	2,493	3,496	1,003
Kansas	257	27%	470	49%	170	18%	39	4.1%	3,208	4,170	962
Missouri	741	38%	898	46%	177	9%	39	2.0%	4,896	6,834	1,938
Nebraska	162	26%	381	60%	53	8%	23	3.7%	1,433	2,063	630
South Dakota	48	17%	159	57%	53	19%	12	4.3%	623	901	278
Wyoming	52	26%	108	55%	11	6%	19	9.6%	468	666	198

**Data withheld to maintain firm confidentiality.*

Data on connections for SDSL, other wireline, and satellite were not included because data on these technologies for many states was withheld to maintain firm confidentiality or so such a small number of connections were reported that it rounded to 0.

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

The number of fiber connections in the United States, Nebraska, and neighboring states significantly increased between December 2015 and December 2016. Nebraska saw a 26.2% increase in fiber connections during this time period. In comparison, the U.S. saw a 14.8% increase in fiber connections and our neighboring states saw increases ranging from 15.2% to 54.5%.

Table 6
Fiber Connections by State Dec. 31, 2015- Dec. 31, 2016 (in thousands) and % Increase

	Dec. 31, 2015	June 30, 2016	Dec. 31, 2016	Increase Dec. 2015-Dec. 2016	% increase Dec. 2015-Dec. 2016
Total U.S.	10,492	11,129	12,041	1,549	14.8%
Colorado	150	177	203	53	35.3%
Iowa	130	145	165	35	26.9%
Kansas	110	130	170	60	54.5%
Missouri	124	151	177	53	42.7%
Nebraska	42	46	53	11	26.2%
South Dakota	46	50	53	7	15.2%
Wyoming	8	9	11	3	37.5%

Source: [Internet Access Services: Status as of Dec. 31, 2015](#)

Source: [FCC Internet Access Services: Status as of June 30, 2016](#)

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

**Nebraska Information Technology Commission
EDUCATION COUNCIL**

2017-2019 PRO TEM Membership Renewals/Replacements EXPIRING June 30, 2019

<u>Name</u>	<u>Representing</u>	<u>Status</u>
<u>K-12 EDUCATION (2017-19 term PRO TEM)</u>		
<u>Trent Kelly</u>	Nebraska Council of School Administrators	Mike Dulaney confirmed (11/7/2017)
<u>HIGHER EDUCATION (2017-19 term PRO TEM)</u>		
<u>Bret Blackman</u>	University of Nebraska Office of the President	Hank Bounds confirmed (12/15/2017)

Note

Underlined Candidates are new voting members to the NITC Education Council and have a brief biographical statement attached to this document

RECOGNITION

The Nebraska Information Technology Commission wishes to recognize Mr. Mike Lucas and Mr. Mark Askren for their many years of service on the Education Council, in the role of advising the Commission on matters of education technology initiatives, funding, and policy.

Biographical Sketches

Trent Kelly

Trent Kelly was hired by Hastings Public Schools in 2000. He succeeds Mike Lucas on the Education Council as a representative of the Nebraska Council of School Administrators. Mr. Kelly's position at Hastings Public Schools is the Director of Technology and Operations where he is responsible for all technology support, purchases, coordination, and building renovations. Trent has a Bachelor of Science degree in education from UNO, Masters in Technology from Peru State, Masters of Educational Administration from UNK, and Ed Specialist degree from UNK. He is also active with the Nebraska Association of Technology Administrators (NATA).

Bret Blackman

Bret Blackman serves as Associate Vice President for IT for the University of Nebraska system, as well as CIO of the UNO campus. His current roles include leading the University's OneIT initiative under the direction of Mark Askren, Vice President for IT; leadership to the division of Information Technology Services for the University of Nebraska; and serving on UNO's Chancellor's Cabinet. Bret has worked in higher education for 19 years as an IT leader and is a graduate of the University of Nebraska at Omaha.

March 8, 2018

To: NITC Commissioners

From: John Watermolen, State GIS Coordinator
Sudhir Ponnappan, Chair, GIS Council
Casey Dunn/Kea Morovitz, Vice-Chair, GIS Council
Jon Kraai, Past-Chair, GIS Council

Subject: GIS Council Report

Nebraska Spatial Data Infrastructure (NESDI) Updates

At the November 1, 2017 GIS council meeting, the council voted proceed with “continue as is” for all the strategic initiatives. The council also recommended that each working group to reconvene and review action items, goals to determine if any need to be updated, added or deleted, especially with the current GIS coordinator still getting up to speed on all the initiatives and actions items.

Nebraska Statewide Imagery Program

Statewide Imagery Program-Business Plan: Because of the costs of flying an imagery program, we are looking at some subscription models such as Google and Digital Globe along with talking to some aerial imaging vendors to get their thoughts. The imagery working group met in January to start the discussion of how to deal with subscription based imagery because the horizontal accuracy does not meet the standards that are set in the Imagery business plan. From that meeting, we have surveyed state agencies on what their needs are regarding imagery. The survey found that many state agencies use the USDA-NAIP imagery that is collected every other year. The USDA-NAIP program will be flying Nebraska in 2018, but after that there is a lot of uncertainty with the program.

Administrative and Political Boundaries

There has been very little progress on this and I have sent an email to the co-chairs with directions on how we think we need to proceed to get back on track. The main direction is to use the parcel data as a base and make adjustments to any federal or state boundaries that are based on the parcel. Some of these boundaries are waiting on how PSC is going to address NG-911 data issues and what data DOT has regarding boundaries and how they are maintained.

Nebraska Street Centerline and Address Program

The progress that has been made has been with PSC gathering street centerlines from the counties. The OCIO GIO is assisting using a software package from 1 Spatial to help with standardizing the schema of the data.

Nebraska Statewide Elevation Program

Collection is complete and on schedule with the dates in the USGS agreement documents. The OCIO GIO is looking into several options to be able to host the data and share the data and imagery. The hosting options are On Premise, OCIO Cloud in Azure or ESRI's cloud service

Geodetic and Survey Control Inventory and Assessment

We have been working with ESRI to get our PLSS data into a format that is easy to use and it is almost finished. We are working with Bureau of Land Management of developing and signing an MOU to define the data steward and document how the data is shared.

OCIO and Agency GIS Consolidation/Integration:

GIO Infrastructure:

We have been building the infrastructure and architecture to be able to support the agencies. Our goal is to have the infrastructure implemented by the end of March. Once it is implemented we will have a test environment, a production environment and a fail over environment. All existing servers, that are accounted for in the new infrastructure will be shut down. We have an Enterprise Advantage Program with ESRI that provides us multiple technical and training resources. The GIO team has learned many things especially all the firewall rules and have met with open system teams to help build the infrastructure. We also are using a free software called Chef and are developing “cook books” that will help document the server environment and configuration for the servers. ESRI recommends using chef to help with server deployment across multiple servers.

We have purchased an analytics tool to help use determine the effectiveness of our mapping websites. This analytics program alerts us of any issues with any web sites (mapping and non-mapping) such as slow response time or broken data links.

We are working on workflows, standard operating procedures and best management practices to utilize the Enterprise Geodatabases and have a training class we will doing at DOT regarding this, since they will be the first to move their data over.

COST Rates and GIS Needs:

The GIO has approved cost rates and 4 agencies or boards are processing the paperwork through their internal processes. There is concern about finding the money in their agencies to pay for the services.

I continue to visit with state agencies every few months to continue discussions and any GIS needs.

Department of Transportation- Consolidation and Integration:

This is an ongoing process. We are making progress. We are waiting on DOT to provide the OCIO GIO team with their schema. The OCIO GIO team works with the DOT GIS Manager to help him navigate issues that he encounters at DOT.

OCIO Geospatial/GIS Enterprise Public Service Commission Agreement:

We have extended the agreement and discussed cost rates and have started working with PSC on the next phase of the data collection and repository needs as NG 911 progresses. PSC has made the data from the repository available to the public.

ESRI- GIS License Consolidation:

We have consolidated 1 agencies desktop licenses (Nebraska State Patrol) that coincided with the addition of a shared GIS position.

Story Maps:

We have hosted several story map classes, which has opened up various discussions with such agencies such as DHHS. DHHS is starting to see the power of Story Maps and have become very interested in using them. The OCIO is looking at using them for their monthly metrics.

Census:

We have been working with the Census to get ready for the 2020 census, which is going to be more GIS centric than previous censuses. The GIO team and partner agencies have completed update to school district boundaries and voting districts. These data sets have submitted it to the Census. Next up is Local Update of Census Addresses (LUCA). This process has a 120 day turn around to assist the Census bureau in updating their address points. Cities, Counties, Tribes and the State had the opportunity to participate. For the city and counties that don't participate, it will be up to the state to help verify address points.(See attached map of participants)

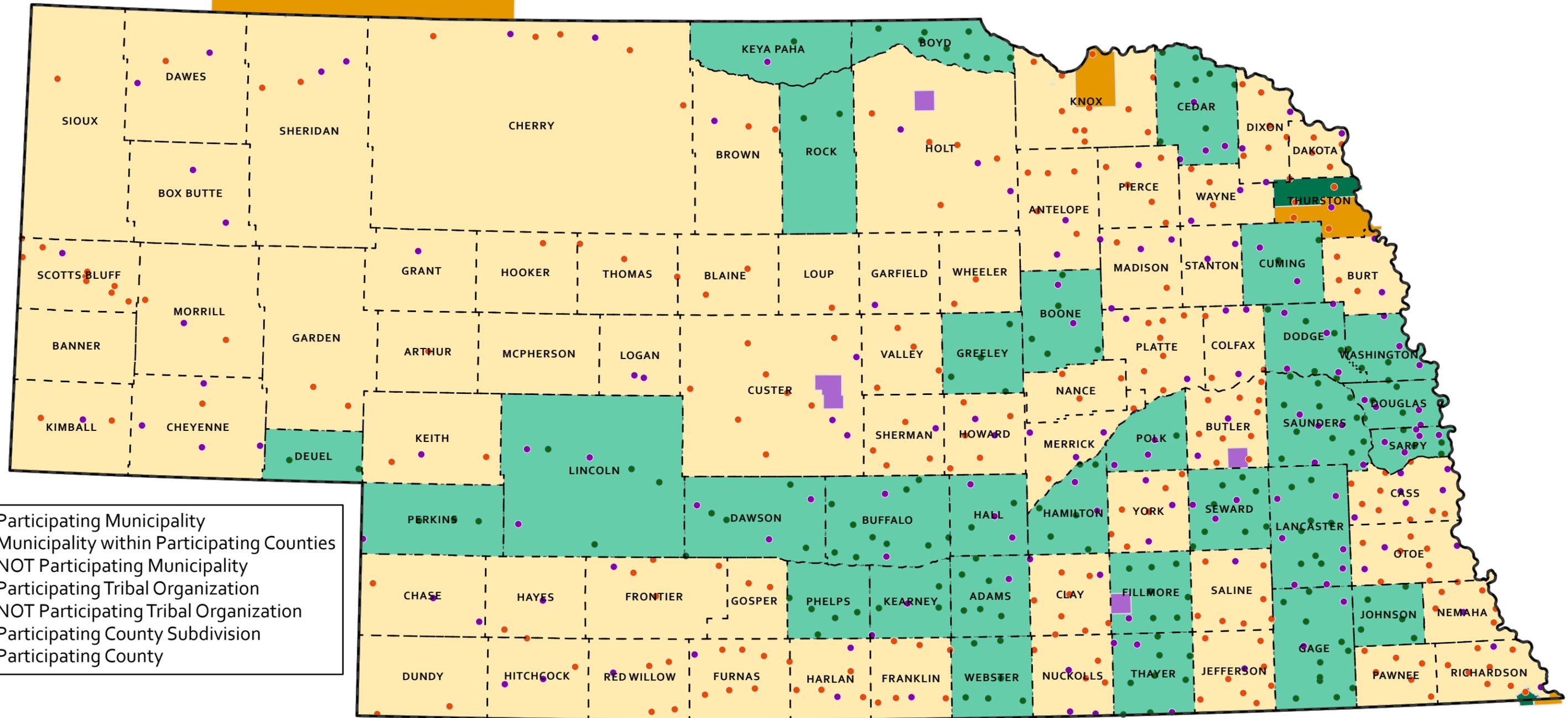
Geospatial Data Act:

There is a bill in the U.S. Senate and the U.S. House of Representatives regarding the Geospatial Data Act of 2017. The bill helps to ensure cooperation with the Federal Government with state and local entities to make sure the best available data is being used. The GIO team has had a conversation with a staff member from Senator Fischer's office regarding this act.

NSP Staff:

We have added 1 staff member that is a shared position with NSP.

LUCA Participation



- 30 of 93 counties are participating (32%)
- 158 of 530 municipalities signed up (30%)
- 105 municipalities are in counties which signed up for LUCA. This leaves 263 municipalities that OCIO will have to verify (~50% of the cities)
- 24 of 50 CDPs are in participant counties
- 2 of 8 Tribal Organizations signed up to participate in LUCA (Winnebago, and Sac and Fox)
- 4 townships signed up, only one is in a county which is participating in LUCA (Momence is in Fillmore County)



Transforming Government, Education, Healthcare and Communities

Nebraska's Statewide Technology Plan

Approved March 8, 2018





2018
Nebraska Information Technology Commission

www.nitc.nebraska.gov

501 S. 14th Street
P.O. Box 95045
Lincoln, NE 68509-5045
(402) 471-3560

Foreword

Transforming Government, Education, Healthcare, and Communities, the Nebraska Information Technology Commission's annual statewide technology plan, focuses on seven strategic initiatives which promote the effective use of technology both within the State of Nebraska's operations and throughout the state.

Three strategic initiatives—State Government IT Strategy, IT Security, and Nebraska Spatial Data Infrastructure (NESDI)—address the need to take an enterprise approach to IT in order to achieve the State's IT priorities of security, availability, and consolidation.

The statewide technology plan also addresses the use of technology in education, economic development, and health care. Access to technology and broadband service is becoming increasingly critical for students, businesses, and health care. Four strategic initiatives—Network Nebraska, Digital Education, Rural Broadband and Community IT Development, and eHealth—promote the effective use of technology, while also highlighting the need to address the divide between those with access to technology and the skills to effectively use it and those without.

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.

