AGENDA
NEBRASKA INFORMATION TECHNOLOGY COMMISSION
Varner Hall - Board Room
3835 Holdrege Street
Lincoln, Nebraska
Thursday, November 14, 2019
9:00 a.m.

9:00 a.m.	1.	Roll call; meeting notice; Open Meetings Act information.
	2.	**Approval of July 25, 2019 meeting minutes.*** [Motion to approve.] *(Attachment 2)*

3. Reports from the advisory councils and Technical Panel.

9:05 a.m.   a.   Technical Panel report – Kirk Langer.
          i.   Enterprise projects.
                1.   **Project closure: Oracle Fusion project, Dept. of Administrative Services.*** [Motion to close project.] *(Attachment 3-a-i-1)*
                2.   Project update: Nebraska State Accountability (NeSA) project, Dept. of Education – Jeremy Heneger.
                     Project closure: Nebraska State Accountability (NeSA) project, Dept. of Education * [Motion to close project.]
                3.   Project update: Nebraska Regional Interoperability Network (NRIN) project – Sue Krogman and NRIN Governance Board Executive Committee.
                4.   Draft Report on the Status of Enterprise Projects. *(Attachment 3-a-i-4)*
          ii.   Technical standards and guidelines.
                1.   **Proposal 12. Amend the accessibility policy.*** [Motion to approve.] *(Attachment 3-a-ii-1)*

9:30 a.m.   b.   GIS Council report – John Watermolen. *(Attachment 3-b)*
          i.   **Membership nominations.*** [Motion to approve.]

9:40 a.m.   c.   Education Council report – Tom Rolfes.
          i.   **Membership nominations.*** [Motion to approve.] *(Attachment 3-c-i)*

9:50 a.m.   d.   Community Council report – Anne Byers. *(Attachment 3-d)*
          i.   **Membership nomination.*** [Motion to approve.]

10:00 a.m.   e.   eHealth Council report – Anne Byers. *(Attachment 3-e)*
          i.   **Membership nomination.*** [Motion to approve.]

10:10 a.m.   f.   State Government Council report – Ed Toner.
          i.   **Amendments to the council charter.*** [Motion to approve.] *(Attachment 3-f-i)*

10:15 a.m.   4.   Rural Broadband Task Force report – Anne Byers.

| 10:20 a.m. | 5. | **Approval of update to the State Broadband Plan.*** [Motion to approve.] *(Attachment 5)* |

| 10:25 a.m. | 6. | **Approval of strategic initiatives for Statewide Technology Plan update.*** [Motion to approve.] *(Attachment 6)* |

| 10:30 a.m. | 7. | 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 October 4, 2019. The agenda was posted to the NITC website on November 8, 2019.

Nebraska Open Meetings Act

Attachment 2

NEBRASKA INFORMATION TECHNOLOGY COMMISSION
Hamilton Telecommunications
1006 12th Street, Aurora, Nebraska
Thursday, July 25, 2019, 10:00 a.m.
MEETING MINUTES

MEMBERS PRESENT:
Ed Toner, Chief Information Officer, Chair
Senator Bruce Bostelman, Nebraska Legislature
LaShonna Dorsey, Mutual of Omaha
Shane Greckel, Greckel Farms, LLC
Dr. Terry Haack, Bennington Public Schools
Dorest Harvey, US Strategic Command/J84
Tom Nutt, Phelps County Commissioner
Dan Spray, Precision Technologies, Inc.
Gary Warren, Hamilton Telecommunications
Walter Weir, University of Nebraska

MEMBERS ABSENT: None

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

The chair, Ed Toner, called the meeting to order at 10:01 a.m. Roll call was taken. A quorum was present to conduct official business. The meeting notice was posted to the NITC website and the Nebraska Public Meeting Calendar on June 13, 2019. The agenda was posted to the NITC website on July 17, 2019. A copy of the Nebraska Open Meetings Act was on the table in the back of the room.

PUBLIC COMMENT

There was no public comment.

NOVEMBER 8, 2018 AND MARCH 14, 2019 MEETING MINUTES.

Commissioner Harvey moved to approve the November 8, 2018 and March 14, 2019 minutes as presented. Commissioner Nutt seconded. Roll call vote: Toner-Yes, Dorsey-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Nutt-Yes, Spray-Yes, Warren-Yes, and Weir-Yes. Results: Yes-9, No-0, Abstained-0. Motion carried.

REPORTS FROM THE ADVISORY COUNCILS AND TECHNICAL PANEL

TECHNICAL PANEL REPORT

Enterprise Projects:

The Centrex conversion project was undertaken due to the current providers no longer supporting Centrex after June 2020. Allo Communications was awarded the contract for a managed VoIP system. The Office of the CIO was the first agency to migrate and has had very few issues.

The Nebraska Department of Health and Human Services has asked the OCIO to assist with the Medicaid Management Information System Project. This project of building a comprehensive data management and analytics (DMA) platform is aligned with the CMS modular approach to building system and operational capabilities. DHHS has indicated the June completion date will not happen.

The Medicaid Eligibility and Enrollment System Project is on hold until an alternative analysis is done. Gartner, Inc. has been hired to conduct the assessment of the EES II project, and began work on June 4,

2019. Gartner's objectives are to provide five deliverables, including an environmental assessment, a comprehensive alternatives analysis, and a roadmap with actionable recommendations for implementing an Eligibility and Enhancement modernization project.

Enterprise Project Closures:

Oracle Fusion Project, Dept. of Administrative Services

When NITC Chair Toner was appointed as Interim DAS Director, an evaluation was conducted regarding the progress and direction of the project. It was determined not to proceed with the cloud solution but instead do a version upgrade to the existing solution. Commissioner Weir requested a "lessons learned" report documenting all the issues such as the patches, interfaces, payroll, and lack of redundancy.

Commissioner Warren moved to not approve closure of the DAS Fusion Project until the lessons learned document has been submitted to the Technical Panel. Commissioner Weir seconded. Roll call vote: Greckel-Yes, Haack-Yes, Harvey-Yes, Nutt-Yes, Spray-Yes, Warren-Yes, Weir-Yes, Toner-Yes, and Dorsey-Yes. Results: Yes-9, No-0, Abstained-0. Motion carried.

Due to no former administrators or staff are on board from the original project, the lessons learned report will be completed by Commissioner Weir.

Nebraska State Accountability (NeSA) Project, Dept. of Education

The question was raised as to whether the NeSA server co-location issue has been addressed. Discussions are continuing regarding the servers. Commissioner Haack stated that the ACT testing was done in March/April but the school districts have still not received the results. After discussion, there were concerns expressed about the enterprise project report not being accurate, whether any technical issues are involved, and reluctance to approve closure of the project.

Commissioner Haack moved to not approve closure of the Nebraska State Accountability (NeSA) Project until additional information on the project status is provided. Commissioner Weir seconded. Commissioner Toner provided a friendly amendment to not approve closure of the Nebraska State Accountability (NeSA) Project until the Nebraska Department of Education staff have been given an opportunity to appear before the Commission to explain the project deficiencies. Commissioner Haack and Commissioner Weir accepted the friendly amendment. Roll call vote: Weir-Yes, Toner-Yes, Dorsey-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Nutt-Yes, Spray-Yes, and Warren-Yes. Results: Yes-9, No-0, Abstained-0. Motion carried.

Nebraska Regional Interoperability Network (NRIN) Project, Nebraska Council of Regions

The purpose of this project is to implement a statewide microwave network. Although many installations have been completed, there are concerns about the maintenance sustainability.   This project has been funded, to date, by Homeland Security Grants. NRIN does have a Governance Board who has responsibilities such as developing sustainability plans. Concern was expressed about the projects red status and what the overall plan was for coverage of the entire State and sustainability.

Commissioner Haack moved to not close Nebraska Interoperability Network (NRIN) until additional information on the status of the project is provided and requested that representatives from the NRIN Governance Board provide information on sustainability and statewide coverage. Commissioner Harvey seconded. Roll call vote: Toner-Yes, Dorsey-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Nutt-Yes, Spray-Yes, Warren-Yes, and Weir-Yes. Results: Yes-9, No-0, Abstained-0. Motion carried.

Technical Standards and Guidelines

Proposal 18-06, Amend GIS Imagery Standards

This item seeks approval of revisions to the existing GIS imagery standards by adding a new addendum to the standard. The addendum will address issues relating to license/subscription imagery. The Technical Panel posted it for the 30-day comment period. No comments were received.

Vendors currently can charge up to $3 million dollars for imagery data. If the OCIO can have customers buy into the standard and license/subscription, it could be an opportunity for considerable cost savings to them.

Proposal 19-01, Amend Street Centerline Standards

This item seeks approval of a new GIS standard for street centerlines. The existing standard would be repealed in its entirety and replaced with the new language of the proposal. The new standard would adopt by reference the national standards for street centerlines published by the National Emergency Number Association. Also, subsection (2) includes two additional attributes that are optional. The Technical Panel posted it for the 30-day comment period. No comments were received.

Proposal 19-02, Amend Address Point Standards

This item seeks approval of a new GIS standard for address points. The existing standard would be repealed in its entirety and replaced with the new language of the proposal. The new standard would adopt by reference the national standards for address points published by the National Emergency Number Association. The Technical Panel posted it for the 30-day comment period. No comments were received.

Commissioner Haack moved to approve the revised amendments to 18-06, 19-01 and 19-02as presented. Commissioner Harvey seconded. Roll call vote: Dorsey-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Nutt-Yes, Spray-Yes, Warren-Yes, Weir-Yes, and Toner-Yes. Results: Yes-9, No-0, Abstained-0. Motion carried.

GIS COUNCIL REPORT – John Watermolen.

Mr. Watermolen provided highlights from the Council report including NebraskaMAP, Nebraska GeoElection Pilot Project, and local and national articles about GIS in Nebraska, as well as GIS resources regarding the flood response. The OCIO held a GIS Open Houses to share with agencies how GIS can be used by the agency as well as its customers and had good attendance.

Discussion occurred regarding the flood response and use of drones. Commissioner Nutt shared that a recent NACO survey indicated that the drones were very helpful during flooding. Senator Bostelman informed the Commission that he is serving on a committee to study and address the flood response and how to prepare for emergencies in the future.

EDUCATION COUNCIL REPORT – Tom Rolfes.

Membership nominations. The Education Council would like to recommend the following membership nominations for approval by the NITC.

HIGHER EDUCATION (2019-21 term):
    Bret Blackman, University of Nebraska System
    Mike Carpenter, Independent Colleges & Universities
    Derek Bierman, Community College System
    Steve Hotovy, State College System

K-12 EDUCATION (2019-21 term):
    Dr. Ted DeTurk, Educational Service Units
    Trent Kelly, Administrators

Stephen Hamersky, Private Education
Matt Chrisman, Public Teachers

Commissioner Haack moved to approve the nominations of the Education Council. Commissioner Harvey seconded. Roll call vote: Dorsey-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, Nutt-Yes, Spray-Yes, Warren-Yes, Weir-Yes, and Toner-Yes. Results: Yes-9, No-0, Abstained-0. Motion carried.