Ed Toner
Chief Information Officer
Chair, Nebraska Information Technology Commission





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NITC Commissioners and Staff

Commissioners

Ed Toner, Chair, Chief Information Officer, Office of the CIO, State of Nebraska

Senator Bruce Bostelman, Nebraska Legislature, Ex-officio member

Shane Greckel, Owner/Operator, Greckel Farms LLC

Dr. Terry Haack, Superintendent, Bennington Public Schools

Dorest Harvey, US Strategic Command / J84

Randy Meininger, Mayor, City of Scottsbluff

Dan Shundoff, Chief Executive Officer, Intellicom

Daniel Spray, President, Precision Technology

Gary Warren, President of Services Corporations, Hamilton Telecommunications

Walter Weir, Chief Information Officer, University of Nebraska

Staff

Ed Toner, Chief Information Officer

Rick Becker, Government Information Technology Manager

Anne Byers, eHealth and Community Information Technology Manager

Tom Rolfes, Education Information Technology Manager

John Watermolen, State GIS Coordinator

Lori Lopez Urdiales, Administrative Assistant



Executive Summary

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. The NITC is chaired by Ed Toner, Chief Information Officer for the State of Nebraska. Commissioners are appointed by the Governor and represent elementary and secondary education, postsecondary education, communities, the Governor, and the general public. Much of the NITC's work is conducted through its advisory groups: the Technical Panel, the Community Council, the Education Council, the State Government Council, the eHealth Council, and the GIS Council.

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 accordance with the Legislature's directive (Neb. Rev. Stat. § 86-516) to "annually update a statewide technology plan," the NITC, with input from its advisory groups and other stakeholders, has identified seven areas on which to focus. These initiatives are projects that are of strategic importance to the state and require an enterprise approach, involvement by the NITC, and/or cooperation of multiple entities for their success. The strategic initiatives and the action items which support them are the core of the statewide technology plan. The NITC's current strategic initiatives are:

- State Government IT Strategy
- IT Security
- Nebraska Spatial Data Infrastructure (NESDI)
- Network Nebraska
- Digital Education
- Rural Broadband and Community IT Development
- eHealth

NITC Overview

The Office of the Chief Information Officer provides support for the NITC, its Councils, the Technical Panel, and ad hoc groups.

Mission

The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens, regardless of location, while making investments in government, education, health care and other services more efficient and cost effective.

Vision, 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.



Core Values

- We strive to know our customers and stakeholders and understand their needs.
- We inspire cost-effective solutions.
- We encourage collaboration for the sharing of resources.
- We encourage public participation in the technology development process.

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 23-member advisory committee composed of agency directors, state IT professionals, and a representative 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 federal, state, local government, education and private individual and associations. They provide statewide coordination of GIS initiatives

Strategic Initiatives

In order to advance its vision and goals, the NITC, with input from its advisory groups and other stakeholders, has identified seven key initiatives which promote the effective use of technology within the State of Nebraska, as well as education, economic development, local government, and health care. 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 first three strategic initiatives—State Government IT Strategy, IT Security, and Nebraska Spatial Data Infrastructure (NESDI)—address the need to take an enterprise approach to IT in order to achieve the State's IT priorities of security, availability, and consolidation.

The last four strategic initiatives address the use of technology in education, economic development, and health care. Access to technology and broadband service is becoming increasingly critical for students, businesses, and health care. Four strategic initiatives—Network Nebraska, Digital Education, Rural Broadband and Community IT Development, and eHealth—promote the effective use of technology while also highlighting the need to address the divide between those with access to technology and the skills to effectively use it and those without.

A brief description of each strategic initiative follows:

State Government IT Strategy. The objective of this initiative is to develop and implement a comprehensive strategy for the use of information technology by Nebraska state government. The strategy will utilize a hybrid centralization model combining elements of both the centralized and decentralized IT management models. Enterprise technologies will be centralized, and agency-specific activities will remain with the agencies.

IT Security. This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources.

Nebraska Spatial Data Infrastructure (NESDI). The objective of this initiative 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.

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. All of the Nebraska public school districts (244), Educational Service Units (17) and all public higher education entities (13) participate in Network Nebraska, benefitting from one of the lowest commodity Internet rates in the entire country. Network Nebraska's low commodity Internet rates are made possible through aggregation of demand and statewide bidding. Network Nebraska's new action item focus will be on better performance metrics and more effective communication to participants and stakeholders.

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. Action items will focus on the technical challenges for students in the transition from secondary to post-secondary education, and addressing the need for equitable broadband access for students and their families to access digital education resources.

Rural Broadband and Community IT Development. Broadband availability, widespread adoption of broadband technologies, and a skilled IT workforce have become requirements for communities wishing to grow their economies. This initiative is being refocused to address the need for better broadband availability in unserved and underserved rural areas of the state. As gigabit broadband has become available in an increasing number of communities in Nebraska and in the United States, the gap in service availability has grown between areas with access to very high speed broadband and those areas without access to internet at speeds of 25 Mbps down/3 Mbps up which is the FCC's current definition of broadband.

eHealth. Electronic health information exchange (HIE) allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically—improving the speed, quality, safety and cost of patient care. This initiative supports the adoption of health information exchange technologies in Nebraska and the use of health IT to help patients access their health information and better manage their care. Health information exchange in Nebraska is primarily conducted through the Nebraska Health Information Initiative (NeHII), which is one of the largest statewide health information exchanges in the country with over 9,700 users and data on over 3.5 million individuals. NeHII now covers 68% of the Nebraska's hospital beds (excluding psychiatric hospitals).

State Government IT Strategy

Overview

Objective:

To develop and implement a strategy for the use of information technology by Nebraska state government.

Description:

Develop and implement a comprehensive strategy for use of information technology by Nebraska state government. The strategy will utilize a hybrid centralization model combining elements of both the centralized and decentralized IT management models. Enterprise technologies will be centralized with agency-specific activities remaining with the agencies.

Top Priorities:

- Security
- Consolidation
- Availability

Strengths/Assets:

- Leadership support.
- Use of a hybrid centralization model allows the OCIO to handle enterprise technologies while agencies maintain authority over agency specific activities and functions.

Challenges/Issues:

- In order for the hybrid structure to work, there has to be strong cooperative and collaborative management between OCIO and agency IT management.

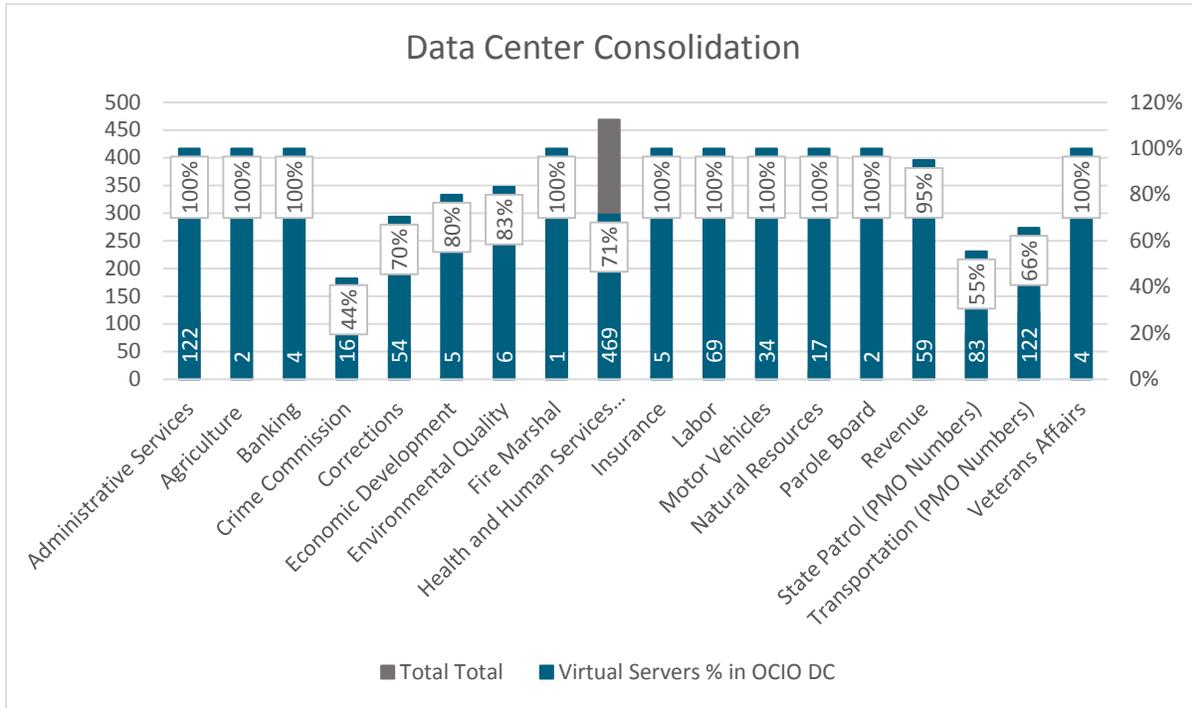
Collaborators:

- OCIO
- State Government Council
- Technical Panel
- State Agencies

Recent Accomplishments:

- Single Help Desk Solution has been implemented for initial group of agencies.
- Enhanced operations center by establishing process for change management, problem management and service requests.
- Resource consolidation completed for network support, server support, and site support.

Metrics



Action Items

1. Action: Single Help Desk Solution - Incident Management Implementation

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: June 2018

Funding: None

Targets/Deliverables:

1.1 Migrate participating agencies in phases.

2. Action: IT Cost Efficiencies

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2018

Funding: None

Targets/Deliverables:

2.1 Enhance server virtualization and optimization.

2.2 Implement a configuration management database (CMDB) and full asset management processes.

3. Action: Operationalize IT and Project Governance

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: June 2018

Funding: None

Targets/Deliverables:

3.1 Establish enterprise project governance at the agency level.

4. Action: Consolidate on STN Domain

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: June 2018

Funding: None

Targets/Deliverables:

4.1 Implement phased migration.

5. Action: Data Center Consolidation

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2018

Funding: None

Targets/Deliverables:

5.1 Implement phased migration.

6. Action: Network Migration (New World)

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2018

Funding: None

Targets/Deliverables:

6.1 Implement phased migration.

6.2 Implement active/hot-stand-by configuration.

7. Action: Enterprise Tool Consolidation

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: June 2019

Funding: None

Targets/Deliverables:

7.1 Consolidate use of an enterprise Kronos tool.

7.2 Consolidate use an enterprise file sharing tool.

8. Action: Application Process Maturation (DevOps)

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2018

Funding: None

Targets/Deliverables:

8.1 Identify a single job scheduling tool.

8.2 Create a job scheduling team.

8.3 Identify a single software configuration management tool.

8.4 Create a configuration management team.

8.5 Identify a single application scanning tool.

8.6 Create a DevOps team.

8.7 Consolidate DBA team.

8.8 Identify .NET and Java programmers.

8.9 Develop process and procedures.

12th Annual Cyber Security Conference Offers Learning Tracks for Professional Community

This year marked the 12th anniversary of the Annual Nebraska Cyber Security Conference. Conference-goers reported it an overall success and a great opportunity for IT employees and business owners in Nebraska's local communities to network and learn how to better protect business data.

During his morning welcome, Ed Toner announced a record attendance: Over 275 people participated in the event, more than any other year. Not surprisingly, a number of people from previous years returned, but this year students from the new SCC career academy were present and part of the networking focus. If anything, the attendance at this conference provided a unique profile view into our local cyber community.

One of the biggest themes from not just the breakout sessions, but the conference as a whole, was that cyber security is everyone's job. Conference planners aim to develop different tracks of interest as the conference continues to grow each year. Team work and communication is key to providing a business with proper security measures. Throughout the day, conference participants enjoy activities from breakfast to vendors to lunch, and breakout sessions with a good variety of topics.

This year's 12th conference offered 23 different lecture topics including the FBI, Dell, University of Nebraska-Lincoln College of Law, the State of Nebraska OCIO and many others. Each session aimed to communicate with Nebraskans about a unique approach to Cyber Security. Lessons included such topics as "Modern Attacks Against Our Corporate Networks" and "Whither Quantum Computing and Cryptography".

The 2018 Cyber Security Conference will take place Thursday, September 27, at Southeast Community College, located at 8800 "O" Street.



IT Security

Overview

Objectives:

To define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources, including:

- Reviewing security settings on State hardware and software;
- Reviewing security requirements for IT purchases;
- Conducting security awareness training and education;
- Conducting security assessments and risk assessments on data and facilities;
- Conducting vulnerability management scanning;
- Conducting application vulnerability scanning;
- Complying with Federal regulations for PCI, HIPAA, IRS, CJIS, SSA; Following the NIST Framework;
- Implementing statewide reporting mechanism for security related events;
- Implementing statewide Security Operations Center in cooperation with the University of Nebraska System;
- Implementing statewide Computer Emergency Response Team (CERT).

Challenges/Issues:

- Lack of funding
- Lack of staff
- De-centralized IT structure for the State including agency information security officers

Collaborators:

- Security Architecture Workgroup
- University of Nebraska System
- Southeast Community College
- Department of Homeland Security
- Federal Bureau of Investigation
- Nebraska Information Assurance Center
- OWASP

Recent Accomplishments:

- Cyber Resilience Review (Security Assessment) performed by the Department of Homeland Security for 6 State of Nebraska Agencies.
- Deployed Albert monitoring system from MS-ISAC to measure anomalies in netflow.
- Completed inventory of Personally Identifiable Information.
- Annual Cyber Security Conference was held.
- New information security policy adopted.
- SIEM tool installed.

Action Items

1. Action: Deploy mobile device management.

Lead: OCIO

Participating Entities: State Agencies

Time Frame: June 2018

Funding: Charge back to agencies

Targets / Deliverables:

1.1 Implement phased deployment of mobile device management.

2. Action: Perform a complete IT hardware inventory of all state agencies.

Lead: Chris Hobbs, State Information Security Officer

Participating Entities: State Agencies

Time Frame: June 2019

Targets / Deliverables:

2.1 Itemized list of IT-related hardware used within the State of Nebraska network

3. Action: Perform a complete IT application inventory of all state agencies.

Lead: Chris Hobbs, State Information Security Officer

Participating Entities: State Agencies

Time Frame June 2019

Targets / Deliverables:

3.1 Itemized list of applications used within the State of Nebraska network

4. Action: Complete Nebraska Security Operation Center.

Lead: Chris Hobbs, State Information Security Officer

Participating Entities: University of Nebraska, Central Administration; University of Nebraska, Lincoln; University of Nebraska, Omaha; University of Nebraska, Kearney; University of Nebraska Medical Center; Third Party Vendors; Multi State Information Sharing and Analysis Center (MS-ISAC); Department of Homeland Security (DHS)

Time Frame: June 2018

Funding: To be determined

Targets / Deliverables:

4.1 Enterprise security operations centers in multiple locations 24 x 7 for redundancy

4.2 Service level agreements with all participants

4.3 Written charter

5. Action: Qualys scan tool implementation and enhancement.

Lead: Chris Hobbs, State Information Security Officer

Participating Entities: State Agencies

Time Frame: June 2018

Targets / Deliverables:

- 5.1 Establish vulnerability scans for entire state network.
- 5.2 Feed Qualys scan results into QRadar.

GIS Grant Funds Workshops for Nebraska's Public Schools

In November 2017, State GIS coordinator, John Watermolen approached Nebraska Education Service Units to start helping teachers and students to learn Geographic Information Systems (GIS). Classroom training is funded by a grant which Watermolen covers in six hour workshops designed to help teachers understand how to use GIS technology while students learn alongside. Teachers are allowed to bring students with them to attend each workshop. The grant reimburses the school for the cost of the sub (up to \$150), pays for morning snacks and breakfast (up to \$10.00 per person) for the teachers and the kids.

The material targets Middle School and High School teachers who are interested in training to bring GIS Technology into the classroom as a teaching tool. Subject covered during a typical workshop include Social Studies, Science, Agricultural Science. Gifted Program Coordinators, Curriculum Administrators, Technology and Staff developers have all attended.

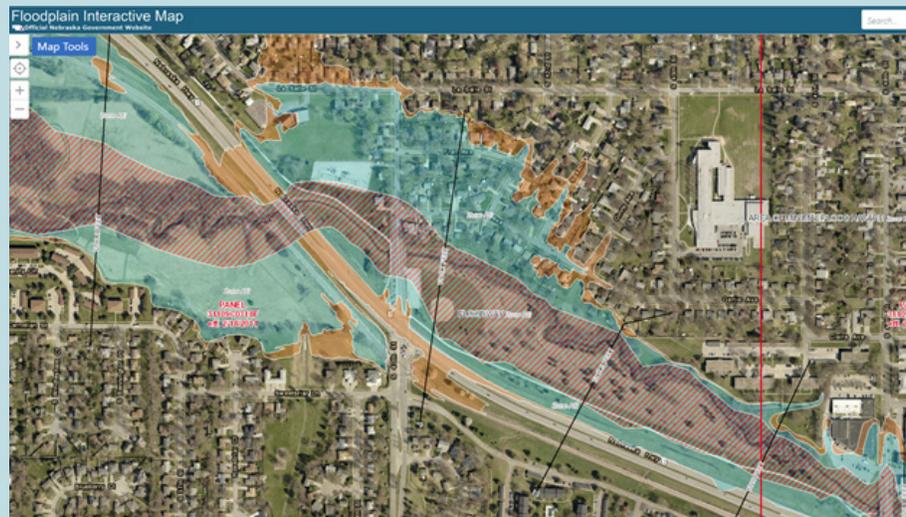
2017 Workshops were held in Sydney, Scottsbluff, Ainsworth and Lincoln.

While Watermolen reported, "Middle and High School students and teachers have always liked the workshop," the age level definitely factors in to students comfort in learning the material. Watermolen continues, "Fifth and

Sixth Grade teachers generally have felt it was grade appropriate, Fourth grade teachers have loved it, and some have said it was not appropriate for that grade level."

The bottom line is that it really depends on the technology comfort level of the teachers.

Most workshop class sizes are from 15 to 36 in attendance. "The largest GIS workshop we have had is 38 – we had two administrators attend in addition to the 36 teachers and students," Watermolen added.



Learning the floodplains: Students attending GIS Workshops used interactive maps to learn about local floodplains and the implications of using technology to plan and manage land.

Nebraska Spatial Data Infrastructure (NESDI)

Overview

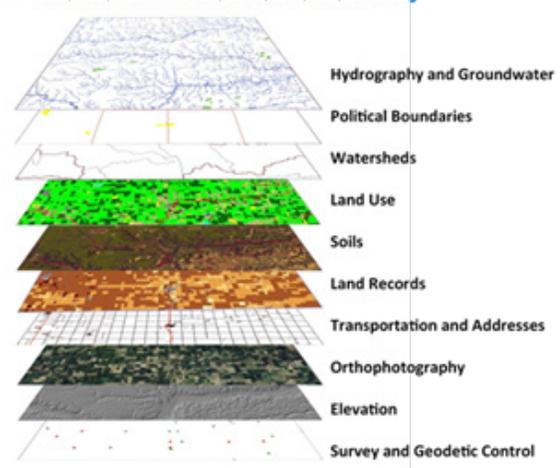
Objectives:

- *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.*
- *Facilitate the creation, maintenance, analysis and publishing of quality and authoritative data and information systems. Priority layers include: imagery, elevation, street centerlines, point addressing, and land records.*
- *Formalize data stewardship and encourage data sharing and provide widespread access to data and services through NebraskaMAP.gov.*
- *Facilitate technical assistance and education outreach opportunities for furthering the adoption of the NESDI and geospatial applications.*
- *Achieve sustainable and efficient allocation of resources to support the implementation and wise governance of GIS services and geospatial data*

Collaborators:

- The State of Nebraska
- Local and County Government
- League of Municipalities
- Nebraska Association of County Official
- Nebraska GIS LIS Association
- Natural Resources Districts
- Public Power Districts
- Federal Agencies
- Private Industry
- K-12, College, and University of Nebras

Nebraska Core Framework Layers



Strengths/Assets:

- The GIS Council, established by Neb. Rev. Stat. § 86-572(2), provides an existing governance structure, representing a broad range of stakeholder interests.
- Standards which are foundational to the NESDI are in place or in development
- Existing State GIS Coordinator and three GIS staff member in CIO GIS Shared Services Office. There are 2 GIS staff members that are shared resources with other state agencies.
- Several strong state agency and local county-based GIS programs.
- Several NESDI data layers and applications exist with coverage in priority areas or statewide.

- Strategic Plan completed in 2012 with stakeholder input from across the state. It serves as roadmap to setting statewide priorities and was used to develop the NESDI strategic initiative and action items.
- Centralized data file infrastructure established to host and share state agency data layers.

Challenges/Issues:

- Insufficient legislative or executive sponsor to support GIS Council efforts.
- Resources are inadequate to develop and maintain all framework layers.
- Resources are inadequate for a stewardship infrastructure that supports comprehensive stewardship of framework data.
- Outreach and training needs of GIS and geospatial data use and applications are broad given the level of different users.
- Reluctance to share data or making data available easily or timely.
- Technical limitations in current infrastructure and networks to host and exchange data.
- Sustainability of data maintenance and updates.
- Lack of metadata and appropriate documentation of data layers to support data discovery, sharing, and reliability of data.
- Lack of understanding of standards and no authoritative enforcement to data stewards not following standards. Local counties do not see NITC standards as a requirement but a guideline.

Recent Accomplishments:

- Working groups established involving our collaborators to gather information and develop plans.
- New standards adopted for elevation, imagery, street centerlines and addresses. Metadata standards have been updated to reflect FGDC and ISO requirements.
- Elevation business plan completed and implementation started with collaborators working to acquire LiDAR data for the remaining western and Sandhill areas of Nebraska
- Established a statewide K-12 GIS Education Initiative by leveraging a statewide enterprise license agreement for software and services to private and public schools. We are participating with ESRI and the NE GIS/LIS Council on a state story map contest
- Established a tiered cost rate for state agencies, based on the number of GIS desktop user licenses, maturity and necessary resources needed to support the agencies mission. We have 3 agencies that are working on the paperwork to take advantage of the cost rates and the offerings.
- Established an enterprise data and hardware infrastructure and associated documentation.
- Consolidate all GIS server software into the State GIS Enterprise Architecture
- Consolidated 1 state agencies desktop GIS licenses into the State desktop GIS license pool

Recommendations:

- Continue this initiative. Current GIS Council goals are in line with strategic initiative and

objectives. The next set of priority NESDI layers will become new action items in this initiative.

- Integrate NESDI data development, maintenance and application priorities into public safety, NG 9-1-1, and emergency management policy and activities.

Metrics

The metrics below are used to evaluate the status of the NESDI and overall GIS program for the state.

Status of Nebraska Based on NSGIC Coordination Criteria

The National States Geographic Information Council (NSGIC) has published a listing of “9 Criteria for a Successful Statewide GIS Program.” While these are not firm, binary criteria, they provide a measure by which different states can be compared. In general, the most successful states tend to have these things in common.

Criterion	Status
1. A full-time, paid coordinator position is designated and has the authority to implement the state’s business and strategic plans:	Partially meets criterion. NITC has a full-time State GIS Coordinator. Authority to implement Business and Strategic Plans will come through NITC and Office of the CIO. Limited funds are available to carry out specific action items.
2. A clearly defined authority exists for statewide coordination of geospatial information technologies and data production:	Partially meets criterion. NITC GIS Council provides governance to statewide coordination efforts along with the Office of the CIO based on statutory authority for state entities. Rely on partnerships from local involvement.
3. The statewide coordination office has a formal relationship with the state’s Chief Information Officer (CIO):	Meets criterion. The State GIS Coordinator is positioned in the Office of the CIO.
4. A champion (executive and other legislative champions) is aware and involved in the process of geospatial coordination:	Meets the criterion. There is a strong, active executive champions (CIO) currently involved in the process. Other Executive Agencies are aware of GIS within their agency. There is no legislative champion identified at the present time because there isn’t a current need for legislation regarding geospatial activities. This could change in the near future
5. Responsibilities for developing the National Spatial Data Infrastructure and a State Clearinghouse are assigned:	Partially meets criterion. A complete Nebraska Spatial Data Infrastructure (NESDI) has not been fully developed. The NebraskaMAP state clearinghouse exists, but has limited capability and lags behind other states. Both require sustained resources to develop and exist.
6. The ability exists to work and coordinate with local governments, academia, and the private sector:	Partially meets criterion. These entities are represented on the NITC GIS Council. There is some evidence of local government involvement with state functions, but overall GIS adoption across the state remains low.

(Table Continues on page 22.)

7. Sustainable funding sources exist to meet project needs:	Partially meets criterion. There is funding for the State GIS Coordinator and various resources for projects through other agencies. However, long-term, sustainable funding and allocation of resources is still needed. Have developed cost rates to work toward a sustainability model
8. GIS Coordinator has the authority to enter into contracts and become capable of receiving and expending funds:	Meets criterion. The State GIS Coordinator in the Office of the CIO can enter into contracts.
9. The Federal Government works through the statewide coordinating authority:	Partially meets criterion. The Federal Government recognizes the Nebraska GIS Council and their efforts and has worked with the state (e.g. via NAIP, Homeland Security, FEMA, NebraskaMAP)

Action Items

1. Action: Formalize the definition of the Nebraska Spatial Data Infrastructure (NESDI) and data stewardship

GIS assists in solving complex issues by providing the ability to understand spatial relationships among various spatial data sets. In many cases, the spatial analysis capabilities of a GIS can identify trends from among many datasets to solve problems. Selected datasets have such widespread utility in a GIS that they have been identified as “Framework Datasets” and due to their significance are accorded special attention by the GIS community. Traditionally, these data sets have been developed independently for a relatively narrow range of purposes. However, the use of geospatial data and the range of applications it is used for is growing rapidly. This places increasing demands on individual data in terms of accuracy and completeness, and especially upon those inherent spatial relationships among datasets.

This action item will begin to better define the NESDI and identify the necessary relationships among the various NESDI data layers. The document will provide an illustration of the “big picture” of Nebraska’s framework including:

- A common understanding of framework
- A context for prioritizing the components of the framework
- A context and justification for future funding requests
- A basis for identification of potential stewards and stewardship roles and responsibilities

The context of the framework themes will be explored at the local, state, regional and national levels. This will benefit the overall coordination, development, revision and promulgation of the relationships among various GIS framework data standards. It will aid in development, implementation and revision of stewardship guidance and procedures for the various GIS framework themes. In addition, it will provide additional direction on NESDI governance, management practices, policy development, and outreach with the statewide community.

Lead: State GIS Coordinator, GIS Council Representatives

Participating Entities: GIS Council, NESDI Data Stewards

Timeframe: Ongoing

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans.

Target/Deliverables:

1. Develop a document that defines the NESDI and the role of data stewardship to support the NESDI.

2. Action: Geodetic and Survey Control Inventory and Assessment

Spatial data deployed in an enterprise environment generally has higher requirements for accuracy and quality than does a single-purpose dataset. Geodetic and survey control is essential for the development of spatial data that can be analyzed in combination with other layers.

A careful examination of our current survey and geodetic control data across the state based will be conducted on various criteria for its use in the development of NESDI framework layers. This action item will identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.

Lead: State GIS Coordinator, GIS Council Representatives

Participating Entities: Nebraska Department of Natural Resources, Nebraska Department of Roads, State Surveyors Office, various Licensed Land Surveyors, Federal Partners including NOAA – National Geodetic Survey and Army Corp of Engineers

Timeframe: 2018-2020

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans.

Target/Deliverables:

1. Develop a current inventory and assessment report of geodetic and survey control in Nebraska.
2. Summarize scope of geodetic and survey control in the state in terms of coverage, density, and availability of data for use in the development of other NESDI framework layers.
3. Identify and document recommendations for:
 - Developing and improving statewide survey and geodetic control data in Nebraska.
 - Incorporation of recommendations into new and current NITC standards that impact the NESDI framework.
 - Education and training needs to stakeholders for using survey and geodetic control in their applications.
 - Best practices for incorporating data into mapping, GIS, and other GPS related applications.
 - Methods and linkages through data sharing to communicate and provide access to relevant data to users and stakeholders.