Network Nebraska Report: Membership remains constant at 292 members as of 7/1/2019. Participation Fee and Interregional Transport Fee remain virtually the same as 2018-19. Internet access unit cost was reduced by 50%, and total daily internet capacity is 95Gbps. Solar Winds and Ops Center Support is getting upgraded at the University of Nebraska. Invoice and E-rate aggregation is progressing as smoothly as can be expected. The OCIO assumed responsibility for 112 fiber circuits, all of their E-rate filing, and billing back the post-discount portion. The OCIO and State Purchasing is ramping up for the Mega RFP to be released this Fall, rebidding fiber Ethernet circuits and the statewide backbone segments. University CIO and Network Nebraska Executive sponsor, Mark Askren, is stepping down from his position, and the new operational sponsor will be Andrew Buker from UNO.

Commissioner Harvey acknowledged the good work and cost savings that Network Nebraska has provided for its customers.

Digital Education Update: In cooperation with the Rural Broadband Task Force's Homework Gap Subcommittee, the Education Council commissioned a 13-question Homework Gap survey of Nebraska K-12 teachers and released it on July 9. Within 72 hours, the survey had met the goal of a 10% response rate, or 2,500 teachers. As of 7/24/2019, the survey has had 6,400 responses (27%) and the survey closes on 7/30/2019. Early results:
- 64% of the teachers responding said less than 25% of their homework is dependent on digital or internet resources
- 48% of the teachers either agreed or strongly agreed that the absence of internet for some of their students in the class affected the level or amount of homework that they assign for all students in that class
- 78% of the teachers said that if suddenly every student had broadband internet at home that it would either have substantial or minimal positive impact on student learning/achievement.

Members of the Education Council are continuing to collaborate with the Nebraska Department of Education's Future Ready Council and Digital Learning Plan for Nebraska, with their next meeting is July 30 in Lincoln.

STATE GOVERNMENT COUNCIL REPORT – Ed Toner.

State agencies have been participating in the OCIO Applications Portfolio Management Project. Quadrants are being used to determine which applications are critical versus non-critical to the agency as well as the citizens it serves. To date, approximately 1,200 applications have been evaluated. About 10% were eliminated which is already saving dollars. Lois Hanson, Project Manager, was commended for her work with the project.

In September, the OCIO Data center will be conducting a resiliency test during non-working hours.

UPDATE: RURAL BROADBAND TASK FORCE – Anne Byers. *(Attachment 5)*

Ms. Byers thanked the task force members and the OCIO/PSC staff for their work and involvement on the Rural Broadband Task Force. The Nebraska Universal Service Fund, Broadband Data, Broadband Technologies, Public-Private Partnerships and Homework Gap/Leveraging Funding Subcommittees have been working on recommendations. The report is due in November 1, 2019.

Commissioner Nutt shared that the two top issues counties are facing today are economic development and broadband.

Commissioner Spray commended Anne Byers for her work with the Rural Broadband Task Force.

ADJOURNMENT

Commissioner Nutt moved to adjourn. Commissioner Spray seconded. All were in favor. Motion carried.

The meeting was adjourned at 11:42 a.m.

The meeting minutes were taken by Lori Lopez Urdiales and reviewed by the NITC Managers.

Attachment 3-a-i-1

Project Lessons Learned Form

General Information				
Project Name				**Date**
Oracle FuzioN				August, 2019
Sponsoring Agency				
Department of Administrative Services				
Contact	**Phone**	**Email**		**Employer**
Byron Diamond, DAS Director				
Project Manager	**Phone**	**Email**		**Employer**
Michael Rasmussen, Program Director				

Project Start Date	07/13/2017	**Estimated End Date**	12/11/2018	**Project End Date**	06/30/2019

Key Questions		Explanation
1. Did the scope of the project change?	X Yes ☐ No	Chart of accounts was changed in the original project prompting a change in project direction.
2. Did the project meet the expectations of the stakeholders?	X Yes ☐ No	The final resolution successfully implemented on 9/17/2019
3. Did the project costs exceed the budget provided?	☐ Yes X No	Actuals were lower than the initial project estimates utilizing the alternative solution.

Significant Project Milestones Insert additional lines as necessary.					
Milestone	Met	Not Met	Original Date	Actual Date	Impact (if late)
Complete installation of 9.2	X	☐	09/17/2019	09/17/2019	The alternate plan was delivered on schedule
	☐	☐			
	☐	☐			

What went wrong during the project and recommendations to avoid similar occurrences in the future
Provide a summary of what went wrong during the project, including the problem or issue, the impact and the recommendation to avoid those occurrences in the future.

The proposed DAS project turned out to be two separate projects. The first project was the required and absolutely critical stabilization of the current JDEdwards ERP system. The second project was the proposed upgrade of the current environment to an Oracle cloud-based environment.

Thankfully the Office of the CIO was able to address and fix the stabilization of the current system by installing a backup computer system in Omaha, implementing improved networking and applying numerous patches to the system that had accumulated over time.

The second project was to migrate five current disparate IT systems individually supporting human resource and benefit management, employee recruiting and development, payroll and financial functions, and budget planning to an Oracle cloud-based single enterprise platform called Fuzion.

The move of the JDE Finance and Accounting system to the cloud (project number 65-01) was actually predicated, in large part, on DAS's belief that the current JD Edwards Finance system would no longer be supported and the State would have to do something and soon. The DAS Director suggested that an upgrade to a cloud-based Oracle system could be covered by their current contract with Oracle and thus would negate the need for a formal RFP. In retrospect this turned out to be a bad decision and the project should have been subjected to an RFP. The Director of DAS also believed DAS could accomplish the total upgrade for less than the 17 million that was allocated. Fortunately, with the change in direction taken and a successful completion, the total expenditures were less than half the planned expenditure of 17 million.

The amount of work that would be required, by State agencies, to help install this system as well as the necessary time to implement and test it was underestimated. Agencies were not fully aware of the costs or amount of work they would be required to incur in implementing this project. Additionally, no funding was provided to the agencies to offset the costs they would incur. In the future projects of this size and scope need to be fully vetted with all participants so no surprises are experienced.

After the contract with Oracle was signed, the implementation partner, KPMG & Civic Initiatives, determined that a change to the structure of the Chart of Accounts was required. This type of change is a major undertaking that would affect every agency. This additional requirement was a major blow to a project already in trouble.

Promises were made that once this system installed the State could save or avoid upwards of 20 million dollars a year. Given the state of the current existing system as well as the work that would be required to fully install the new system - those promises were just not achievable or realistic.

What went right during the project and how similar projects may benefit from this information
Provide a summary of what went right during the project, including the success or accomplishment, the impact and how future projects may benefit from this information.

The business case that was presented to the budget committee was based on information that was provided and accurate at the time of presentation. However, the main premise of the business case (lack of ongoing support from Oracle) changed prior to the project actual initiation and was extended until 2030. That pertinent information was not shared with anyone outside of DAS which could have resulted in a different determination. In order to ensure that we tracked events such as this, there are proposed changes to the project review and project reporting process which are outlined in the next section.

NITC Reporting/Process Improvements and Recommendations
Use this section to insert NITC Enterprise Reporting improvements and recommendations.

The Technical Panel will consider a resolution at their October meeting providing for the following:

1. Projects designated as enterprise projects by the NITC will provide regular status reports to the OCIO's Project Management Office.
2. Project managers will attend monthly OCIO project management meetings to review the status of each enterprise project.
3. The OCIO's Project Management Office will provide status reports at each regular meeting of the Technical Panel.

Additional Comments
Use this section to insert comments / concerns not included in any other section.

It was subsequently discovered that Oracle intends to fully support the State's version of JD Edwards through 2030. With the State's budget continuing to be tight, a likelihood of increased costs for Fuzion, and the reduced risk of a loss of support for our existing applications, it was decided that this project, at this time, no longer made good business sense for the State. Instead the State will shift its focus to upgrading J.D. Edwards (JDE) from version 9.1 – 9.2. This upgrade was completed successfully the weekend of August 17th with very few issues reported. A process for quarterly patching is in place to ensure security of the application.

Attachment 3-a-i-4

Report on the Status of Enterprise Projects

November 2019

Prepared for the Governor and the
Appropriations Committee of the Legislature

This report is submitted by the Chief Information
Officer pursuant to Neb. Rev. Stat. § 86-530.

NEBRASKA

OFFICE OF THE CIO

INTRODUCTION

The Nebraska Information Technology Commission is responsible for determining which proposed information technology projects in state government are "enterprise projects," and in coordination with the Chief Information Officer, monitoring the status of such projects.[1] The commission has adopted an enterprise project policy addressing these requirements.[2] Pursuant to that policy, the agency primarily responsible for a project must provide periodic progress reports. Reports are submitted to the Project Management Office of the Office of the Chief Information Officer, and, beginning in October 2019, agencies are required to participate in project status meetings called by the office. The technical panel also reviews the status of these projects during their meetings and provides regular updates to the commission. Finally, this annual status report is submitted by the Chief Information Officer pursuant to Neb. Rev. Stat. § 86-530.

STATUS REPORT

The following projects are currently designated as enterprise projects by the commission:

Agency/Entity	Project	Designated
Dept. of Health and Human Services	New Medicaid Management Information System (MMIS)	07/08/2009
Nebraska Council of Regions	Nebraska Regional Interoperability Network (NRIN)	03/15/2010
Dept. of Health and Human Services	Medicaid Eligibility & Enrollment System	10/28/2014
Office of the CIO	Centrex Replacement	07/12/2018

As of the date of this report, two of the enterprise projects are reporting significant project risks:

1) Dept. of Health and Human Services, Medicaid Eligibility & Enrollment System project; and
2) Office of the CIO, Centrex Replacement project.

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[1] Neb. Rev. Stat. §§ 86-525 to 86-530.
[2] http://nitc.ne.gov/standards/1-206.pdf

The remaining enterprise projects are making satisfactory progress towards successful competition.

Attachment A is a dashboard report with summary information on the current status of each of the enterprise projects. More detailed project status information is available by contacting the Office of the Chief Information Officer.

DRAFT

Projects Status Dashboard
October 2019

Enterprise Projects - Current

Agency/Entity	Project	NITC Designated
Department of Health and Human Services	New Medicaid Management Information System (MMIS)	7/8/2009
Nebraska Council of Regions	Nebraska Regional Interoperability Network	3/15/2010
Department of Health and Human Services	Medicaid Eligibility & Enrollment System	10/28/2014
Office of the CIO	Centrex Replacement	7/12/2018

Note: Status is self-reported by the agency

Project Storyboard: 01 Centrex Conversion (65060012)

Project Manager	Kortus, Julie	Status Report Date	10/3/19
Project Type	Major Project	Status	Approved
Stage	Design	Progress	Started
Total Estimated Cost	$2,800,000.00	Estimate to Complete	
Actual Cost To Date			

Project Dates

	Start	Finish
Plan	10/10/17	3/9/21
Baseline	10/10/17	6/30/20
Days Late	252	252

Status Report Indicators

Overall	❌	➡️
Schedule	❌	➡️
Scope	❌	➡️
Cost and Effort	❌	➡️

Project Description

To secure the most cost efficient Hosted Voice Over Internet Protocol Telephony (VOIP) Services. This solution will replace the State's Centrex service throughout the State of Nebraska. The purpose of the project is to provide phone service that includes the most up-to-date VOIP features and functionality as a hosted service with equipment ownership, maintenance and service remaining with the Contractor.

Key Accomplishments

Ported OCIO numbers to new VOIP solution
Ported a variety of commission and boards to VOIP solution
Process improvements
Cross training
Engaged BSMs in assisting agency Communication Coordinators if needed

Status Report Update

Some of the issues we have experienced:
* Time it takes to reconcile final inventories with the agencies
* Project resources
* Agencies needing additional cable/wiring prior to port
* Agencies requiring circuit upgrades, and time this takes for carrier to complete
* Employees at some agencies frequently moving their physical location

Upcoming Activities

Continued process improvements
Additional resources will be added
Installs and ports for Nebraska Department of Labor
Installs and ports for Department of Health and Human Services
Installs and ports for Nebraska Department of Transportation

Issues by Priority

Risks by Priority
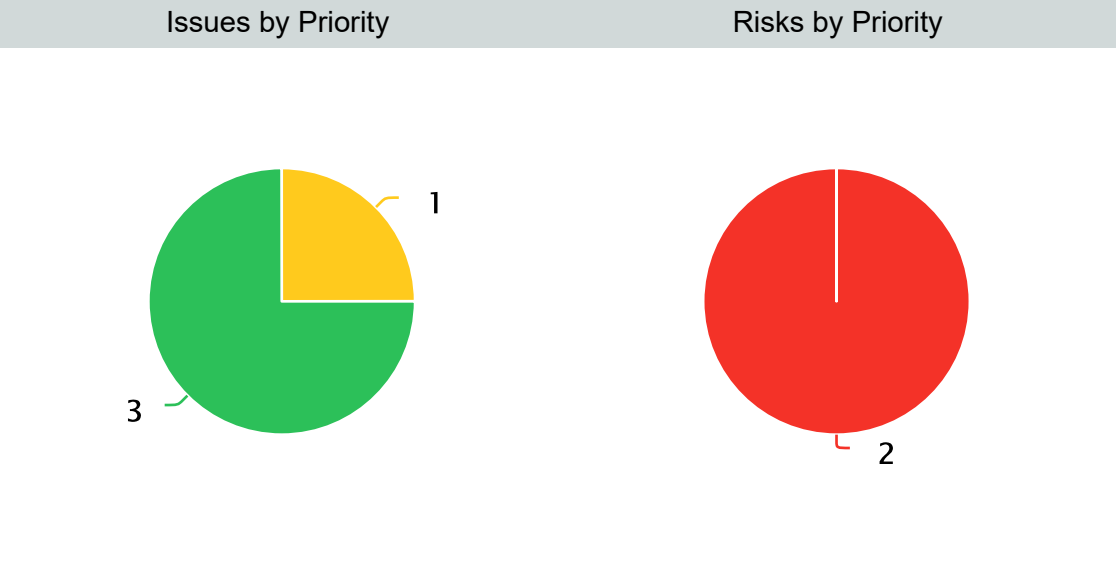
Current Issues

More Issues...

Issue	Priority	Status	Target Resolution	Owner
Overlap of service	⚠️	Open	12/31/19	Kortus, Julie
Rates	🟢	Open	11/30/18	Kortus, Julie
Dependency on Network Resources	🟢	Open	2/14/19	Kortus, Julie

Current Risks

More Risks...

Risk	Probability	Impact	Priority	Status	Target Resolution	Owner
Bandwidth	⚠️	⚠️	❌	Open	2/14/19	Kortus, Julie
Billing Developer being reassigned to another project	⚠️	🟢	❌	Open	2/28/19	Kortus, Julie

Project Manager	Spaulding, Don	Status Report Date	10/3/19
Project Type		Status	Approved
Stage	Build	Progress	Started
Total Estimated Cost	$81,200,000.00	Estimate to Complete	77.98%
Actual Cost To Date	$63,318,485.00		

Project Dates

	Start	Finish
Plan	6/1/18	4/30/22
Baseline	6/1/18	4/30/22
Days Late	0	0

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

Status Report Update

Gartner, Inc. has been hired to conduct the assessment of the EES II project, and began work 06/04/19. Gartner's objectives are to provide 5 deliverables, including an environmental assessment, a comprehensive alternatives analysis, and a roadmap with actionable recommendations for implementing an Eligibility and Enhancement modernization project.

The five deliverables were completed on time and budget in September 2019. DHHS is reviewing the recommendations and determining next steps.

Upcoming Activities

Issues by Priority   Risks by Priority   Current Issues

No matching records were found

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

Project Manager	Spaulding, Don	Status Report Date	10/2/19
Project Type	Major Project	Status	Approved
Stage	Build	Progress	Started
Total Estimated Cost	$113,600,000.00	Estimate to Complete	15.29%
Actual Cost To Date	$17,363,786.07		

Project Dates

	Start	Finish
Plan	7/1/14	4/30/20
Baseline	7/1/14	4/30/20
Days Late	0	0

Status Report Indicators

Overall	◆	➡
Schedule	◆	➡
Scope	◆	➡
Cost and Effort	◆	➡

Project Description

Medicaid and Long-Term Care (MLTC) has undertaken a strategic transformation toward a vision for a Medicaid enterprise that is fundamentally data-driven. This project supports the programmatic shift by giving the stakeholders access to claims and clinical data and appropriate analytic tools. This project of building a comprehensive data management and analytics (DMA) platform is aligned with the CMS modular approach to building system and operational capabilities. The current system consisting of legacy MMIS and Truven DW/DSS has several limitations that warrant the need to re-engineer the data management and analytical operations. The DMA system is envisioned to be the core repository for the State to address all its information and data needs.

Key Accomplishments

• Completed scope confirmation and updated integrated master schedule. New schedule baseline created.
• Completed multiple deliverable expectation document (DED) and deliverable reviews.
• The State is continuing to work with Deloitte to refine content and functionality for previously rejected DDI contract deliverables, which lacked completeness for acceptance.
• Continued DMA Managed Care Entity (MCE) outreach and planning efforts.
• The State completed a review of RFP requirements internally and with Deloitte to finalize what is required for go-live.
• Continued development efforts towards the remaining RFP DDI scope.
• The State UAT execution is in progress. The UAT test case authoring is complete.
• Continued Medicaid Enterprise Certification Lifecycle (MECL) Review 2 (R2) certification efforts including certification criteria mapping, delivering Certification Evidence Documents (CEDs) for checklist items to IV&V, and collecting evidence.
• The State completed an analysis of the MECL R1 mapping to the RFP requirements to confirm that certification requirements will be implemented at the appropriate time.
• Continued organizational change management (OCM) activities including hiring a new resource as OCM coordinator, OCM Project Posters, surveys, and weekly briefs, among others.
• Completed Training plan review with Deloitte and continued review of training materials; including job aides and web based training (WBT) modules.

Status Report Update

The DMA project completed its initial discovery, requirements, creation of user stories and majority of development activities in concert with systems integration partner and vendor, Deloitte Consulting, LLP.

State and vendor reached agreement on full scope of the requirements included in the RFP in July. Amendment 2 that confirmed that scope was approved by State DAS and Deloitte on August 20th. State and vendor are now driving to complete user acceptance testing in December of 2019 and prepare for initial operating capability in April of 2020.

Upcoming Activities

• Continue executing per revised integrated master schedule and achieve go-live date with vendor.
• Complete Deliverable and DED review, acceptance and approval activities for upcoming and in-flight work products.
• Complete quarterly and monthly reviews of requisite deliverables.
• Review and garner State approval on past Releases, and plan for verification of upcoming release(s).
• Continue organizational change management (OCM) activities.
• Work on upcoming Operational readiness activities including go-live planning.
• Finalize HIA end users list with feedback from State Management.
• Finalize the Production Conversion approach with vendor.
• Continue DMA Truven migration and sunset planning.
• Continue to work on training activities and go-forward plan with Deloitte.
• Complete UAT test case execution to ensure the product functionality meets contractual requirements and State's expectations.
• Commence the encounter testing with MCEs.
• Complete the Project Partnership Understanding (PPU) updates and submit to CMS.
• Continue MECL R2 certification planning and documentation efforts using CMS's Medicaid Enterprise Certification Toolkit (MECT) framework.

Project Storyboard: Nebraska Regional Interoperability Network (NRIN)

Project Manager	Krogman, Sue	Status Report Date	10/2/19
Project Type		Status	Approved
Stage	Build	Progress	Started
Total Estimated Cost	$12,500,000.00	Estimate to Complete	96.00%
Actual Cost To Date	$12,000,000.00		

Project Dates

	Start	Finish
Plan	10/1/10	8/31/19
Baseline	10/1/10	8/31/19
Days Late	34	34

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

Status Report Update

Moving ahead with the installation on sites in the NE Region. Also, finishing up sites that were bypassed in the other Regions. Fiber runs are being connected from McCook to North Platte and from McCook to Axtell. SE meeting discussed finishing up their final ring or waiting on tower. NC area waiting on approval from tower owner in anticipation of direct buildout from Taylor to O'Neill.

Upcoming Activities

Issues by Priority	Risks by Priority

Current Issues

No matching records were found

Attachment 3-a-ii-1

TO: NITC Commissioners

MEETING DATE: November 14, 2019

SUBJECT: Proposal 12. Amend the accessibility policy.

RECOMMENDED ACTION: Approve Proposal 12.

BACKGROUND: This item seeks approval of revisions to the accessibility
                               policy. The policy contains the scoping and technical
                               requirements for information and communication
                               technology to ensure accessibility and usability by
                               individuals with disabilities.

                               The current policy, adopted by the commission on October
                               31, 2001, was based on the federal regulations that
                               implemented section 508 of the federal Rehabilitation Act
                               of 1973. These federal regulations have since been updated
                               with the publication of the "Revised 508 Standards" on
                               January 18, 2017.

                               Section 1 of Proposal 12 provides for the adoption of the
                               revised federal standards, with some modifications specific
                               to Nebraska state government. In addition, subsection (4)
                               recommends compliance with the Web Content
                               Accessibility Guidelines 2.1 published by the W3C World
                               Wide Web Consortium.

                               Section 2 amends a definition contained in section 1-101 to
                               conform with the definition used in the federal regulations.

                               The Technical Panel posted the proposal for a 30-day
                               comment period; no comments were received. The panel
                               recommended approval of the proposal by a vote of 5-0-0.

RECOMMENDED BY: Technical Panel

A PROPOSAL relating to the accessibility policy; to amend section 2-101 and subsection (156) of section 1-101; and to repeal the original section and subsection.

1   Section 1. Section 2-101 is amended to read:

2   2-101. Accessibility policy.

3   (1) Purpose. This policy contains scoping and technical requirements for information and

4   communication technology ("ICT") to ensure accessibility and usability by individuals with

5   disabilities.