3. Action: Nebraska Statewide Elevation Program

Surface elevation databases are critically important for a wide range of GIS applications and as such have been determined to be a priority database for development by the GIS Council. Elevation databases have been determined by the Federal Geographic Data Committee (FGDC) to be a Framework Database because of their use by a wide cross-section of geospatial data users. LiDAR (Light Detection and Ranging) is a proven remote sensing technology that enables the efficient

collection of highly accurate surface elevation data for large geographic areas. This dataset serves as a basis for other derived geospatial data products in its relationship to the overall NESDI. More importantly, this data set strengthens the geodetic control context for the development of other framework layers. Pursuant to the objectives outlined in the Strategic Plan, the GIS Council is responsible for identifying and coordinating the use of digital elevation LiDAR technologies to develop enhanced surface elevation data for Nebraska. This involves:

- a) An assessment of the current status and perceived adequacy of existing Nebraska surface elevation data, relative to the perceived short and intermediate-term needs;
- b) An exploration and documentation of the likely costs and benefits of utilizing LIDAR technology to collect enhanced surface elevation data for large geographic areas of Nebraska;
- c) Recommendations related to possible future Nebraska LIDAR initiatives including technical standards, possible lead agencies, funding strategies, and timelines; and
- d) Identification of methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.

Lead: State GIS Coordinator, GIS Council Elevation Working Group

Participating Entities: Nebraska Department of Natural Resources, Nebraska Department of Roads, Nebraska Natural Resource Districts, Public Power Entities, Federal Partners including Army Corp of Engineers, USGS, USDA-NRCS, and USDA-FSA.

Timeframe: Data Collection is Ongoing

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans. Future funds are required for meeting objectives outlined in the business plan.

Target/Deliverables:

1. Implement a Nebraska Statewide Elevation Program.

4. Action: Nebraska Statewide Imagery Program

Imagery is a required spatial data framework layer needed for a multitude of mapping applications. It is important that imagery is accurate, current, and easily accessible to end users. This dataset serves as a basis for other derived geospatial data products in its relationship to the overall Nebraska Spatial Data Infrastructure (NESDI). 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. It is expected that this effort will be 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). This initiative will:

- 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.
- Identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.
- Research new cost models (subscription based) from various vendors in order to maximize the state's investment.

Lead: State GIS Coordinator, GIS Council Imagery Working Group

Participating Entities: Nebraska Department of Natural Resources, Nebraska Department of Roads, Nebraska Natural Resource Districts, Public Power Entities, City and County Governments, Federal Partners including USGS and USDA-FSA.

Timeframe: Ongoing

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans. Future funds are required for meeting objectives outlined in the business plan and to look at alternatives because of the uncertainties beyond 2018 with the current NAIP program

Target/Deliverables:

1. Implement a Nebraska Statewide Imagery Program.

5. Action: Street Centerline-Address Database

This action item will:

- Develop and maintain a statewide seamless street centerline and address referencing system used for various transportation, public safety (ie, NexGEN 911), economic development and other related applications.
- Initiate assessment of current street centerline data.
- Implement a data model and workflow guidelines for QA/QC of existing and future maintenance of street centerline data.
- Develop data model for address points and use of data in relationship to street centerlines and other NESDI framework layers.
- Further develop partnership efforts that support NexGEN 911 or combinations thereof who needs to be involved in the process of using street centerline and address point data.
- Research and develop recommendations for standards, policies, infrastructure, and funding to support collaborative efforts by state, local and federal agencies to periodically acquire updated a seamless street centerline-address database.
- Identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.

Lead: State GIS Coordinator, GIS Council Street Centerline and Address Working Group

Participating Entities: GIS Council, State Government Council, Nebraska Department of Roads, E 9-1-1 community

Timeframe: Implementation timeline determined by Business Plan. Currently working with PSC and DOT

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans. Future funds are required for meeting objectives outlined in the business plan.

Target/Deliverables:

1. Develop a Nebraska Street Centerline Database (NSCD) and a Nebraska Address Database (NAD) business plan.
2. Implement a Nebraska Street Centerline Database (NSCD) and a Nebraska Address Database (NAD).

6. Action: Statewide Land Record Information System

This action item will:

- Develop 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.
- Develop guidelines for a common geodatabase model that can provide public data for use in a multitude of state government applications.
- Implement a geodatabase model to maintain baseline data.
- 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.
- Develop data workflows with local county assessors to obtain parcel (spatial and attribute) data for use in various state government applications.
- Revise the current NITC Land Record Information and Mapping Standards that have been adopted with the goal of enabling the integration of local government land records into a statewide dataset.
- Identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.

Lead: State GIS Coordinator, GIS Council Land Records Working Group

Participating Entities: GIS Council, State Surveyors Office, Department of Revenue, County Assessors, and various licensed Land Surveyors

Timeframe: Implementation timeline determined by Business Plan

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans. Future funds are required for meeting objectives outlined in the business plan.

Target/Deliverables:

1. Update the current NITC 3-202 Land Record and Information Mapping Standards for standard land record product(s) that will meet the majority of stakeholder requirements and expectations in a cost-effective manner.
2. Implement the Nebraska Statewide Parcel Geodatabase Development and Maintenance Plan.
3. Develop a Nebraska Land Records business plan.
4. Implement the Nebraska Land Records business plan.

7. Action: NebraskaMAP - A Geospatial Data Sharing and Web Services Network

This initiative will:

- Enhance NebraskaMAP beyond its current geoportal status to an enterprise-level geospatial platform;.
- Provide necessary communication and mechanisms for public and private access to peer-reviewed Nebraska SDI data, maps, and GIS web services.

NebraskaMAP started as a metadata portal to inventory and provide linkages to several data sets. Enhancements will involve expanding services to upload, review and share NESDI data either

through direct download, REST services, or accessing through web services. This system would also provide conduit to authoritative data sets, linked and shared base maps to reduce data storage costs, and a coordinated security system, including the possibility for limited data access and password protection for specific data sets. The State agencies are developing a statewide GIS Enterprise system in order to conduct daily business operations. This systems will also coincide with the interoperability, data sharing, and workflows planned for NebraskaMAP.

Lead: State GIS Coordinator, GIS Council NebraskaMAP Working Group

Participating Entities: GIS Council, State Agencies, State Government Council

Timeframe: 2018-2020

Funding: No initial funding required for this action item other than personnel time to meet, develop and communicate plans. Future funds are required for meeting objectives outlined in the business plan.

Target/Deliverables:

1. Develop NebraskaMAP Geospatial Data Sharing and Web Services Network Business Plan.
2. Update, enhance and implement NebraskaMAP into a statewide data clearinghouse enterprise platform.

Partnerships between Schools and Libraries Could Improve Library Internet Access

As more schools are providing tablets or laptops to students and utilizing online educational tools, students without internet access at home may face difficulties in completing their homework. An innovative proposed project will test the feasibility of forming school-library partnerships to improve library internet access so that students can more easily complete their homework.

Public libraries are often the only source of public internet access in small, rural communities. However, many small and rural libraries do not have adequate internet speeds to service both the student population and patrons in the community. A survey of Nebraska libraries by the Nebraska Library Commission found that over 80% of the state's rural and small libraries have internet access which does not meet the FCC's 25 Mbps down/3 Mbps up definition of broadband for households.

Public schools in Nebraska, however, are well connected through a statewide fiber network, Network Nebraska, which provides substantial internet speeds to public school buildings. A school's scalable broadband could be shared with the local library, improving library internet access for their students and teachers.

The Nebraska Library Commission, in collaboration with the State Office of the Chief Information Officer, has submitted a Sparks grant application to the Institute of Museum and Library Services to partner with, and incentivize five rural public school districts and five rural public libraries to work together to increase the internet speeds at the public library. Participating schools and libraries interested in establishing a terrestrial connection between the school and library could file a mini-consortium E-rate filing in 2019-2020, leveraging available federal support through a novel model for E-rate filing.

The expected timeframe for this project will be from May 1, 2018-April 30, 2019, with pre-applications submitted and evaluated between January and March, 2018. Rural libraries, their patrons, students and teachers without home broadband access, and schools in five Nebraska communities will directly benefit from the project. Upon successful completion of the demonstration period, the project could be replicated, benefitting additional libraries, patrons, students, teachers, and schools. Additionally, the broader E-rate community will benefit from the innovative model for E-rate filing being demonstrated through this project.

For more information, contact Holly Woldt, Nebraska Library Commission, holly.woldt@nebraska.gov, 402 471-4871 or Tom Rolfes, Nebraska Information Technology Commission/Office of the Chief Information Officer, tom.rolfes@nebraska.gov, 402 471-7969.



Spring 2017, five Nebraska public libraries, including the Wymore Public Library, piloted a broadband toolkit designed to help assess use of technology and develop a technology plan. Left to Right: Tom Rolfes, Nebraska Information Technology Commission; Janet Roberts, Library Director, Wymore Public Library; Susannah Spellman, Internet2; and Holly Woldt, Nebraska Library Commission.

Network Nebraska

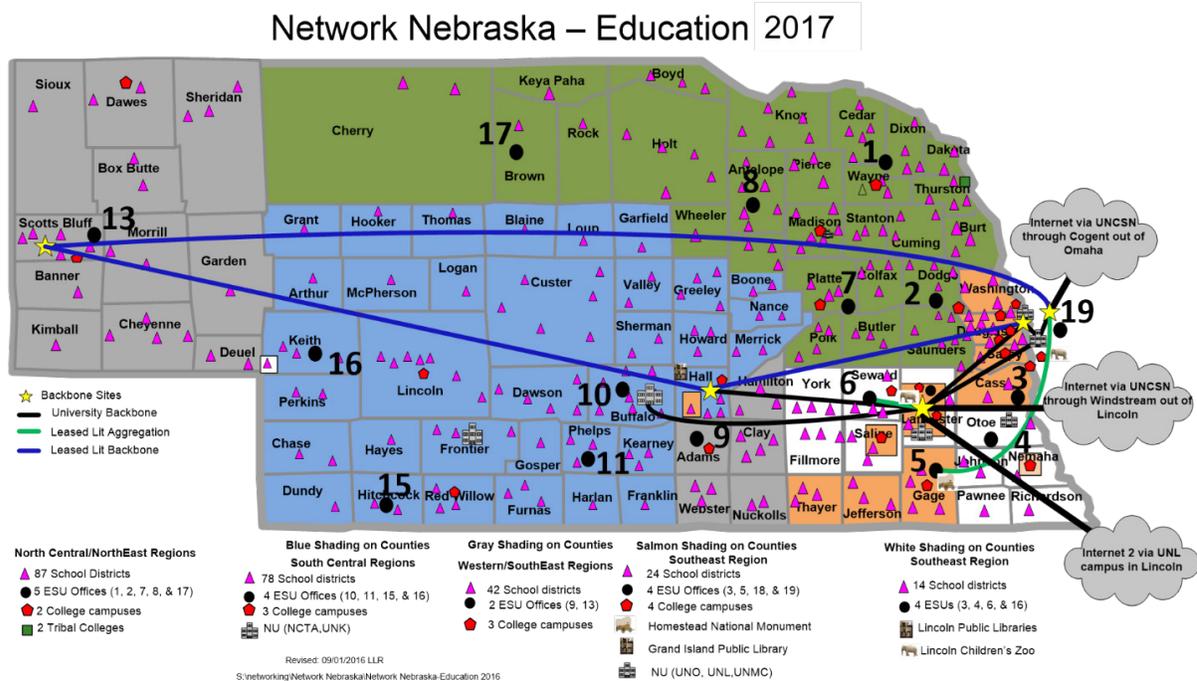
Overview

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 interconnects several hundred education entities to a multipurpose core backbone extending from Omaha to Lincoln to Grand Island and Scottsbluff, and provides aggregated Internet and commercial peering services extending out to the furthest corners of the state.



Collaborators:

- Collaborative Aggregation Partnership: Office of the CIO, University of Nebraska Computing Services Network, Nebraska Educational Telecommunications, Public Service Commission, Nebraska Department of Education, Nebraska Information Technology Commission
- Network Nebraska Advisory Group: 8 K-12 members; 8 higher education members
- Educational Service Unit (ESU) Coordinating Council, ESU-Network Operations Committee, ESU-Distance education Advisory Committee, higher education chief technology officers



Strengths/Assets:

- Every K-12 school district, educational service unit, and public college and university participate in Network Nebraska and share in its annual costs.
- Network Nebraska is a completely voluntary, self-funded project, which contributes to its resilience, sustainability and focus on customer service.
- Shared personnel support within the Office of the CIO, Administrative Services, and the University of Nebraska contribute to its ultra-low operational costs and affordability.
- Having all of the K-20 education entities on Network Nebraska provides not only a sense of pride in ownership of the network, but the daily offsets in Internet access peaks between K-12 and higher education also saves on the cost of Internet access.

Challenges/Issues:

- The absence of full-time network employees reduces the capacity for such services as marketing, communications, research & development, and customer follow-up.
- The Network Nebraska cost recovery rates, although small in comparison to other state networks, are still above what rural public libraries and private K-12 schools are accustomed to paying for Internet service provision alone.