6   (2) Definitions. For the purpose of this section, terms defined in referenced documents and

7   not defined in section 1-101 will have the meaning as defined in the referenced documents.

8   (3) Standards. ICT that is procured, developed, maintained, or used by state agencies shall

9   conform to the following standards: Revised 508 Standards, 36 C.F.R. § 1194 (2018)

10   [https://www.govinfo.gov/content/pkg/CFR-2018-title36-vol3/xml/CFR-2018-title36-vol3-

11   part1194.xml].

12   For the State of Nebraska, the Revised 508 Standards referenced in this subsection are

13   revised as follows:

14   (a) In E103.4, replace the definition of "Existing ICT" with the following: "*Existing ICT.* ICT

15   that has been procured, maintained or used on or before November 14, 2020.";

16   (b) In E202.2, replace the existing language with the following: "*Legacy ICT.* Any component

17   or portion of existing ICT that complies with an earlier standard adopted by the commission, and

1   that has not been altered on or after November 14, 2020, shall not be required to be modified to

2   conform to the Revised 508 Standards.";

3   (c) In E202.3, replace the existing language with the following: "*Public Safety Systems.* The

4   Revised 508 Standards do not apply to any ICT operated by state agencies as part of a public

5   safety system.";

6   (d) In E202.4, replace the existing language with the following: "*State Contracts.* ICT

7   acquired by a contractor incidental to a contract shall not be required to conform to the Revised

8   508 Standards."; and

9   (e) In E203.1, replace the existing language with the following: "*General.* Agencies shall

10 ensure that all functionality of ICT is accessible to and usable by individuals with disabilities,

11 either directly or by supporting the use of assistive technology, and shall comply with E203. In

12 providing access to all functionality of ICT, agencies shall ensure the following: A. That state

13 employees with disabilities have access to and use of information and data that is comparable

14 to the access and use by state employees who are not individuals with disabilities; and B. That

15 members of the public with disabilities who are seeking information or data from a state agency

16 have access to and use of information and data that is comparable to that provided to members

17 of the public who are not individuals with disabilities.".

18   (4) Guidelines. In addition to the web content requirements contained in the referenced

19 standards in subsection (3), the commission recommends compliance with the following

20 guidelines: Web Content Accessibility Guidelines 2.1, W3C World Wide Web Consortium

21 Recommendation 05 June 2018 [https://www.w3.org/TR/2018/REC-WCAG21-20180605/].

22 1. Authority

23 The commission shall "[a]dopt minimum technical standards, guidelines, and architectures

24 upon recommendation by the technical panel..." Neb. Rev. Stat. § 86-516(6).

25 2. Purpose and Objectives

1   The purpose of this document is to define and clarify policies, standards, and guidelines that

2   will help agencies meet the needs of people with disabilities.

3   Neb. Rev. Stat. §73-205 required the Commission for the Blind and Visually Impaired, the

4   Nebraska Information Technology Commission, and the Chief Information Officer to develop a

5   technology access clause by January 1, 2001. The Technology Access Clause applies to all

6   purchases of information technology. The clause includes the following provisions:

7   "The intent and purpose of these standards is to ensure that the needs of Nebraskans with

8   disabilities are met through reasonable accommodation of the information technology products

9   and services of the state. Future information technology products, systems, and services

10   including data, voice, and video technologies, as well as information dissemination methods, will

11   comply with the following standards to the greatest degree possible."

12   1. Effective, interactive control and use of the technology including, but not limited to, the

13   operating system, applications programs, and format of the data presented must be readily

14   achievable by individuals with disabilities. The intent is to make sure that all newly procured

15   information technology equipment; software and services can be upgraded, replaced or

16   augmented to accommodate individuals with disabilities.

17   2. Information technology made accessible for individuals with disabilities must be

18   compatible with technology used by other individuals with whom the individual with a disability

19   must interact.

20   3. Information technology made accessible for individuals with disabilities must be able to be

21   integrated into networks used to share communications among employees, program

22   participants, and the public.

23   4. Information technology made accessible for individuals with disabilities must have the

24   capability of providing equivalent access to telecommunications or other interconnected network

25   services used by the general population.

1   5. These provisions do not prohibit the purchase or use of an information technology product

2   that does not meet these standards provided that:

3   a. There is no available means by which the product can be made accessible and there is

4   no alternate product that is or can be made accessible; or

5   b. The information manipulated or presented by the product is inherently unalterable in

6   nature (i.e., its meaning cannot be preserved if it is conveyed in an alternative manner).

7   c. The product is used in conjunction with an existing information technology system, and

8   modifying the existing system to become accessible would create an undue burden.

9   d. The agency must be able to modify or replace the information technology product with

10   one that will accommodate the needs of individuals with disabilities.

11   "When development, procurement, maintenance, or use of electronic and information

12   technology does not meet these standards, individuals with disabilities will be provided with the

13   information and data involved by an alternative means of access that allows the individual to

14   use the information and data."

15   The primary objectives of accessibility standards and guidelines include:

16   1. Where feasible, people with disabilities can use the same information technology systems

17   as people without disabilities;

18   2. Early planning for accessibility will make it easier to provide reasonable accommodations

19   when information technology systems are not accessible

20   3. Standards and Guidelines

21   3.1. Functional Performance Criteria (Section 1194.31)

22   3.1.1 General-Alternative Access

23   3.1.1.1

24   At least one mode of operation and information retrieval that does not require user vision

25   shall be provided, or support for Assistive Technology used by people who are blind or visually

26   impaired shall be provided.

1   3.1.1.2

2   At least one mode of operation and information retrieval that does not require visual acuity

3   greater than 20/70 shall be provided in audio and enlarged print output working together or

4   independently, or support for Assistive Technology used by people who are visually impaired

5   shall be provided.

6   3.1.1.3

7   At least one mode of operation and information retrieval that does not require user hearing

8   shall be provided, or support for Assistive Technology used by people who are deaf or hard of

9   hearing shall be provided.

10   3.1.1.4

11   Where audio information is important for the use of a product, at least one mode of

12   operation and information retrieval shall be provided in an enhanced auditory fashion, or support

13   for assistive hearing devices shall be provided.

14   3.1.1.5

15   At least one mode of operation and information retrieval that does not require user speech

16   shall be provided, or support for Assistive Technology used by people with disabilities shall be

17   provided.

18   3.1.1.6

19   At least one mode of operation and information retrieval that does not require fine motor

20   control or simultaneous actions and that is operable with limited reach and strength shall be

21   provided.

22   3.2 Software Applications and Operating Systems (Section 1194.31)

23   3.2.1 Navigation

24   3.2.1.1

1   When software is designed to run on a system that has a keyboard, product functions shall

2   be executable from a keyboard where the function itself or the result of performing a function

3   can be discerned textually.

4   3.2.1.2

5   A well-defined, on-screen indication of the current focus shall be provided that moves

6   among interactive interface elements as the input focus changes. The focus shall be

7   programmatically exposed so that Assistive Technology can track focus and focus changes.

8   3.2.2 Image/Information Display

9   3.2.2.1

10   Sufficient information about a user interface element including the identity, operation and

11   state of the element shall be available to Assistive Technology. When an image represents a

12   program element, the information conveyed by the image must also be available in text.

13   3.2.2.2

14   When bitmap images are used to identify controls, status indicators, or other programmatic

15   elements, the meaning assigned to those images shall be consistent throughout an application's

16   performance.

17   3.2.2.3

18   Textual information shall be provided through operating system functions for displaying text.

19   The minimum information that shall be made available is text content, text input caret location,

20   and text attributes.

21   3.2.2.4

22   Software shall not use flashing or blinking text, objects, or other elements having a flash or

23   blink frequency greater than 2Hz and lower than 55 Hz.

24   3.2.3 Compatibility

25   3.2.3.1

1   Applications shall not disrupt or disable activated features of other products that are

2   identified as accessibility features, where those features are developed and documented

3   according to industry standards. Applications also shall not disrupt or disable activated features

4   of any operating system that are identified as accessibility features where the application

5   programming interface for those accessibility features has been documented by the

6   manufacturer of the operating system and is available to the product developer.

7   3.2.4 Use of Color

8   3.2.4.1

9   Applications shall not override user selected contrast and color selections and other

10   individual display attributes.

11   3.2.4.2

12   Color-coding shall not be used as the only means of conveying information, indicating an

13   action, prompting a response, or distinguishing a visual element.

14   3.2.4.3

15   When a product permits a user to adjust color and contrast settings, a variety of color

16   selections capable of producing a range of contrast levels shall be provided.

17   3.2.5 Animation

18   3.2.5.1

19   When animation is displayed, the information shall be displayable in at least one non-

20   animated presentation mode at the option of the user.

21   3.2.6 Forms

22   3.2.6.1

23   When electronic forms are used, the form shall allow people using Assistive Technology to

24   access the information, field elements, and functionality required for completion and submission

25   of the form, including all direct ions and cues.

26   3.3 Web-Based Internet Information and Applications (Section 1194.22)

1   3.3.1 Navigation

2   3.3.1.1

3   Redundant text links shall be provided for each active region of a server-side image map.

4   3.3.1.2

5   Client-side image maps shall be provided instead of server-side image maps except where

6   the regions cannot be defined with an available geometric shape.

7   3.3.1.3

8   Row and column headers shall be identified for data tables.

9   3.3.1.4

10   Markup shall be used to associate data cells an d header cells for data tables that have two

11   or more logical levels of row or column headers.

12   3.3.1.5

13   Frames shall be titled with text that facilitates frame identification and navigation.

14   3.3.1.6

15   A method shall be provided that permits users to skip repetitive navigation links.

16   3.3.2 Image/Information Display

17   3.3.2.1

18   Documents shall be organized so they are readable without requiring an associated style

19   sheet.

20   3.3.2.2

21   Pages shall be designed to avoid causing the screen to flicker with a frequency greater than

22   2Hz and lower than 55 Hz.

23   3.3.2.3

24   A text-only page, with equivalent information or functionality, shall be provided to make a

25   web site comply with the provisions of this part, when compliance cannot be accomplished in

any other way. The content of the text-only page shall be updated whenever the primary page

changes.

3.3.2.4

When pages utilize scripting languages to display content, or to create interface elements,

the information provided by the script shall be identified with functional text that can be read by

Assistive Technology.

3.3.2.5

When a web page requires that an applet, plug-in or other application be present on the

client system to interpret page content, the page must provide a link to a plug-in or applet that

complies with the provisions of Section 2 (Software Applications and Operating Systems),

above.

3.3.3 Information Display Alternatives

3.3.3.1

A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or

in element content).

3.3.3.2

Equivalent alternatives f or any multimedia presentation shall be synchronized with the

presentation.

3.3.3.3 Use of Color

3.3.3.3.1 Web pages shall be designed so that all information conveyed with color is al so

available without color, for example from context or markup.

3.3.3.4 Forms

3.3.3.4.1 When electronic forms are designed to be completed on-line, the form shall allow

people using Assistive Technology to access the information, field elements, and functionality

required for completion and submission of the form, including all directions and cues.