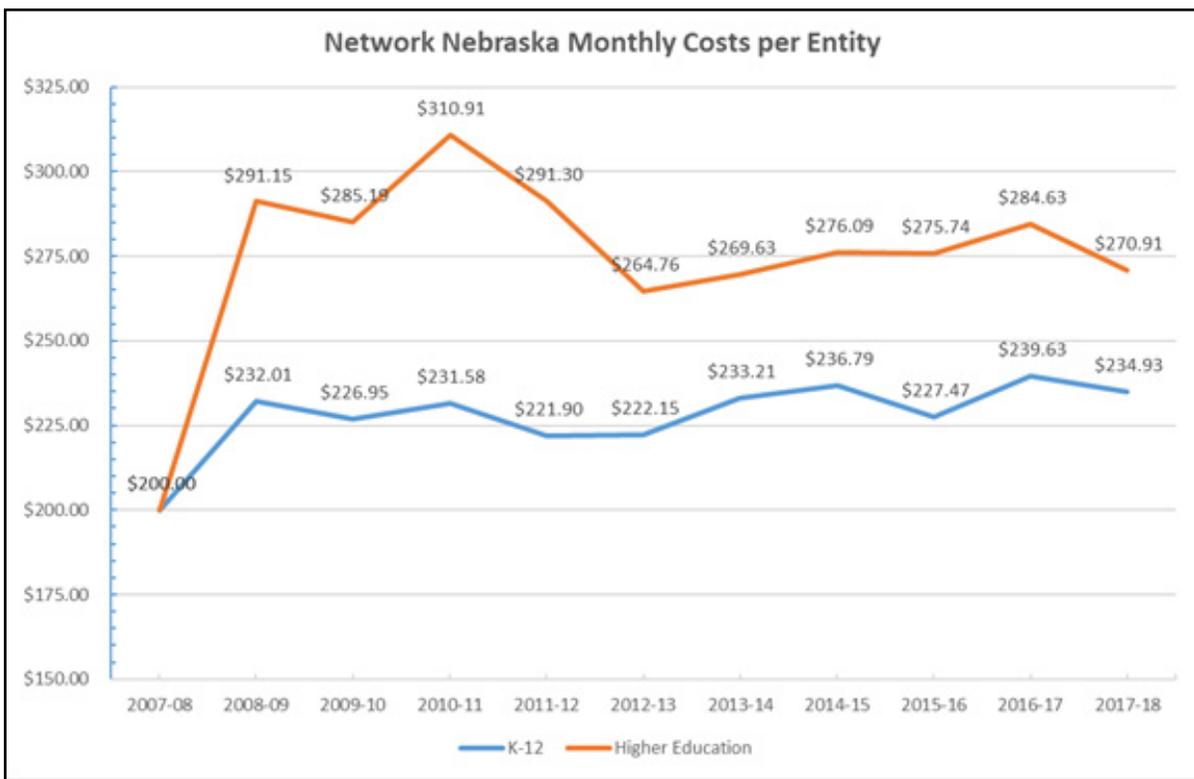
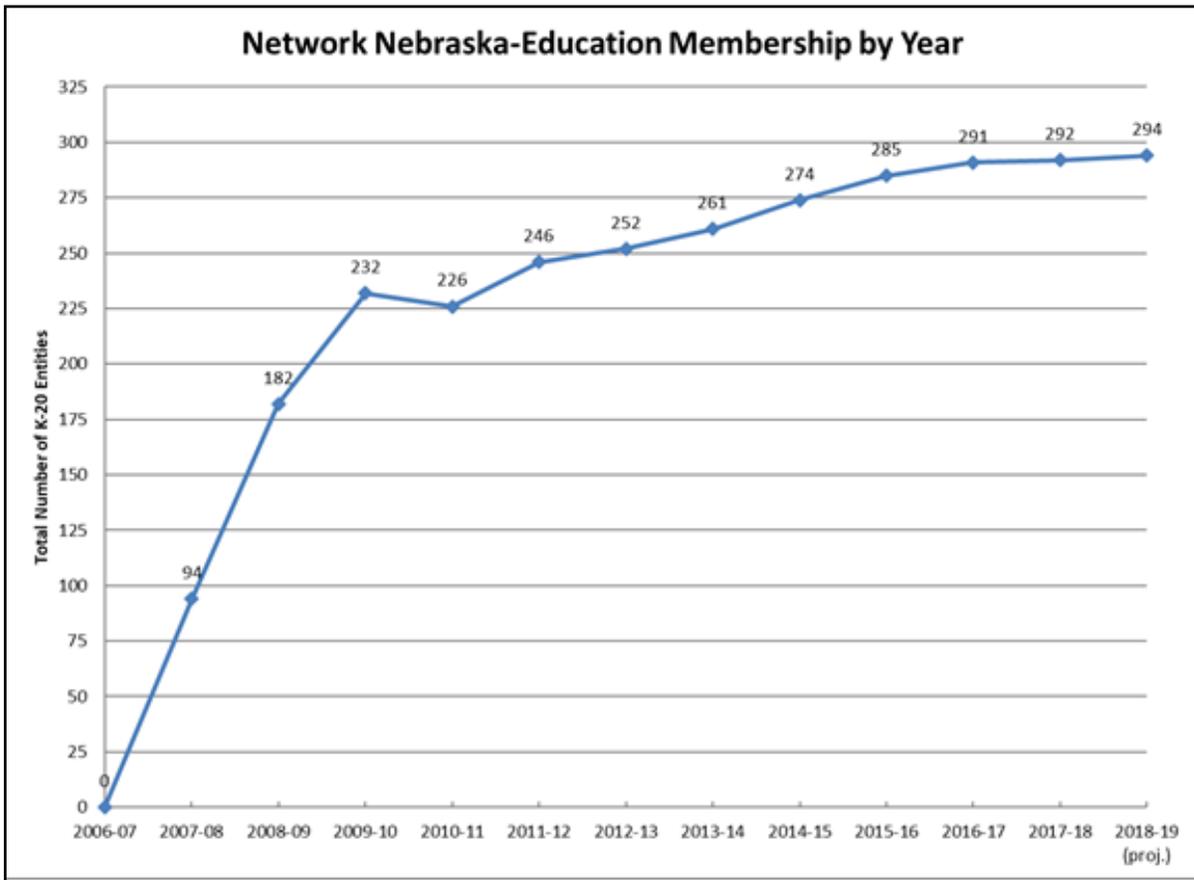
Recent Accomplishments:

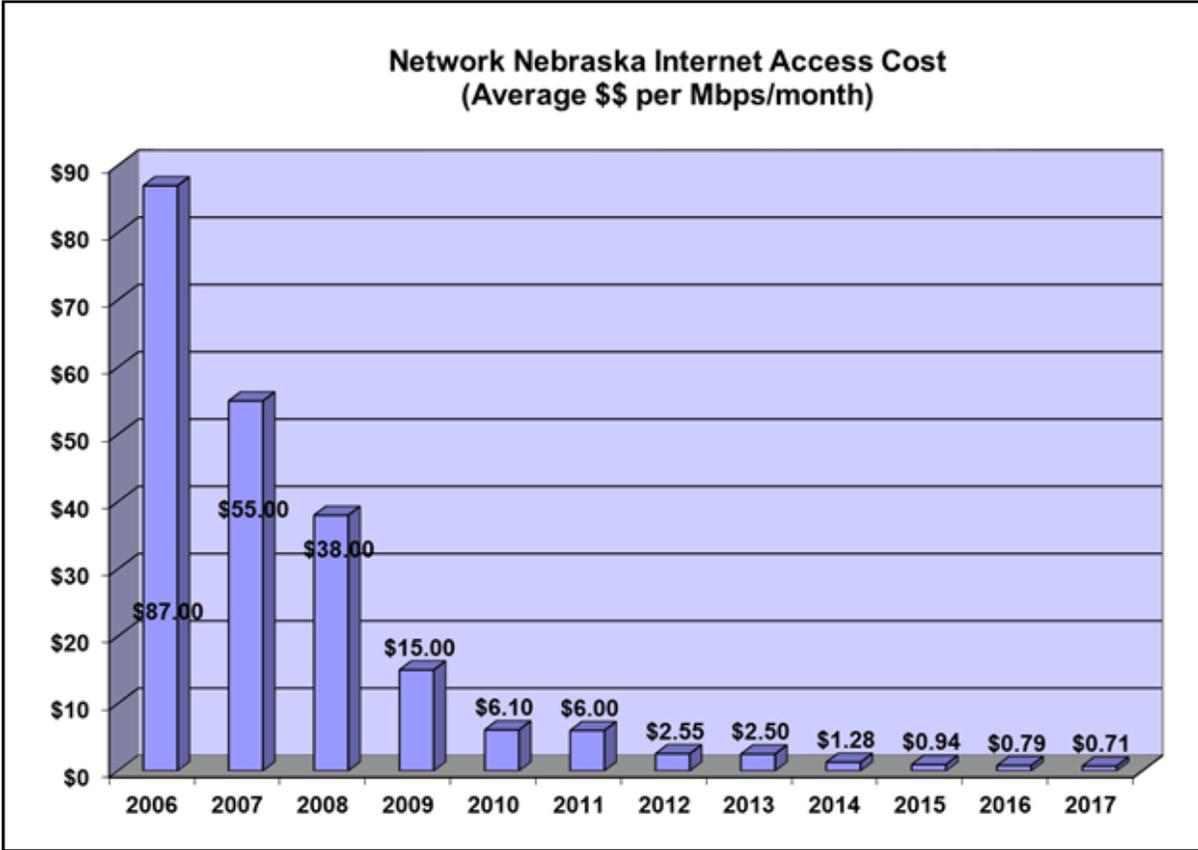
- Increased public school district participation to 100% by 7/1/2017
- Public higher education participation at 100% by 7/1/2012
- Achieved one of the lowest commodity Internet rates in the entire country, made possible through aggregation of demand and statewide bidding
- Achieved 100% retention of voluntary membership, now reaching 292 entities by 7/1/2017

Recommendations:

- Continue this initiative.
- Position Network Nebraska to provide services such as network monitoring and management, mitigation of Distributed Denial of Service (DDoS) attacks, statewide helpdesk, aggregated invoicing, and coordinated E-rate filing

Metrics





Action Items

1. Action: 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.

Lead: Education Council

Participating Entities: Collaborative Aggregation Partnership (CAP); Network Nebraska Advisory Group (NNAG), OCIO/NITC staff

Timeframe: 2018-20

Funding: Additional funding and/or resources will be required for this action item out of the Network Nebraska Participation Fee, which is a participant-funded budget.

Targets/Deliverables:

1.1 The NNAG Participant Criteria subcommittee and OCIO staff will accommodate and enforce affiliate connections into Network Nebraska.

1.1.1 Measurable: A) List the types and quantities of affiliate and hosted entity connections to the network.

1.2 The Network Nebraska support team will use automated tools to monitor network utilization and uptime and develop a web-based graphic for real-time depiction of WAN circuits, backbone and Internet.

1.2.1 Measurable: A) Regularly present utilization statistics to NNAG and to the Network Nebraska membership in an annual report.

1.3 The Network Nebraska support team will implement incident management and change control frameworks appropriate to the staffing of Network Nebraska.

1.3.1 Measurables: A) Implementation of a ticketing system that allows interaction with supported users. B) Advance communication of planned outages / upgrades that affect membership. C) Documentation of past changes to core network systems.

1.4 NNAG and CAP will guide Office of the CIO (OCIO) decisions regarding network capacity, services, and reliability.

1.4.1 Measurables: A) NNAG co-chairs will attend monthly CAP meetings and share information. B) CAP liaisons will attend bi-monthly NNAG meetings and share information.

2. Action: The Education Council and OCIO/NITC staff will serve as the communication hub for existing and potential new Network Nebraska Participants.

Lead: Education Council; OCIONITC Staff

Participating Entities: Collaborative Aggregation Partnership (CAP); Network Nebraska Advisory Group (NNAG)

Timeframe: 2018-20

Funding: Additional funding and/or resources will be required for this action item out of the Network Nebraska Participation Fee, which is a participant-funded budget.

Targets/Deliverables:

2.1 Develop and implement a communications strategy.

2.1.1 Measurables: A) Specific data and reports in an online newsletter or other form of communication to members outside of the annual fee memo. B) Designated representatives send timely notifications of changes in procedures affecting member relations with the Network Nebraska Support Team.

2.2 Conduct an annual survey of Participants to guide direction and service development.

2.2.1 Measurables: A) Survey is conducted, and data from the survey is compiled for sharing with NNAG, CAP, and the NITC Education Council.

3. Action: Review the NITC IT Security Initiative and cloud computing components of the State Government IT Strategy Initiative as drafted by the NITC State Government Council.

Lead: Education Council; NNAG

Participating Entities:

Timeframe: 2018-20

Funding: No additional funding is projected for this action item.

3.1 Develop applicable practices and strategies for security and cloud applications in educational environments

3.1.1 Measurables: A) Formulation of a Strategy document

3.2. Determine how to incorporate the applicable strategies within services of Network Nebraska.

3.2.1 Measurables: A) Additional services or security practices added to NN services list or provided by member “centers of excellence.”

Other Recommended Measurables:

- Network Nebraska backbone uptime
- Network Nebraska Internet access uptime
- Network Nebraska backbone bandwidth utilization (actual)
- Network Nebraska membership growth
- Network Nebraska Internet growth (purchased and actual)
- Network Nebraska unit cost of Internet
- Number of public and non-profit, non-education entities (e.g., libraries) connected to Network Nebraska

Lincoln Public Schools Hotspot Lending Program Expands Home Access

By Anne Byers, Nebraska Information Technology Commission

Lincoln Public Schools (LPS) Board of Education is addressing the need for expanded evening access to the internet for students through a pilot Wi-Fi hotspot lending program at Southeast High School. The program will soon expand to Northeast High School.

“I’m glad that LPS thought ahead about students who don’t have home access,” said Jean Hellwege, school librarian at Southeast High School.

Fifty devices are available for student checkout. When a teacher or counselor notices a student doesn’t have home Internet access, they tell the student about the program. Students then fill out a form from their counselor. Once approved by the principal, a responsible use agreement is sent home with the student for parents to sign. Students can then check out a hotspot from the school media center.

Mary Reiman, director of library media services at LPS, explained that “relationship building is a key” to identifying students who need additional access to the Internet. LPS evaluated hot spot devices, looking for a product that offered device management and smart filters. Only District Chromebooks can use the hotspot. Multiple computers can connect to one device so siblings or groups of students can also use the same hotspot. The devices provide the same filtering as LPS web filtering.

Seventeen of the devices are currently checked out.

The program is a collaboration of the Board of Education, Library Media Services, Computing Services and Business Affairs and was spearheaded by Kirk Langer, chief technology officer; Mary Reiman, the director of library media services; Dr. Jane Stavem, associate superintendent for instruction; Dr. Liz Standish, associate superintendent for business affairs; Tim Hahn, education technology specialist; Brent Toalson, principal of Southeast High School; and Jean Hellwege, school librarian at Southeast High School.

What advice would Hellwege give to another school about starting a similar program?

“Meet and plan how to identify the students who need them and how to get the devices into their hands,” said Hellwege. “For us, the media center was the logical place.”

For more information, contact Jean Hellwege, Southeast High School, (402) 436-1304, jhellwe@lps.org

Digital Education

Overview

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:

The Digital Education 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.

Initiative progress 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.