3.3.3.5 Time Responses

1   3.3.3.5.1 When a timed response is required, the user shall be alerted and given sufficient

2   time to indicate more time is required.

3   3.4 Telecommunications Products (Section 1194.23)

4   3.4.1 Image/Information Display

5   3.4.1.1

6   Where provided, caller identification and similar telecommunications functions shall also be

7   available for users of TTYs, and for users who cannot see displays.

8   3.4.1.2

9   Products that transmit or conduct information or communication shall pass through cross-

10   manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other

11   information necessary to provide the information or communication in a usable format.

12   Technologies which use encoding, signal compression, format transformation, or similar

13   techniques shall not remove information needed for access or shall restore it upon delivery.

14   3.4.2 Technology Links Compatibility

15   3.4.2.1

16   Telecommunications products or systems, which offer voice communication but do not

17   include TTY functionality, shall provide a standard non-acoustic connection point for TTYs.

18   Microphones shall be capable of being turned on and off to allow the user to intermix speech

19   with TTY use.

20   3.4.2.2

21   Telecommunications products, which include voice communication functionality, shall

22   support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.

23   3.4.2.3

24   Where a telecommunications product delivers output by an audio transducer which is

25   normally held up to the ear, a means for effective magnetic wireless coupling to hearing

26   technologies shall be provided.

1   3.4.2.4

2   Interference to hearing technologies(including hearing aids, cochlear implants, and assistive

3   listening devices) shall be reduced to the lowest possible level that allows a user of hearing

4   technologies to utilize the telecommunications product.

5   3.4.3 Volume Control

6   3.4.3.1

7   For transmitted voice signals, telecommunications products shall provide again adjustable

8   up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12

9   dB of gain shall be provided.

10   3.4.3.2

11   If the telecommunications product allows a user to adjust the receive volume, a function

12   shall be provided to automatically reset the volume to the default level after every use.

13   3.4.4 Voice Mail

14   3.4.4.1

15   Voice mail, auto-attendant, and interactive voice response telecommunications systems

16   shall be usable by TTY users with their TTYs.

17   3.4.4.2

18   Voice mail, messaging, auto-attendant, and interactive voice response telecommunications

19   systems that require a response from a user within a time interval, shall give an alert when the

20   time interval is about to run out, and shall provide sufficient time for the user to indicate more

21   time is required.

22   3.4.5 Controls or Keys/Physical Operation

23   3.4.5.1

24   Products, which have mechanically operated controls or keys, shall comply with the

25   following: Controls and Keys shall be tactilely discernible without activating the controls or keys.

26   3.4.5.2

1   Products which have mechanically operated controls or keys shall comply with the following:

2   Controls and Keys shall be operable with one hand and shall not require tight grasping,

3   pinching, twisting of the wrist. The force required to activate controls and keys shall be 5lbs.

4   (22.2N)maximum.

5   3.4.5.3

6   Products, which have mechanically operated controls or keys, shall comply with the

7   following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2

8   seconds. Key repeat rate shall be adjustable to 2 seconds per character.

9   3.4.5.4

10   Products which have mechanically operated controls or keys shall comply with the following:

11   The status of all locking or toggle controls or keys shall be visually discernible, and discernible

12   either through touch or sound.

13   3.5 Video and Multi-Media Products (Section 1194.24)

14   3.5.1 TV

15   3.5.1.1

16   All analog television displays 13 inches and larger, and computer equipment that includes

17   analog tele vision receiver or display circuitry, shall be equipped with caption decoder circuitry

18   which appropriately receives, decodes, and displays closed captions from broadcast, cable,

19   videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, wide

20   screen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with

21   conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners,

22   whether or not they are marketed with display screens, and computer equipment that includes

23   DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which

24   appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape,

25   and DVD signals.

26   3.5.1.2

1   Television tuners, including tuner cards for use in computers, shall be equipped with

2   secondary audio program playback circuitry.

3   3.5.2 Video and Multi-Media

4   3.5.2.1

5   All training and informational video and multimedia productions which support the agency's

6   mission, regardless of format, that contain speech or other audio information necessary for the

7   comprehension of the content, shall be open or closed captioned.

8   3.5.2.2

9   All training and informational video and multimedia productions, which support the agency's

10   mission, regardless of format, that contain visual information necessary for the comprehension

11   of the content, shall be audio described.

12   3.5.3.2

13   Display or presentation of alternate text presentation or audio descriptions shall be user-

14   selectable unless permanent.

15   3.6 Self-Contained, Closed Products (Section 1194.25)

16   3.6.1

17   Self-contained products shall be usable by people with disabilities without requiring an end-

18   user to attach Assistive Technology to the product. Personal headsets for private listening are

19   not Assistive Technology.

20   3.6.2 Response Time

21   3.6.2.1

22   When a timed response is required, the user shall be alerted and given sufficient time to

23   indicate more time is required.

24   3.6.3 Controls or Keys/Physical Operation

25   3.6.3.1

Where a product utilizes touch screens or contact-sensitive controls, an input method shall be provided that complies with the provisions in Section 4.e, above.

3.6.3.2

When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

3.6.4 Audio/Voice Output

3.6.4.1

When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at any time.

3.6.4.2

When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.

3.6.4.3 Use of Color

3.6.4.3.1 Color-coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

3.6.4.3.2 When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.

3.6.4.4 Image/Information Display

3.6.4.4.1 Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

3.6.4.5 Location Accessibility

1   3.6.4.5.1 Products which are freestanding, non-portable, and intended to be used in one

2   location and which have operable controls shall comply with the following: The position of any

3   operable control shall be determined with respect to a vertical plane, which is 48 inches in

4   length, centered on the operable control, and at the maximum protrusion of the product within

5   the 48 inch length on products which are freestanding, non-portable, and intended to be used in

6   one location and which have operable controls.

7   3.6.4.5.2 Products which are freestanding, non-portable, and intended to be used in one

8   location and which have operable controls shall comply with the following: Where any operable

9   control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum

10   and 15 inches minimum above the floor.

11   3.6.4.5.3 Products which are freestanding, non-portable, and intended to be used in one

12   location and which have operable controls shall comply with the following: Where any operable

13   control is more than 10 inches and not more than 24 inches behind the reference plane, the

14   height shall be 46 inches maximum and 15 inches minimum above the floor.

15   3.6.4.5.4 Products, which are free standing, non-portable, and intended to be used in one

16   location and which have operable controls shall comply with the following: Operable controls

17   shall not be more than 24 inches behind the reference plane.

18   3.7 Desktop and Portable Computers (Section 1194.26)

19   3.7.1

20   Where provided, at least one of each type of expansion slots, ports and connectors shall

21   comply with publicly available industry standards.

22   3.7.2 Controls or Keys/Physical Operation

23   3.7.2.1

24   All mechanically operated controls and keys shall comply with the provisions of Section 4.3,

25   above.

26   3.7.2.2

1   If a product utilizes touch screens or touch-operated controls, an input method shall be

2   provided that complies with the provisions of section 4.3, above.

3   3.7.3

4   When biometric forms of user identification or control are used, an alternative form of

5   identification or activation, which does not require the user to possess particular biological

6   characteristics, shall also be provided.

7   4. Definitions

8   Agency: shall mean any governmental entity, including state government, local government,

9   or third party entities under contract to the agency.

10   Alternate formats: are usable by people with disabilities and may include, but are not limited

11   to, Braille, ASCII text, large print, recorded audio, and electronic formats that comply with this

12   part.

13   Alternate methods: are different means of providing information, including product

14   documentation, to people with disabilities. Alternate methods may include, but are not limited to,

15   voice, fax, relay service, TTY, Internet posting, captioning, text-to-speech synthesis, and audio

16   description.

17   Assistive technology: includes any item, piece of equipment, or system, whether acquired

18   commercially, modified, or customized, that is commonly used to increase, maintain, or improve

19   functional capabilities of individuals with disabilities.

20   Electronic and information technology: includes information technology and any equipment

21   or interconnected system or subsystem of equipment, that is used in the creation, conversion, or

22   duplication of data or information. The term electronic and information technology includes, but

23   is not limited to, telecommunications products (such as telephones) information kiosks, and

24   transaction machines, World Wide Websites, multimedia, and office equipment such as copies

25   and fax machines. The term does not include any equipment that contains embedded

26   information technology that is used as an integral part of the product, but the principal function

1 of which is not the acquisition, storage, manipulation, management, movement, control, display,

2 switching, interchange, transmission, or reception of data or information. For example, HVAC

3 (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control

4 devices, and medical equipment where information technology is integral to its operation, are

5 not information technology.

6 Equivalent facilitation: provides that nothing in this part is intended to prevent the use of

7 designs or technologies as alternatives to those prescribed in this part provided they result in

8 substantially equivalent or greater access to and use of a product for people with disabilities.

9 Information technology: is any equipment or interconnected system or subsystem of

10 equipment, that is used in the automatic acquisition, storage, manipulation, management,

11 movement, control, display, switching, interchange, transmission, or reception of data or

12 information. The term information technology includes computers, ancillary equipment, software,

13 firmware and similar procedures, services (including support services), and related resources.

14 Operable controls: are the component of a product that requires physical contact for normal

15 operation. Operable controls include, but are not limited to, mechanically operated controls,

16 input and output trays, card slots, keyboards, or keypads.

17 Product: is an electronic and information technology.

18 Self-contained, Closed Products: are products that generally have embedded software and

19 are commonly designed in such a fashion that a user cannot easily attach or install assistive

20 technology. These products include, but are not limited to, information kiosks and information

21 transaction machines, copiers, printers, calculators, fax machines, and other similar types of

22 products.

23 Telecommunications: are the transmission, between or among points specified by the user,

24 of information of the user's choosing, without change in the form or content of the information as

25 sent and received.

TTY: is an abbreviation for teletypewriter. Machinery or equipment that employs interactive

text based communications through the transmission of coded signals across the telephone

network. TTY's may include, for example, devices known as TDDs (telecommunication display

devices) or telecommunication devices for deaf persons) or computers with special modems.

TTYs are also called text telephones.

Undue burden: means significant difficulty or expense. In determining whether an action

would result in an undue burden, an agency shall consider all agency resources available to the

program or component for which the product is being developed, procured, maintained, or used.

5. Applicability

General Statement

These policies are intended to be sufficiently generic to apply to a wide range of

governmental and educational agencies in the State of Nebraska. Each agency or operational

entity must develop detailed procedures to implement broad policies and standards.

Compliance with these accessibility policies and standards will be a requirement during

consideration of funding for any projects requiring review by the NITC. Compliance may be used

in audit reviews or budget reviews.

Compliance and Enforcement Statement

The Governing board or chief administrative officer of each organization must develop

internal compliance and enforcement policies as part of its information accessibility efforts. Such

policies should be reasonable and effective. The NITC intends to incorporate adherence to

accessibility policies as part of its evaluation and prioritization of funding requests. The NITC

recommends that the Governor and Legislature give due consideration to requests for

accessibility improvements during the budget process.