Collaborators:

- Educational Service Unit (ESU) Coordinating Council and advisory groups
- Public and private K-12 schools
- Nebraska Department of Education
- University of Nebraska
- Nebraska State College System
- Nebraska Community College System
- Association of Independent Colleges and Universities of Nebraska

Strengths/Assets:

- The enhancement of Digital Education is the combined focus of public and private K-12 entities and public and private higher education entities working together through Network Nebraska.
- The recent developments in learning management software, content management software, and longitudinal data tracking and depiction make it a particularly important time to improve on the statewide deployment of these systems.
- The high bandwidth transport and Internet capacity of Network Nebraska makes it possible to implement private cloud and public cloud applications to every education entity on Network Nebraska.

Challenges/Issues:

While collaboration among entities is strong, the initiative lacks a “champion” and any additional implementation funding is a scarce commodity.

Recent Accomplishments:

- ESU collaborators have developed BlendEd briefing materials and the TLT Learning Group.
- The Nebraska Department of Education has made progress on the Adviser project involving all but four Nebraska school districts.
- The Nebraska Department of Education's Future Ready Nebraska Digital Learning Plan is being developed by a statewide committee for review and approval by the State Board of Education.
- NITC Education Council and Community Council have collaborated on the design of several technology solutions that may reduce the Homework Gap and improve digital equity among economically challenged students.
- The Nebraska Library Commission, in partnership with the State Office of the CIO, has applied for a Sparks Grant from the Institute for Museum and Library Services to incentivize school districts and public libraries to work together to improve Internet speeds at rural public libraries.

Recommendations:

- Continue and refocus this initiative.
- Encourage and/or incentivize collaborators and stakeholders to be more results-oriented using project management techniques.
- Build on the excellent foundation and success of Network Nebraska to deliver high quality digital educational opportunities that provide a framework for student success.

Action Items

1. Action: Address technical challenges for students in the transition from secondary to post-secondary education.

Lead: Education Council

Participating Entities: K-12 and Higher Education professional and advisory groups

Timeframe: 2018-20

Funding: Additional funding may be required for this action item

Targets/Deliverables:

1.1 Conduct a collaborative research project to identify existing infrastructure and pedagogical efforts in both secondary and post-secondary institutions.

1.1.1 Measurables: A) Create collaborative research study engaging the colleges of education at NE higher education institutions with a focus on opportunities for graduate student involvement. B) Secure funding support for research study. C) Develop and conduct national collaborative research study with entities i.e., Educause, MHEC.

Targets/Deliverables:

1.2 Based on the results of the research project and other available resources, identify opportunities for collaboration to ease transition for students.

1.2.1 Measurables: Pending study outcomes.

1.3 Identify key challenges for transitioning students and conduct an environmental scan to identify successful approaches to mitigate those challenges.

1.3.1 Measurable: These challenges will be identified in the study.

1.4 Create a guide for effective practices in the use of flexible learning technologies.

1.4.1 Measurable: Pending study outcomes.

1.5 Develop a strategy to encourage vendors to implement data exchange standards in their products and services.

1.5.1 Measurable: Pending study outcomes.

2. Action: Expand awareness and address the need for equity of access as it relates to digital education.

Lead: Education Council

Participating Entities: NITC Community Council, K-12 and Higher Education professional and advisory groups

Timeframe: 2018-20

Funding: Additional funding may be required for this action item

Targets/Deliverables:

2.1 Form a joint study group comprised of stakeholders from across the state to identify opportunities and actions to ensure equitable access for students.

2.1.1 Measurables: A) Members of the NITC Ed Council will participate in the study proposed in LB 994. B) Alternative should LB 994 not be approved, NITC will secure resources to form its own study group with key stakeholders across Nebraska.

2.2 Education Council will work in collaboration with other Nebraska stakeholders, such as the Community Council Broadband Initiative, to find solutions for available, accessible, reliable, secure and affordable Internet access as related to academic success.

2.2.1 Measurables: A) NITC Ed Council members meet regularly with Community Council Broadband Initiative members. B) Propose grant to provide resources for affordable access through NE libraries.

2.3 Identify and promote the use of accessible products and services in achieving equity of access.

2.3.1 Measurables: A) Implement statewide bid for internet hot spot access. B) Explore TV White Space for student home access for educational purposes.

Other Recommended Measurables:

- Published research regarding infrastructure, pedagogy, equity of access, and impact on learning
- Number of K-12 students who have gained home Internet access through Digital Inclusion initiatives
- Number of public libraries that have gained faster Internet access by reaching Network Nebraska, either directly or indirectly

Seward County Attracts Investments in Broadband Infrastructure

By Anne Byers, Nebraska Information Technology Commission

Seward County is leveraging public-private partnerships to attract investments in broadband infrastructure. Jonathan Jank, President and CEO of the Seward County Chamber and Development partnership, recognizes the importance of fiber to a community and has led the county's efforts to improve broadband infrastructure.

"As an economic development professional, I see fiber optic service as the fifth utility: sewer, water, electric, natural gas and fiber," said Jank. "It is a critical piece of the economic development puzzle. All of my economic development recruitment projects demand fiber at this point. I can't remember my last proposal that hasn't included that expectation of our community and of our county. We were fortunate to land a new ag manufacturing company pretty recently in Seward. And they chose Seward because they had building availability, access to good labor, and because we had fiber optic connectivity. We were competing against multiple other communities, and we won because of those things."



Because of Seward's proximity to Lincoln, many Seward residents expect to have the same amenities available in Lincoln, including fiber internet access.

"So we chose to incentivize a fiber optic service provider to build in our historic downtown business district, and we did that through utilizing our LB 840 funds," said Jank.

The Local Option Municipal Economic Development Act established by LB840 in 1991

authorizes incorporated cities and villages to collect and appropriate local tax dollars—including sales and/or property tax for economic development purposes. In order to utilize LB 840 funds, a community must develop a local economic development plan and have it approved by voters. The approved plan becomes the basis for the collection and expenditures of LB 840 funds for economic development. Over 60 Nebraska communities are currently eligible to offer loans, grants, and other activities through LB 840.

“And actually if you look into state statutes, LB 840 was created so that a portion of that can be used for infrastructure investment,” said Jank. “For those that have that available in your community as an economic development tool, I encourage you to check that out.”

Seeing the success in Seward, the county expanded its efforts to improve broadband infrastructure to Milford, Seward County’s second largest community. The county ran a similar game plan in Milford, utilizing LB 840 funds to incentivize fiber to the business district. The county also used some philanthropy funds to build fiber to the home in Milford as well.

“What is exciting about the investment that was made through LB840 in Seward, in particular, is that investment tends to attract more investment. And investments along with fiber to the business district actually led to fiber to the home. We had Bluestem Fiber choose to come into Seward as one of their pilot communities to build fiber to the home. And really the only complaint we’ve heard is when are you going to get to my home. They can’t build fast enough. So that has become an expectation. We are fortunate to have that level of investment in both Seward and Milford. And really our long-term goal is to be potentially the first fiber to the home county in the state.”

Building community support was also an important to Seward County’s success. Through talking to business owners during business retention and expansion visits, internet connectivity was identified as an issue—especially in downtown Milford. Members of the LB 840 committee, which included the superintendent of the schools in Milford, also identified the need for better internet access for telecommuters and for students needing internet access to complete homework.

“So we were able to articulate all those things, and say we have frustrations in the business community,” said Jank. “We educated our city council members about the importance of it, so everyone had a unified message that we were able to give as we sent out an RFP to see who wants to build in Milford.”

As more residents of towns and cities in southeast Nebraska get fiber access, residents of rural parts of Nebraska are sometimes frustrated that they don’t have fiber.

“I think that just price points can be a challenge for people that don’t understand what fiber can do for their company, or for their home, or for their family,” said Jank. “It’s been important to us to help get that education out in the community as to how they could utilize it further to benefit their bottom line or benefit their family.”

Jank is also working with Bluestem Fiber and other providers to explore ways to better connect those in rural areas of the County.

When Bluestem came to the Seward County Fair and talked to people there, they discovered that the majority of the people were in rural areas.

“That’s critical,” said Jank. “It can’t just be to population centers, you have to think broader scale because many of those people are our farmers are our agricultural producers that need that level of connectivity. If we are not able to help serve them, then we aren’t doing our job.”

Jank gave this advice to communities that want to improve their internet service: “If you are not engaging your chamber of commerce and your economic development organizations in these broadband conversations, you should be. This is critical to the economic vitality of our state and so I would just make that general encouragement to talk with those professionals in and around your community.”



To learn more about how communities can work with telecommunications providers, check out the [Broadband 102 video](#) from the Nebraska Broadband Today conference. The session is moderated by Cullen Robbins, Nebraska Public Service Commission and features three panelists: Tom Shoemaker, Pinpoint Holdings, Brad Moline, Allo Communications, and Jonathan Jank, Seward County Chamber & Development Partnership.

Rural Broadband and Community IT Development

Overview

Objective:

To support efforts to accelerate the deployment of broadband services in unserved and underserved rural areas of the state and to address issues related to the adoption and utilization of broadband technologies.

Description:

Broadband availability, widespread adoption of broadband technologies, and a skilled IT workforce have become requirements for communities wishing to grow their economies. In the past, the Community Council has focused primarily on encouraging the widespread adoption of broadband technologies. However, as gigabit broadband has become available in an increasing number of communities in Nebraska and in the United States, the gap in service availability has grown between areas with access to very high speed broadband and those areas without access to internet at speeds of 25 Mbps down/3 Mbps up which is the FCC's current definition of broadband. Accordingly, this initiative is being refocused to address the need for better broadband availability in unserved and underserved rural areas of the state.

Broadband Availability

A rural-urban broadband gap exists in both Nebraska and the United States. Broadband of at least 25 Mbps down and 3 Mbps up was available to 88.9% of Nebraskans, but only 65.5% of rural Nebraskans in 2016. Nebraska lags the U.S. in broadband availability, with broadband of 25 Mbps down and 3 Mbps up available to 92.3% of Americans and 69.3% of rural Americans in 2016.

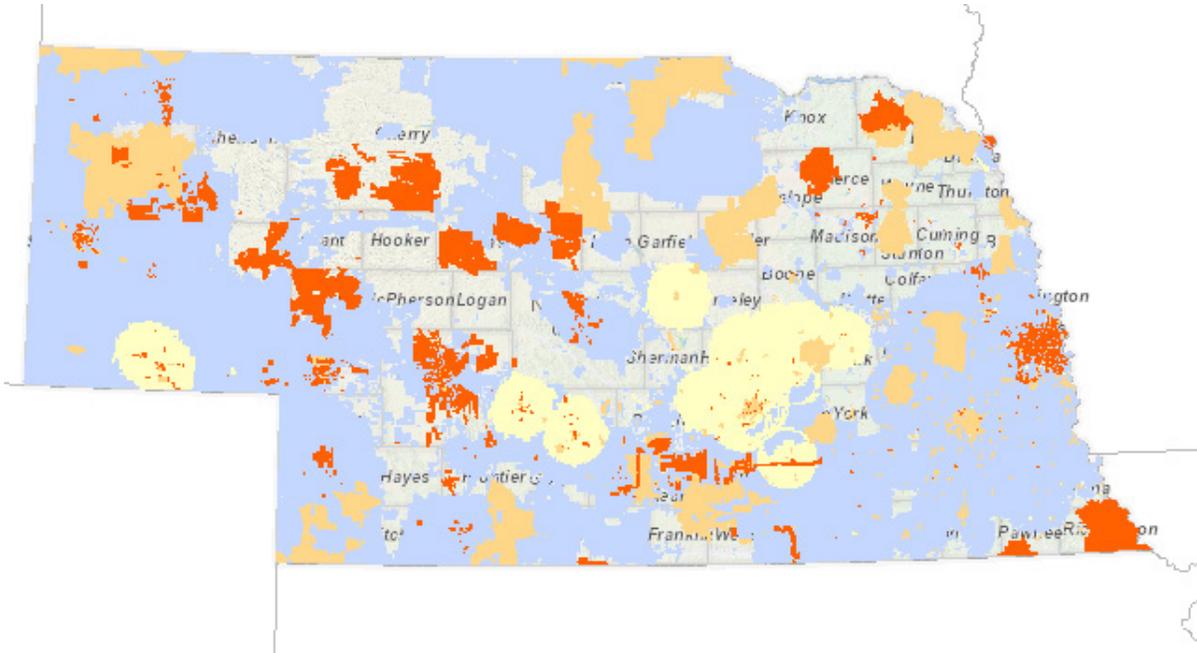
% Population with Access to Fixed 25 Mbps/3 Mbps Service (2016)

	U.S./State (Urban and Rural)	Rural Areas	Urban Areas
United States	92.3%	69.3%	97.9%
Nebraska	88.9%	65.5%	97.5%

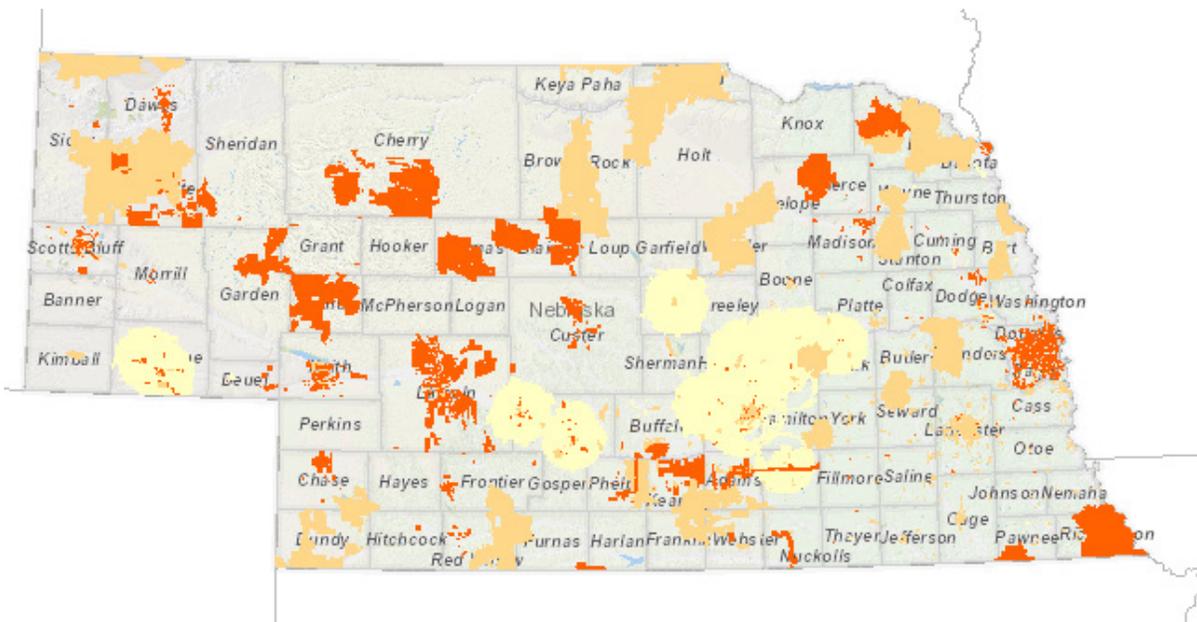
Source: FCC's [2018 Broadband Deployment Report](#)

These maps show that most areas of the state have broadband availability of greater than 10 Mbps download/1 Mbps upload. However, broadband at greater than 25 Mbps download/3 Mbps is available in most of Nebraska's larger communities, but only in limited rural areas.