6. Responsibility

An effective program for accessibility involves cooperation of many different entities. Major

participants and their responsibilities include:

6.1 Nebraska Information Technology Commission

The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate accessibility for information systems through adoption of policies, standards, and guidelines.

6.2 Technical Panel Accessibility Work Group

The NITC Technical Panel, with advice from the Accessibility Work Group, has responsibility for recommending accessibility policies and guidelines and making available best practices to operational entities.

6.3 Assistive Technology Partnership

The Nebraska Assistive Technology Partnership provides training, loan devices and support for accommodations in compliance with Section 508 and the Technology Access Clause. Training and support is available to governmental agencies, schools, businesses, and non-profit organizations.

6.4 University of Nebraska Accommodation Resource Center

The Accommodation Resource Center (ARC) provides training, loan devices and support for accommodation using assistive technology in both the education and employment environment. The ARC website

6.5 Federal Information Technology Accessibility Initiative

The Federal Information Technology Accessibility Initiative (FITA) is an interagency effort, coordinated by the General Services Administration, to offer technical assistance and to provide an information means of cooperation and sharing of information on implementation of Section 508. Questions about 508 standards can be sent to 508@access-board.gov

6.6 Web Accessibility Initiative

1 The Web Accessibility Initiative has created guidelines, which are grouped by priority and

2 are very similar to the final Section 508 rules. The guidelines can be found at W3.

3 6.7 Agency and Institutional Heads

4 The highest authority within an agency or institution is responsible for accessibility of

5 information resources that are consistent with this policy. The authority may delegate this

6 responsibility but delegation does not remove the accountability.

7 6.8 Information Technology Staff

8 Technical staff must be aware of the opportunities and responsibility to meet the goals of

9 accessibility of information systems.

10 7. Related Policies, Standards and Guidelines

11 1. Nebraska Technology Access Clause

12 2. Nebraska Technology Access Clause Checklist (Questions to Consider)

13 a. Desktop and Portable Computers

14 b. Video and Multimedia Products

15 c. Software Application and Operating Systems

16 d. Self-Contained, Closed Products

17 e. Telecommunications Products

18 f. Web Page Accessibility Questionnaire

19 3. Section 504 of the Rehabilitation Act

20 4. Electronic and Information Technology Accessibility Standards, Architectural and

21 Transportation Barriers Compliance Board, 36 CFR Part 1194 can be found at Access-Board.

22 Sec. 2. Subsection (156) of section 1-101 is amended to read:

23 (156) "Web page" means a non-embedded resource obtained from a single Universal

24 Resource Identifier (URI) using Hypertext Transfer Protocol (HTTP) plus any other resources

25 that are provided for the rendering, retrieval, and presentation of content a document stored on

26 a server, consisting of an HTML file and any related files for scripts and graphics, viewable

1 ~~through a web browser on the World Wide Web. Files linked from a web page such as Word~~

2 ~~(.doc), Portable Document Format (.pdf), and Excel (.xls) files are not web pages, as they can~~

3 ~~be viewed without access to a web browser~~.

4   Sec. 3. Original section 2-101 and subsection (156) of section 1-101 are repealed.

5   Sec. 4. This proposal takes effect when approved by the commission.

Attachment 3-b

November 7th, 2019

To: NITC Commissioners

From: John Watermolen, State GIS Coordinator
        Kea Morovitz, Chair, GIS Council

Subject: GIS Council Report

GIS Council Updates
The GIS council met on November 6th – Here are some highlights from that meeting.

Selected a new chair and vice chair for 2020. Mike Schonlau from Douglas County will be the chair and Casey Dunn from Nebraska State Patrol will be the vice chair.

The council was also updated on the 2019 National State Geographic Information Council (NSGIC) annual meeting

The GIS Council is submitting the following names for approval by the commission and to forward to the Governor's Office

Nomination for Council member to represent GIS related industry- 2 seats

> 1.   Nominee- Don Linquist, Precision Agriculture Support Specialist- Mitchell Implements-
> 2.   Nominee- Matt Tinkham, Surveyor Lamp Rynearson

Nomination and Approval for Council at large position (vacated this year)*

> • Nominee- Bailey Gibson, GIS Coordinator, Hall County

Short Biographies of the nominees are at the end of this report.

Nebraska Spatial Data Infrastructure (NESDI) Updates

The GIS Council discussed revisiting the following Nebraska Spatial Data Infrastructure Initiatives to see if any of these need to be revisited or if they feel there are other topics that need to be addressed

Nebraska Statewide Imagery
Should the state find funding for a subscription based imagery, one vendor can provide 15cm (6 inch) in rural areas and 5cm (3inch) in urban areas. A survey has been sent out to agencies, Natural Resource Districts, NACO and League of Urban Municipalities to gauge interest in participation from other entities

Nebraska Street Centerline and Address Program
Met with Public Service Commission to discuss the status of the data. Street Centerlines are going through the 2nd QA/QC review and compared to the MSAG and ALI data that is currently used in 911

system to merge all county street centerline data together. We are waiting for the updated standards to pass with the NITC Commissioners

Nebraska Statewide Elevation Program

Natural Resource Conservation Service, FEMA and U.S. Geological Survey are planning for a 2020 LiDAR Collection. The focus of this collection will be Northeast Nebraska. How much will be covered will be determined by the amount of available funds. A topic that was discussed at the NSGIC annual conference was distribution of these large data sets.

NebraskaMap
NebraskaMap live site averaging 175-200 views per day. We have added 18 Department of Health and Human Services applications and several Department of Transportation applications. We have added at least 5 new datasets to NebraskaMap for the public

OCIO and State Agency GIS Updates:

Nebraska GeoElection Pilot Project:
Presented summary of pilot project at the GeoElection Summit in Washington DC and the National State Geographic Information Council (NSGIC) in Utah

ESRI article about NebraskaMap was published and the link was shared with commission members.

Meeting with agencies:
I continue to visit with state agencies every few months to continue discussions and any GIS needs. We did work with the Department of Revenue to release a Sales tax rate finder tool.

https://gis.ne.gov/portal/apps/webappviewer/index.html?id=8d517191978849dabda17a5e3d57cacc

OCIO GIO Team:

We hosted GIS Day on November 13th to highlight GIS within state government. Agencies had the opportunity to share what GIS projects they have been working on.

NSGIC Geospatial Maturity Assessment (GMA)

This is a self-reported survey collected by NSGIC to see how states are utilizing GIS. The 2019 GMA will be the first one that has been graded. NSGIC is looking at giving states a single grade, when the final report is published. My guess Nebraska will be about a "B".

Here is the GMA categories that were graded:

I.	Coordination	A-
II.	Address Point data layer	A-
III.	Cadastral (State Parcel data)	B+
IV.	Elevation	B+
V.	Ortho Leaf Off	F
VI.	Transportation (street centerlines)	C
VII.	Geodetic Control	B-
VIII.	Govern Unit Boundaries	B-

States were given a chance to respond to the various grades.

Other NSGIC Annual Meeting discussion topics

Strategic Plans updating needed because of the technology changes in the past decade or so-ERA of V1.0 Pre Cloud, Pre AI and Pre Mobile, No google maps, Current ERA V2.0 cloud, AI, mobile, consolidation, open sources. Another example is Custom Collection still necessary or is subscription just as good

Stress test the data for example- GeoElections how does the data that we have help with elections or are there big gaps that need to be addresses

Important issues to states, which are the same that Nebraska is dealing with

      I.   Address Points-National Address Database and benefits
     II.   NG 911 and Indoor locations- PSAP having floor plans
    III.   Street Centerlines
    IV.   Parcels
     V.   LiDAR Distribution
    VI.   IT/GIS Consolidation
   VII.   Web services and subscription data
  VIII.   Cloud –storage and Infrastructure
    IX.   Broadband
     X.   Funding for various projects

Nominee's Bios

Don Linquist

Don is the Precision Ag Support Specialist for Mitchell Implements in Atkinson, NE

I have been doing Precision Ag for 10 years. During the first couple years, a co-worker and I spent time designing a Statewide RTK network. After the sale of the network design, I then focused more on Precision AG GIS, and I was part of a team where we managed over 100k acres. Currently, I have approximately 20 customers totaling 30k-50k acres, and they are various levels of analysis ranging from simple maps to multiple comparative analysis from different data sources.

In the last few years, I have identified an industry standard setting that does not apply to some Nebraska soil conditions or consider our extensive soil variability. This year we expanded our testing and are currently awaiting the harvest data to quantify this finding. In one farm, over the last 5 years, they accredit this analysis for increasing their yields 20-25 bu/ac. That is a 7%-10% increase. I have numerous examples where the use of GIS has found shortcomings in equipment and operation. I know there is much more that can be done. For example, the ability to also utilize non-OEM GIS data from other sources. Right now, this is not economically feasible and many in the Ag industry are unaware of the availability of other resources. The Precision Ag GIS is very much in its infancy. I have spoken to representatives from Microsoft, IBM and ESRI and it is growing.

In my spare time I enjoy working with new technologies and building IOT devices.

Matt Tinkham

Matt works for Lamp Rynearson, Omaha NE

Graduated from the University of Nebraska at Omaha with a BS in Geography and an emphasis in computer mapping in 1999. Have been working as a Land Surveyor for over 24 years. 11 years with Tinkham Land Surveying and the past 13 years with Lamp Rynearson. Has been a licensed Land Surveyor for the past 11 years. Is currently a licensed in the States of Nebraska and North Dakota. Active in the Professional Surveyors Association of Nebraska (PSAN). Served on the Board of Directors for PSAN for the past 6 years. Is the head of the Education Committee and sits on the GIS Committee.

Bailey Gibson

Bailey is the GIS Coordinator for Hall County, Grand Island NE

Since taking the position in 2017, she has worked to have more county departments using spatial data in their daily workflows and decision-making and to make data more available to and interactive for the public. She graduated with a bachelor's in geography from Wayne State College in 2013. After graduating, she started working with the Hall County GIS Department as an intern; updating land records and working with the election commissioner to ensure accurate voter records by using spatial data. In 2014, she was hired as a GIS Tech for Hall County and has worked on projects for outside entities like the state fair marathon and local veterans' club and provides county departments with the support to calculate land uses for assessing property, pull site specific data for zoning permits, track road closures during flooding, and map proposals for county board decisions. She is also a member of the Nebraska GIS/LIS Association and the MidAmerican GIS Consortium and completed the GIS program through SCC in 2016. She is of the primary members for the Hall County/City of Grand Island Interlocal GIS Committee, where she has been able to be a part of setting standards for local data and expanding uses of spatial data in local government and its accessibility for the public.