Broadband Availability by Speed Tiers—Greater than 10 Mbps DL/1 Mbps UL (2016)



Broadband Availability by Speed Tiers—Greater than 25 Mbps DL/3Mbps UL (2016)



- Speed Tiers
- > 100 Mbps DL / 10 Mbps UL
- >50 Mbps DL / 3 Mbps UL
- >25 Mbps DL / 3 Mbps UL
- > 10 Mbps DL / 1 Mbps UL

Source: Nebraska Broadband Map broadbandmap.nebraska.gov, using 2016 FCC Form 477 data

Broadband Adoption. In 2016, 82% of U.S. households and 78% of Nebraska households subscribed to fixed internet service of at least 200 kbps according to the FCC's [Internet Access Services Report](#). At higher speed tiers, the gap in subscription rates between Nebraska and the U.S. average widens. In 2016, 50% of U.S. households, but only 38% of Nebraska households subscribed to broadband of at least 25 Mbps down and 3 Mbps up. Nebraska ranked in the middle of our neighboring states on this measure—behind Colorado (60%), South Dakota (47%) and Wyoming (45%), but tightly clustered with Iowa (38%), Missouri (37%), and Kansas (36%).

**% of Households with Fixed Connections at
Various Speeds by State as of Dec. 2016**

State	At least 200 kbps in at least one direction	At least 10 Mbps Down and 1 Mbps Up	At least 25 Mbps Down and 3 Mbps Up	At least 100 Mbps Down and 10 Mbps Up
U.S. Total	82%	66%	50%	15%
Colorado	89%	66%	60%	*
Iowa	74%	47%	38%	7%
Kansas	79%	59%	36%	16%
Missouri	75%	55%	37%	10%
Nebraska	78%	55%	38%	7%
South Dakota	76%	64%	47%	4%
Wyoming	77%	54%	45%	0%

**Data withheld to maintain firm confidentiality*

Source: [FCC Internet Access Services: Status as of Dec. 31, 2016](#)

It is important to note that these figures do not include households who use mobile broadband as their only source of home internet access. The number of households with phone only internet has been growing, with a 2015 Pew Internet survey finding that 13% of adults have phone-only internet access. With households with phone only access added, the percent of Nebraska households with internet access may be closer to 90%. Because many mobile internet plans include data caps, households with phone only internet may face significant limitations on their usage.

Strengths/Assets:

- Stakeholder support for rural broadband is high nationally and in Nebraska.
- Pending legislation, especially LB 994 which would create a rural broadband task force, may help the state better address the need for better broadband in some rural areas.
- Representatives of the Nebraska Information Technology Commission's Community and Education Councils, Nebraska Public Service Commission, University of Nebraska, Nebraska Library Commission, and USDA Rural Development have formed a strong partnership through the Nebraska Broadband Initiative. The group is sharing information on best practices and broadband-related developments through the Broadband Nebraska newsletter.

The group also partnered with the Nebraska Telecommunications Association to organize broadband conferences in 2017 and 20167. The [Broadband 101 and 102 sessions](#) at the 2017 Nebraska Broadband Today conference were videotaped by staff of the Office of Chief Information Officer to help community leaders better understand broadband technologies and policy as well as to help them better work with telecommunications providers.

- Libraries are key partners in providing internet access and technology training in communities. Recent grants to the Nebraska Library Commission are improving the capacity of Nebraska libraries to act as community anchors. The Nebraska Library Commission was awarded a National Leadership Grant of \$530,732 by the Institute of Museum and Library Services (IMLS) to develop 4 mobile makerspaces which will be hosted by 30 public libraries across Nebraska during the three years of the grant. Partners in this project include the University of Nebraska Lincoln (UNL), Nebraska Innovation Studio, Nebraska Extension, Regional Library Systems, and local public libraries. The Nebraska Library Commission also partnered with the Nebraska Information Technology Commission on an innovative grant proposal to the Institute of Museum and Library Services develop partnerships between schools and libraries to improve internet service in local libraries.

Challenges/Issues:

- Although there is funding for broadband, primarily through the federal Connect America Fund and the Nebraska Universal Service Fund, these funding sources fall short of fully funding the deployment of broadband to all Nebraskans based on current cost estimates.
- The Nebraska Broadband Initiative may need to broaden its stakeholder base to better address the need for information and best practices related to broadband development.

Collaborators:

- Nebraska Information Technology Commission Community Council and Education Council
- Nebraska Public Service Commission
- University of Nebraska-Lincoln
- Nebraska Library Commission
- Other stakeholders

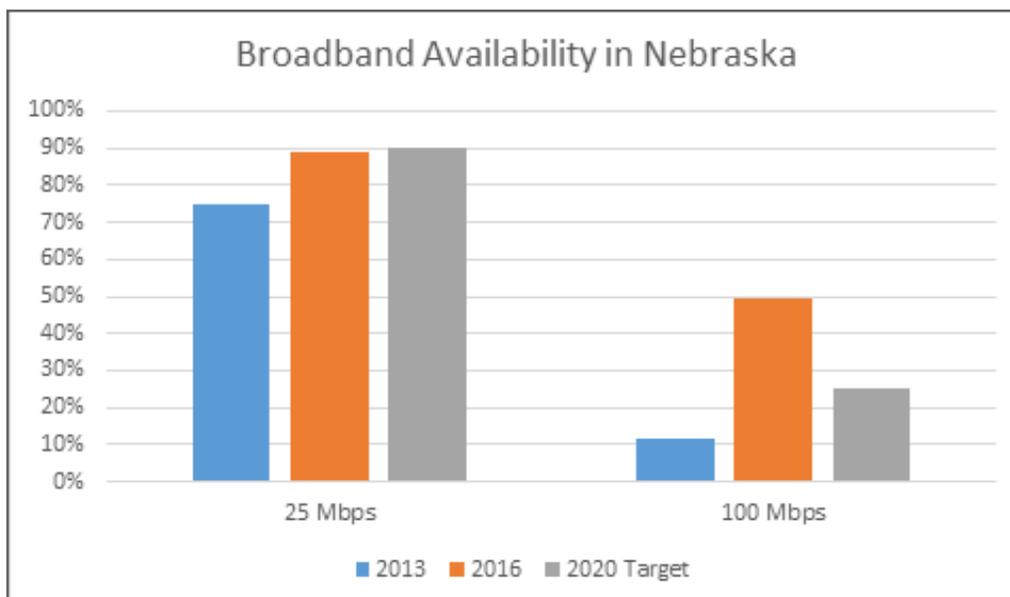
Recent Accomplishments:

The Nebraska Broadband Initiative has engaged in the following activities:

- **The Broadband Nebraska Newsletter has profiled:**
 - Ravenna Leverages Technology, Wireless Broadband (Feb./March 2018)
 - Seward County Attracts Investments in Broadband Infrastructure (Feb./March 2018)
 - [Lincoln Leverages Partnerships, Becomes Smart Gigabit Community \(Dec. 2017\)](#)
 - [Hartington, Hartelco Receive Smart Rural Community Recognition \(Dec. 2017\)](#)
 - NSF Grant Brings Makerspace, Collaborative Opportunities to Sidney ([Fall 2017](#))
 - FirstNet, AT&T Begin Work in Nebraska; Verizon May Compete ([Fall 2017](#))
 - Grant Supports Adoption of Health Information Exchange in 31 Counties ([Fall 2017](#))
 - PSC Docket, Hearing Look at Revising NUSF Contribution Methodology ([Fall 2017](#))
 - [Nebraska Broadband Special Report: Nebraska and the Digital Divide Index \(Spring 2017\)](#)
 - Gallup Builds IT Talent Pipeline ([Jan. 2017](#))
 - Broadband and Homework: How Do We Address the Homework Gap? ([Jan. 2017](#))

- Lincoln Public Schools Hotspot Lending Program Expands Home Access ([Jan. 2017](#))
 - Norfolk Public Library Lends Hotspots, Starts Community Discussions ([Jan. 2017](#))
 - Responsive Countryside: The Digital Age and Rural Communities An Interview with Roberto Gallardo ([Sept./Oct. 2016](#))
 - Six Simple Ways to Address Broadband Development ([Sept./Oct. 2016](#))
 - Steps You Can Take if You Want Better Broadband Service ([Sept./Oct. 2016](#))
- The group also partnered with the Nebraska Telecommunications Association to organize the Nebraska Broadband Today conferences in 2017 and 2016.
 - The [Broadband 101 and 102 sessions](#) at the 2017 Nebraska Broadband Today conference were videotaped by staff of the Office of Chief Information Officer to help community leaders better understand broadband technologies and policy as well as to help them better work with telecommunications providers.
 - The Nebraska Library Commission also partnered with the Nebraska Information Technology Commission on an innovative grant proposal to the Institute of Museum and Library Services develop partnerships between schools and libraries to improve internet service in local libraries.

Metrics



Action Items

1. Action: Support the efforts of communities to address broadband-related development by sharing broadband-related news and highlighting exemplary programs through the Broadband Nebraska newsletter, social media, and other activities through an expanded Nebraska Broadband Initiative.

Lead: NITC Community Council, University of Nebraska-Lincoln Extension and Center for Applied Rural Innovation, Nebraska Public Service Commission, and Nebraska Library Commission

Participating Entities: NITC Community Council, Nebraska Public Service Commission, University of Nebraska-Lincoln Extension and Center for Applied Rural Innovation, the AIM Institute, and other interested stakeholders.

Timeframe: 2017-2018

Funding: Leveraging existing resources

Targets/Deliverables:

1. At least 4 issues of Broadband Nebraska Newsletter per year
2. Other partnership activities

2. Action: Expand awareness and address the need for digital inclusion and equitable broadband access through educational materials, best practices and community outreach.

Lead: Community Council and Education Council

Participating Entities: NITC Community Council, Education Council, Nebraska Broadband Initiative

Timeframe: 2017-2018

Funding: Leveraging Existing Resources

Targets/Deliverables:

1. Develop and share educational materials and profiles of exemplary programs.
2. Work with the Community Council, Education Council and Nebraska Broadband Initiative to develop an outreach program to help communities better understand and address digital equity issues.

3. Action: Support the efforts of Network Nebraska and the Education Council to address digital equity and to explore partnerships to improve library broadband access.

Lead: Community Council and Education Council

Participating Entities: NITC Community Council, Education Council, Nebraska Broadband Initiative

Timeframe: 2017-2018

Funding: Leveraging Existing Resources

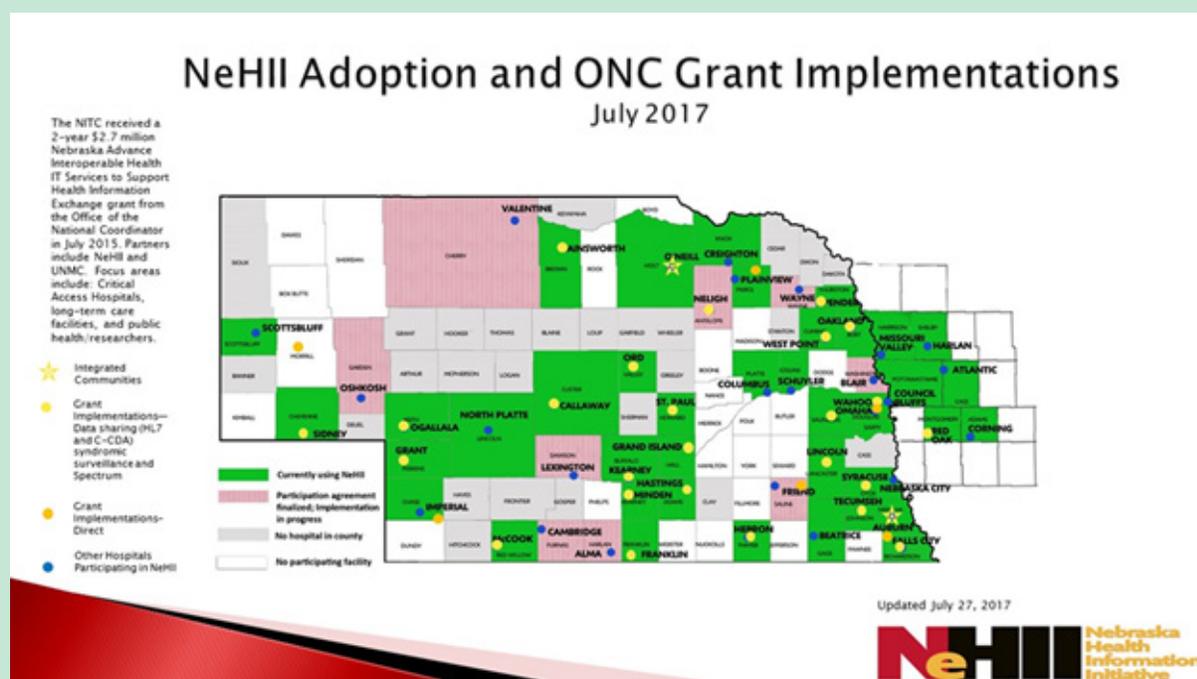
Grant supports adoption of health information exchange in 31 counties

On July 27, 2015, the Nebraska Information Technology Commission was awarded a \$2.7 million Advance Interoperable Health IT Services to Support Health Information Exchange (HIE) cooperative agreement (Grant Number 90IX0008) from the Office of the National Coordinator for Health Information Technology to support the adoption of health IT, the exchange of health information, and the interoperability of health information technology. Partners in the two-year grant included the Nebraska Health Information Initiative (NeHII) and the University of Nebraska Medical Center (UNMC).