Attachment 3-c-i

Nebraska Information Technology Commission
EDUCATION COUNCIL

2019-21 Membership Update

Name	Representing	Status

HIGHER EDUCATION (2019-21 PRO TEM)

Name	Representing	Status
Chuck Lenosky	Independent Colleges & Universities	**Treva Haugaard- Confirmed 11/6/2019**
Carla Streff	Community College System	**Greg Adams- Confirmed 10/21/19**
Dr. Paul Turman	State College System	**Paul Turman- Confirmed 10/11/19**

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

Biographical Sketches

Mr. Chuck Lenosky

Mr. Chuck Lenosky has worked for Creighton University since 1982. He is the I.T. Solutions Architect within the Learning Environments/Technologies Division at the university. Chuck replaces Mike Carpenter on the Education Council as one of two representatives of the Council of Independent Nebraska Colleges. Mr. Lenosky earned a Bachelor of Arts degree in Telecommunications from Michigan State University and a Masters in Adult and Continuing Education from UNL. During his service at Creighton University, he has held several positions within Media, Biomedical Communications, and Learning Environments. In his current position, he functions as a senior technical advisor, and provides technical expertise, strategic planning, and recommendations for new technologies, devices, applications and solutions in support of the University's Digital Strategy. One new focus is in the area of virtual and augmented reality as it applies to medical and health sciences simulations.

Ms. Carla Streff

Ms. Carla Streff began employment with Northeast Community College in 2008. She serves as the Executive Director of Technology Services. Carla replaces Derek Bierman on the Education Council as one of two representatives of the Nebraska Community College System. Ms. Streff holds a Bachelor of Arts degree and is ITIL certified. She was recognized in 2017 by the Center for Digital Education as one of its Top 30 Technologists, Transformers and Trailblazers, and in 2016 by the Association for College and University Technology Advancement (ACUTA). In addition to her work in transforming the NCC service center, she has experience implementing the new learning management systems and new phone system for the college. Carla is a member of EDUCAUSE and is a member of the steering committee for the Summer Institute on Distance Learning and Instructional Technology (SIDLIT).

Dr. Paul Turman

Dr. Paul Turman began working for the Nebraska State College System on January 2, 2019. He is the Chancellor for the State College System and is responsible for overall administration of the state college system comprised of Chadron State College, Peru State College, and Wayne State College. He replaces Mr. Steve Hotovy on the Education Council as one of two representatives of the Nebraska State College System. Dr. Turman earned his B.A. Degree in General Studies and M.A. Degree in Communication Studies from South Dakota State University. He earned his PhD from the University of Nebraska in Interpersonal Communications. He previously served as the Vice President for Academic Affairs for the South Dakota Board of Regents responsible for comprehensive strategy for Instructional Technology for the six public universities. He was also responsible for oversight of the common Student Information, Learning Management, and Integrated Library Systems.

Attachment 3-d

Nov. 6, 2019

To: NITC Commissioners

From: Anne Byers

Subject: Community Council Update

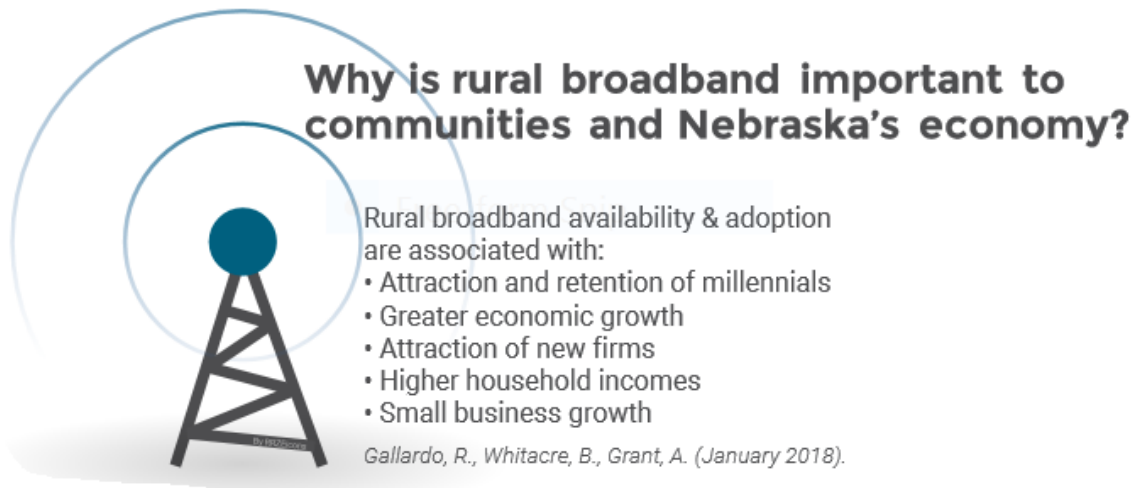**Community Council Update and New Member Nomination**

The Community Council met on Sept. 26, 2019. They recommended the nomination of Allison Hatch to represent the Nebraska Department of Economic Development. Her bio is below:

Allison Hatch is Talent Development Team Leader with the Nebraska Department of Economic Development (DED) where she oversees a state strategy for attracting, retaining and developing qualified talent for growing job opportunities. She is involved with coordinating an extensive communications and outreach effort that promotes Nebraska as welcoming and attracts a diverse group of talented individuals to the state to live and work; developing programs and fostering an environment that results in individuals remaining in the state; and serving as a catalyst for advancing ideas, partnerships and actions that create greater pathways to career opportunities for Nebraska's current and future workforce.
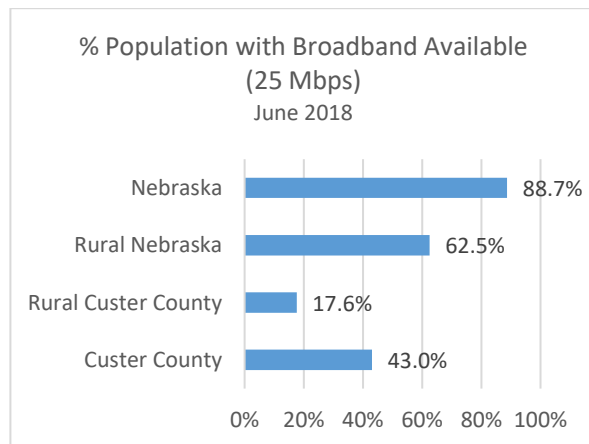
Previously Hatch served as the University Career Services' Associate Director for Employer Relations at the University of Nebraska-Lincoln, as the Talent Attraction Coordinator, InternNE Program Coordinator and Human Resources Coordinator with DED, and as Research Analyst with the Nebraska Department of Labor's Office of Labor Market Information. She holds a Bachelor of Arts degree in Biopsychology from the University of Nebraska-Lincoln, and is a graduate of the Economic Development Institute at the University of Oklahoma.

County Broadband Fact Sheets. The NITC Community Council is partnering with the Nebraska Library Commission to develop broadband fact sheets for counties in Nebraska. A sample fact sheet is included in the meeting materials. The fact sheets will help engage community leaders and local libraries in efforts to address digital inclusion and/or broadband planning.

Custer County Broadband Facts

Why is rural broadband important to communities and Nebraska's economy?

Rural broadband availability & adoption are associated with:
• Attraction and retention of millennials
• Greater economic growth
• Attraction of new firms
• Higher household incomes
• Small business growth

Gallardo, R., Whitacre, B., Grant, A. (January 2018).

Is broadband available to most residents of Custer County?
Do most residents of Custer County subscribe to broadband?

% Population with Broadband Available (25 Mbps) June 2018

Nebraska	88.7%
Rural Nebraska	62.5%
Rural Custer County	17.6%
Custer County	43.0%

Source: FCC Broadband Map (https://broadbandmap.fcc.gov) using June 2018 Form 477 data. These figures do not include broadband availability via mobile broadband or satellite.

% Population with Broadband Subscription 2017

Nebraska	83.6%
Custer County, Nebraska	72.8%
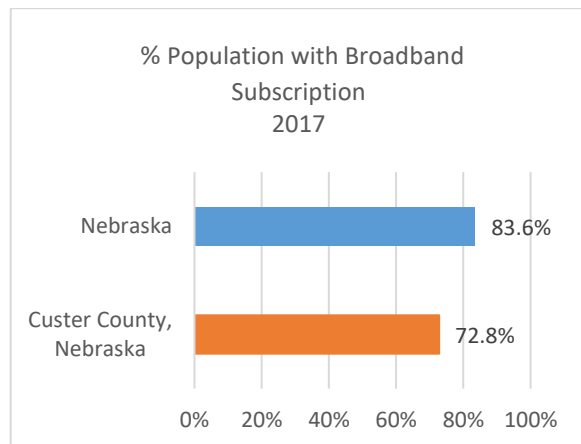
Source: U.S. Census Bureau 2017 American Community Survey 5-Year Data available at https://factfinder.census.gov/ These figures include those who subscribe to cable, fiber optic, or DSL, satellite, fixed wireless subscription, or mobile broadband plans.

Do libraries in Custer County have adequate broadband?

Library	Service Area Population	Maximum Download Speed	Persons Per Megabit Index	Does the Library Apply for E-Rate?
Broken Bow Public Library	3,546	24.1-50.0 Mbps	70.92	No
Nigel Sprouse Memorial Library, Callaway	1,200	12.1-18.0 Mbps	66.67	No
Finch Memorial Library, Arnold	576	3.1-6.0 MBps	96.00	No
Sargent Township Library	655	12.1-18.0 Mbps	36.39	Yes
Brenizer Public Library, Merna	368	1.5 -3.0 Mbps	122.67	Yes

Ansley Township Library, Comstock Township Library, Oconto Public Library, and Mason City Library did not report.

Source: Nebraska Library Commission. **Note:** Not all Nebraska libraries provided data to the Nebraska Library Commission. Available at https://www.zeemaps.com/view?group=3499369&x=-100.053561&y=43.439597&z=11

What can you do to improve broadband in your county or community?

Build Awareness. Community members, businesses and those living outside of city limits need to understand the importance of broadband and how new technologies can be utilized.

Form a Broadband Committee. Work with other interested community leaders to form a community or regional technology committee. Complete the Intelligent Community Checklist to assess your community, county or region.

Document Demand for Broadband. Understand how individuals and businesses are utilizing broadband and identify those interested in better service. Conduct a broadband household and business survey.

Review Local Permitting and Rights of Way Processes to make sure they are processed in a timely manner and are not unduly burdensome on telecommunications providers.

Talk to Your Local Providers. Ask your local providers about current service available, future plans and what can be done to encourage deployment.

Identify and Report Issues. Contact your local provider to report service issues. An online survey can be used to log service issues. The Public Service Commission may be able to help resolve issues.

Contact Local and State Officials to make them aware that your community wants better broadband or is running into particular issues. They may be able to help identify strategies and solutions.

Enhance Broadband in Libraries. The E-rate program can provide funding for library internet service and Wi-Fi. Libraries may also be able to partner with schools to improve library internet access.

Address the Homework Gap by implementing programs to provide internet access for students to complete homework. Examples include hot spot lending programs at the local school or library and Wi-Fi on buses.

Encourage Broadband Use. Classes at the local library or a maker space are great ways to help community members learn about new technologies.

Encourage Public-Private Partnerships by:

- **Placing Conduit in Right of Way.** Communities can lease conduit to telecommunication providers, reducing costs for providers and reducing the need to dig up streets.
- **Inventorying High Points** such as grain elevators and water towers which may be used for fixed wireless deployments. This can help attract a fixed wireless provider and reduce their costs.
- **Conducting an Engineering Study.** Conducting an engineering study is another way to partner with a provider to identify the best locations to deploy broadband.
- **Exploring Financial Incentives.** Offer a low-interest loan, a loan over a longer period, or explore grants or other cooperative approaches.