The grant supported the adoption of health information exchange through NeHII in 47 facilities and health systems—including 21 Critical Access Hospitals (CAHs)—in 31 counties in Nebraska and in Montgomery County, Iowa. Through the grant, the number of hospitals and providers sharing data with NeHII increased from 28 to 53. Over 700 providers and clinical staff were added as users. New functionality implemented included population health analytics, the use of C-CDA exchange to provide information to NeHII, and an HIE to HIE gateway with the Missouri Health Exchange. Two Critical Access Hospitals were also successfully implemented to share syndromic surveillance data with the State's syndromic surveillance system.

The grant also helped health care facilities integrate health information technology into their workflow. UNMC provided assistance in workflow integration to facilities participating in two rural communities selected as integrated communities. Lessons learned are being shared through use case-based training modules. UNMC partners also worked with NeHII to demonstrate the ability to utilize NeHII to conduct research.

The map below shows the implementations funded through this grant.





Services Division of Public Health, NeHII, and Dr. First. The PDMP was funded by grants to the Nebraska Department of Health and Human Services from the Department of Justice Bureau of Justice Assistance and the Centers for Disease Control and Prevention.

- The Nebraska Department of Health and Human Services Division of Medicaid and Long-term Care is working with NeHII to receive federal Medicaid funding to support health information in Nebraska.

Challenges/Issues:

- Interoperability remains a challenge as standards are still being developed.
- Additional efforts may be needed to better integrate health IT into provider workflows.
- Adoption of technologies which allow patients to access their health information and better manage their care may require outreach efforts and education for both health care providers and patients.
- Providers not eligible for Meaningful Use incentive payments (including long-term and post-acute care providers and behavioral health providers) may find investing in health IT to be financially challenging.
- Blocking of health information by health systems and vendors is an issue identified by the Office of the National Coordinator for Health IT.

Collaborators:

- Nebraska Department of Health and Human Services
- NeHII
- UNMC
- Other stakeholders

Recent Accomplishments:

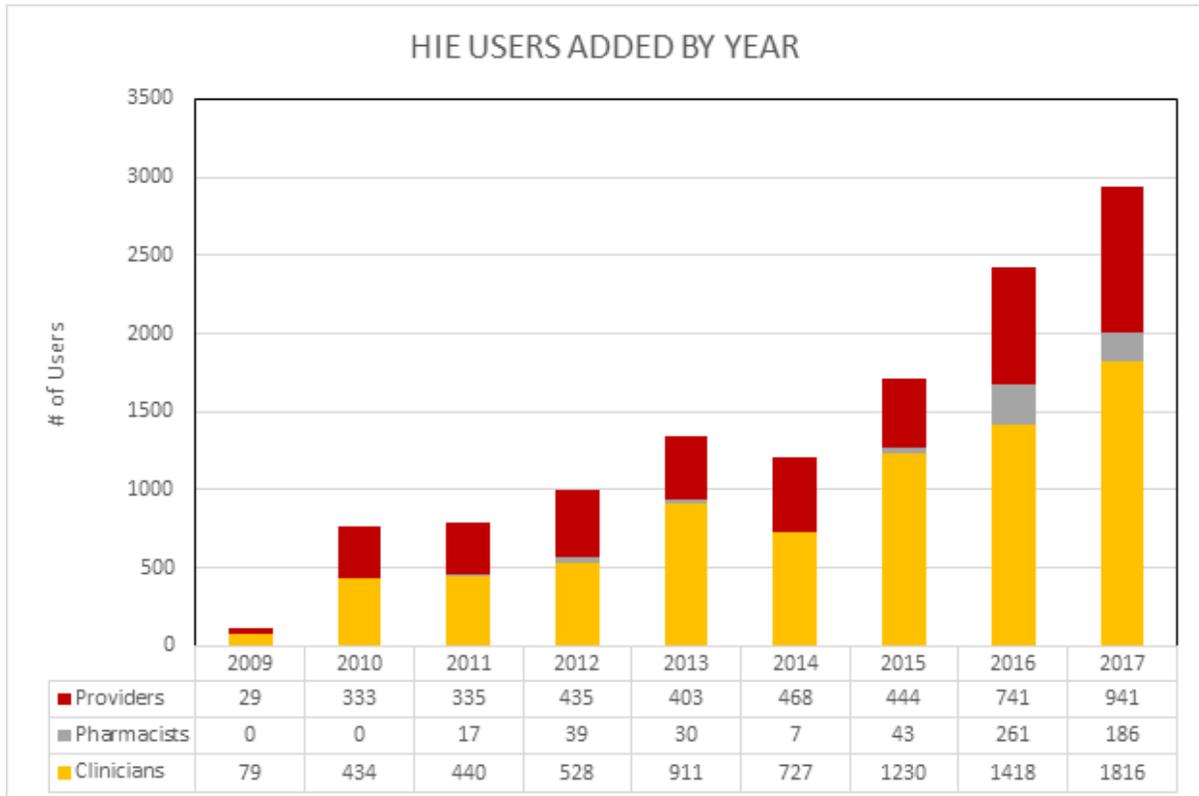
- The NITC received a \$2.7 million cooperative agreement on July 27, 2015 to advance health information exchange in Nebraska from the Office of the National Coordinator for Health IT, U.S. Department of Health and Human Services. The NITC partnered with NeHII and UNMC on the two-year grant. The grant supported the adoption of health information exchange through NeHII in 47 facilities and health systems—including 21 Critical Access Hospitals (CAHs)—in 31 counties in Nebraska and in Montgomery County, Iowa. Through the grant, the number of hospitals and providers sharing data with NeHII increased from 28 to 53. Over 700 providers and clinical staff were added as users. New functionality implemented included population health analytics, the use of Consolidated-Clinical Document Architecture (C-CDA) exchange to provide information to NeHII, and an HIE to HIE gateway with the Missouri Health Exchange. Two Critical Access Hospitals were also successfully implemented to share syndromic surveillance data with the State's syndromic surveillance system.

The grant also helped health care facilities integrate health information technology into their workflow. UNMC provided assistance in workflow integration to facilities participating in two rural communities selected as integrated communities. Lessons learned are being shared through use case-based training modules. UNMC partners also worked with NeHII to demonstrate the ability to utilize NeHII to conduct research.

- Reporting of all medications to the PDMP began on Jan.1, 2018. There are 5,847 prescribers and pharmacists provisioned to access the PDMP as of Feb. 2018. Enhancements, including a morphine milligram equivalents (MME) alert, have gone live.

Metrics

The graph below indicates the steady increase in users (Providers, Pharmacists, Clinicians) added to the system from 2009 through 2017.



Action Items

1. Action: Learn more about data governance and discuss follow-up steps including possibly forming a Data Governance Work Group

Lead: NITC eHealth Council

Participating Entities: NITC eHealth Council and others (to be determined)

Timeframe: 2017-2018

Funding: Leveraging existing resources

Targets/Deliverables:

- The eHealth Council will meet on March 13, 2018 to discuss this issue and make initial recommendations as to next steps.



2. Action: Learn more about how health IT can support public health, including the priorities identified in the 2017-2021 Nebraska State Health Improvement Plan, and discuss follow-up steps.Lead: Community Council and Education Council

Lead: NITC eHealth Council

Participating Entities: NITC eHealth Council and others (to be determined)

Timeframe: 2017-2018

Funding: Leveraging existing resources

Targets/Deliverables:

1. The eHealth Council will meet in the spring of 2018 8 to discuss this issue and make initial recommendations as to next steps.

Community Council

Rural and Community IT Development

Jay Anderson, NebraskaLink

Pam Adams, American Broadband

Rod Armstrong, Co-Chair, AIM Institute

Randy Bretz, TEDxLincoln, Curator

Shonna Dorsey, AIM Institute

Connie Hancock, University of Nebraska Extension

Johnathan Hladik, Center for Rural Affairs

Jacob Knutson, Nebraska Department of Economic Development

Timothy Lindahl, Wheatbelt Public Power District

David Lofdahl, IT Consultant

Megan McGown, North Platte Area Chamber of Commerce and Development Corporation

Libraries and Local Government

Chris Anderson, City of Central City

Brett Baker

Phil Green, Co-Chair, City of Blair

Jessica Chamberlain, Norfolk Public Library

Steve Fosselman, Grand Island Public Library

Steve Henderson, City of Lincoln

Holly Woldt, Nebraska Library Commission

At Large

Mary Ridder, Nebraska Public Service Commission



Education Council

Post Secondary

Bret Blackman, University of Nebraska—Omaha

Derek Bierman, Northeast Community College

Mike Carpenter, Doane University

John Dunning, Wayne State College

Steve Hotovy, Nebraska State College System

Greg Maschman, Nebraska Wesleyan University

Mary Niemiec, Co-Chair, University of Nebraska

Tom Peters, Central Community College

K-12

Burke Brown, District OR-1 Palmyra/Bennet Public Schools

Matt Chrisman, Mitchell Secondary School

Dr. Ted DeTurk, Educational Service Unit 2

Stephen Hamersky, Daniel J. Gross Catholic High School

Dr. Dan Hoelsing, Schuyler Community Schools

Trent Kelly, Hastings Public Schools

Alan Moore, Educational Service Unit 3

Gary Needham, **Co-Chair**, Educational Service Unit 9

Non-Voting Liaisons

Dr. Mike Baumgartner, Coordinating Commission for Postsecondary Education

SuAnn Witt, Nebraska Department of Education

Ed Toner, Office of the CIO, Nebraska Department of Administrative Services

Chad Davis, Nebraska Educational Telecommunications Commission

eHealth Council

The State of Nebraska

Linda Wittmuss, Division of Behavioral Health

Health Care Providers

Kevin Borchert, Nebraska Methodist Health System and Nebraska Board of Pharmacy

Marty Fattig, Nemaha County Hospital

Cindy Kadavy, Nebraska Health Care Association

Dr. Shawn Murdock, Midlands Family Medicine

Brian Sterud, Faith Regional Health Services

Dr. Delane Wycoff, Co-Chair, Pathology Services, PC

Bridget Young, Visiting Nurse Association

eHealth Initiatives

Kevin Conway, NeHII and Nebraska Hospital Association

Max Thacker, Nebraska Statewide Telehealth Network and UNMC

Anna Turman, Western Nebraska Health Information Exchange and Chadron Community Hospital

Public Health

Kathy Cook, Lincoln-Lancaster County Public Health Department

Joel Dougherty, OneWorld Community Health Centers

Marsha Morien, Co-Chair, UNMC College of Public Health

Dave Palm, UNMC

Jenifer Roberts-Johnson, Department of Health and Human Services, Division of Public Health

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Payers and Employers

Rama Kolli, Blue Cross Blue Shield

Consumers

June Ryan, Retired

Robin Szwaneck, AARP

Resource Providers, Experts, and Others

Kimberly Galt, Creighton University School of Pharmacy and Health Professions

Dr. Jim McClay, UNMC

Todd Searls, Wide River

GIS Council

Sudhir Ponnappan, Chair, Nebraska Game and Parks Commission

John Beran, State Surveyor

Chad Boshart, Nebraska Emergency Management Agency

Erin Bottger, Governor's Policy Research Office

Karis Bowen, Department of Health and Human Services

Lash Chaffin, League of Nebraska Municipalities

Timothy Cielocha, Nebraska Public Power District

Doug Hallum, Conservation and Survey Division, University of Nebraska-Lincoln

Eric Herbert, Sarpy County GIS

Les Howard, Conservation and Survey Division, University of Nebraska-Lincoln

John Kraai, Nebraska State Patrol

James Langtry, USGS Nebraska Water Science Center

Jeff McReynolds, City of Lincoln, Lancaster County, Nebraska

Jennifer Myers, Nebraska Association of County Officials

Kea Morovitz, ViceChair, Nebraska Public Service Commission

Gary Morrison, Department of Environmental Quality

James W. Ohmberger, Office of the Chief Information Officer

Barb Oswald, Department of Revenue

Danny Pittman, Nebraska Association of County Officials

Michael Preston, Trimble Inc. - Energy

Steve Rathje, Department of Natural Resources

Lesli Rawlings, Nebraska Geospatial Professional Association

Michael Schonlau, Douglas County, City of Omaha

Ruth Sorenson, Department of Revenue

Milda Vaitkus, Conservation and Survey Division, University of Nebraska-Lincoln

Todd Whitfield, Lamp Rynearson & Associates

Chuck Wingert, Nebraska Association of Resources Districts

Justin Wolff, Department of Transportation



State Government Council

Agency Director or Designee

John Albin, Department of Labor

Chris Ayotte, Department of Revenue

John Bolduc, Nebraska State Patrol

Erin Bottger, Governor's Policy Research Office

Dennis Burling, Department of Environmental Quality

Byron Diamond, Department of Administrative Services

Darrell E. Fisher, Crime Commission

Chris Hill, Department of Health and Human Services

Steve Ingracia, Department of Transportation

Rhonda Lahm, Department of Motor Vehicles

Kelly Lammers, Department of Banking and Finance

Kim Menke, Department of Natural Resources

Robin Spindler, Department of Correctional Services

Other

Jackie Boesen, Workers' Compensation Court

Dean Folkers, Department of Education

John Gale, Secretary of State

Dorest Harvey, Private Sector

Jim Ohmberger, Office of the CIO, Enterprise Computing

Gerry Oligmueller, State Budget Administrator

Jayne Scofield, Office of the CIO, Network Services

Corey Steel, Supreme Court



Ed Toner, Chair, Chief Information Officer

Rod Wagner, Library Commission

Technical Panel

Mark Askren, University of Nebraska Computing Services Network

Christy Horn, University of Nebraska

Kirk Langer, Chair, Lincoln Public Schools

Ed Toner, Office of the CIO, State of Nebraska

Michael Winkle, Nebraska Educational Telecommunications