Explore Forming a Broadband Cooperative. A broadband cooperative may have certain investment and tax advantages and may empower stakeholders to focus on solutions rather than problems.

For More Information, Contact:

Anne Byers
Nebraska Information Technology Commission
Anne.byers@nebraska.gov
402-471-3805

Cullen Robbins
Nebraska Public Service Commission
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Charlotte Narjes
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Tom Rolfes
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Holly Woldt
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Roger Meeks
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402-420-1467

Attachment 3-e

Nov. 5, 2019

To: NITC Commissioners

From: Anne Byers

Subject: eHealth Council Update

eHealth Council Update and New Member Nomination

The eHealth Council met on Sept. 26, 2019. They recommended the nomination of Dr. Larra Petersen to represent the Nebraska Department of Health and Human Services Division of Medicaid and Long-Term Care on the eHealth Council. Her bio is below:

Larra Petersen, Ph.D. is the Deputy Director for Business Performance and Analytics for Nebraska Department of Health and Human Services, Division of Medicaid and Long-Term Care. She oversees the efforts of business operations, including business portfolio management, performance reporting and evaluation, and quality improvement. She was formerly the Director of Population Health & Analytics at Methodist Health System, and Director of Clinical Integration and Population Health at an ACO. The positions involved strategic planning, implementation, and evaluation of population health and Post-Acute Care strategies. Dr. Petersen has significant clinical experience in patient self-management of chronic disease, and has over 10 years experience in program development and implementation, including data management and actionable insights with varied populations. She has also served as a consultant for numerous transformational coaching programs to improve operational and clinical performance.

NEHII Update

NEHII has continued to add data-sharing participants with 19 general acute hospitals, 39 Critical Access Hospitals, and two children's hospitals sharing data. Two specialty hospitals—OrthoNebraska and Madonna Rehabilitation Hospital—are in progress. NEHII is also working to include long-term care facilities as data-sharing participants.

NEHII is transitioning to a new health information exchange platform. The new Intersystems platform will be able to ingest greater amounts and types of data. It will support API integration. The new platform will also support the sharing of behavioral health information with patient consent. NEHII is upgrading its analytics platform to KPI Universe. NEHII is also looking at patient portal, e-prescribing, and rapid credentialing technologies.

NEHII is moving beyond data sharing and is forming three additional entities:

- **NEHII Shared Services** is the for-profit data analytics arm of NeHII.

- The mission of the **NEHII Foundation** is to support the health of all Nebraskans by inviting community philanthropic partners to invest in the mission that demands enhancements in data

- The **Nebraska Healthcare Collaborative** was formed from the commitment of NEHII and the Nebraska Department of Health and Human Services Medicaid and Long-Term Care to actively participate in the development of health data science and population health projects.

PDMP AND SUPPORT ACT UPDATE

Nebraska's Prescription Drug Monitoring Program (DPMP) prevents the misuse of controlled substances that are prescribed and includes all dispensed prescriptions. The number of unique user queries per month continues to increase with over 56,000 queries in August 2109.

The new PDMP platform with NIC was scheduled to go live in late October. It will offer the same or better functionality. Dispensers will submit data via a new website/sFTP site. The transition should provide seamless access for existing users who view data.

The Support Act was signed into law in October 2018 to address the opioid crisis. The Support Act aims to increase PDMP use for Medicaid providers. Effective Oct. 1, 2021, Medicaid providers will be required to query a PDMP prior to prescribing a controlled substance. The Centers for Medicare and Medicaid Services has approved an Advance Planning Document (APD) requesting Support Act funding for sharing PDMP data with contiguous states, workflow integration, e-prescribing, real-time PDMP reporting, data analytics, infrastructure, administrative considerations and neonatal abstinence syndrome.

Attachment 3-f-i

TO:	NITC Commissioners
MEETING DATE:	November 14, 2019
SUBJECT:	Amendments to the State Government Council Charter.
RECOMMENDED ACTION:	Approve the amendments.
BACKGROUND:	As amended, section 7 of the charter provides for meetings of the council to be held at the call of the chairperson with at least 30 days prior notice. The other changes to the charter are clean-up in nature. The State Government Council recommended approval of the amendments by a vote of 18-0-0.
RECOMMENDED BY:	State Government Council

Nebraska Information Technology Commission

State Government Council Charter

1. Introduction

The Nebraska Information Resources Cabinet (the "IRC") was created in January 1996 by Executive Order 96-1. The IRC was re-established as the Government Council of the Nebraska Information Technology Commission (hereafter referred to asthe "Commission") through Executive Order 97-7 in November 1997. The Commission became a statutory body in Laws 1998, LB 924, and the Commission re-established the State Government Council (hereafter referred to asthe "Council").

2. Purpose

The purpose of this charter is to clarify the role of the Council and its relationship with the Commission.

3. Authority

The Nebraska Information Technology Commission shall: "Neb. Rev. Stat. § 86-516 provides: "The commission shall:… (7) Establish ad hoc technical advisory groups to study and make recommendations on specific topics, including workgroups to establish, coordinate, and prioritize needs for education, local communities, intergovernmental data communications, and state agencies[.]" Neb. Rev. Stat. § 86-516(7).;…."

4. Commission Mission and Responsibilities

4.1 Commission 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.

4.2 Commission Responsibilities. The responsibilities and duties of the Commission are codified at Neb. Rev. Stat. § 86-516.

5. Council Mission and Responsibilities

5.1 Council Mission. To The mission of the Council is to provide direction and oversight for state government information technology vision, goals and policy.

5.2 Council Responsibilities.

5.2.1 Establish, coordinate, and prioritize technology needs for state agencies;

5.2.2 Review and make recommendations to the Commission on requests for funds from the Government Technology Collaboration Fund;

5.2.3 Review and make recommendations to the Commission on agency technology projects requesting funding as part of the state budget process;

5.2.4 Assist the Commission in developing, reviewing and updating the statewide technology plan;

5.2.5 Recommend planning and project management procedures for state information technology investments;

5.2.6 Evaluate and act upon opportunities to more efficiently and effectively deliver government services through the use of information technology;

5.2.7 Recommend policies, guidelines, and standards for information technology within state government; and

5.2.8 Such other responsibilities as directed by the Commission.

6. Membership

6.1 Members. The Council shall consist of:

6.1.1 The agency director, or his or her designee, from the following agencies:
    6.1.1.1 Administrative Services, Department of;
    6.1.1.2 Banking and Finance, Department of;
    6.1.1.3 Correctional Services, Department of;
    6.1.1.4 Crime Commission;
    6.1.1.5 ~~Environmental Quality~~<u>Environment and Energy</u>, Department of;
    6.1.1.6 Governor's Policy Research Office;
    6.1.1.7 Health and Human Services, Department of;
    6.1.1.8 Labor, Department of;
    6.1.1.9 Motor Vehicles, Department of;
    6.1.1.10 Natural Resources, Department of;
    6.1.1.11 Revenue, Department of;
    6.1.1.12 State Patrol, Nebraska; and
    6.1.1.13 Transportation, Department of.

6.1.2 The following individuals, or their respective designee:
    6.1.2.1 Chief Information Officer;
    6.1.2.2 Office of the CIO - IT Administrator, Enterprise Computing Services;
    6.1.2.3 Office of the CIO - IT Administrator, Network Services;
    6.1.2.4 Education, Department of - Chief Information Officer;
    6.1.2.5 Secretary of State;
    6.1.2.6 State Budget Administrator;

6.1.2.7   State Court Administrator;

6.1.2.8   Workers' Compensation Court Administrator;

6.1.2.9   One representative of non-code state agencies, to be appointed by the Commission; and

6.1.2.10   One representative from the general public with extensive IT experience, to be appointed by the Commission.

6.2 Alternates. Each member of the Council may designate one ~~(1) official voting~~ alternate member. This ~~official voting~~ alternate member shall be registered with the Office of the Chief Information Officer and, in the absence of the ~~official~~ member, have all the privileges as the ~~official~~ member on items of discussion and voting.

6.3 Member Responsibilities; Conflicts of Interest. A ~~Member~~ member with a potential conflict of interest in a matter before the Council or a potential interest in a contract with the Council is subject to the provisions of the Nebraska Political Accountability and Disclosure Act including sections 49-1499.02 and 49-14,102. A ~~Member~~ member with a potential conflict of interest or a potential interest in a contract shall contact the Nebraska Accountability and Disclosure Commission and take such action as required by law.

7. Meeting Procedures

7.1 ~~Chair~~Chairperson. The Chief Information Officer shall serve as ~~the Chair~~chairperson of the Council.

7.2 Quorum. A quorum consists of at least 50% of the voting membership.

7.3 Voting. Issues shall be decided by a majority vote of the voting members present.

7.4 Non-Member Agencies. Attendance and input by non-member state government agencies is encouraged. The director of a non-member agency may submit to the Council the name of a contact person within his or her agency to receive notification of Council meetings.

~~**7.5 Meeting Frequency.** The Council shall meet not less than four times per year.~~

~~7.6~~7.5 Notice of Meetings. The Council shall meet at the call of the chairperson. Notice of the time and place of each meeting of the Council shall be made at least ~~seven (7) calendar~~ 30 days prior to the meeting. Notice shall be published on ~~the Council's website at http://www.nitc.ne.gov/~~the Commission's website (https://nitc.nebraska.gov/) and the Nebraska Public Meeting Calendar (https://www.nebraska.gov/calendar/index.cgi).

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Attachment 5

Nov. 6, 2019

To: NITC Commissioners

From: Anne Byers

Subject: Nebraska Broadband Plan Update

In 2014, the Nebraska Information Technology Commission approved the state broadband plan, *Broadband in Nebraska: Current Landscape and Recommendations*. The 2014 plan was developed in collaboration with the Nebraska Broadband Initiative. Current Nebraska Broadband Initiative partners include the Nebraska Public Service Commission, University of Nebraska-Lincoln, Nebraska Information Technology Commission, Nebraska Library Commission, and USDA. The initiative was formed to implement the planning component of the Nebraska Public Service Commission's broadband mapping and planning grant from the National Telecommunications and Information Administration through the American Recovery and Reinvestment Act.

The state broadband plan is now five years old. As two statewide efforts—the Rural Broadband Task Force and Blueprint Nebraska—have produced reports with recommendations to improve rural broadband availability and to enhance economic development in Nebraska, it would likely be duplicative to convene another group of stakeholders to update the state broadband plan. Yet, having an updated broadband plan may help Nebraska obtain federal funding. Last year, USDA awarded bonus points to ReConnect grant applicants if their state had a broadband plan that had been updated in the last five years.

We are proposing that the NITC update the state broadband plan by affirming the vision, objectives, goals, and recommendations included in the 2014 broadband plan and appending the Rural Broadband Task Force report.

A draft of an updated broadband plan is attached for your consideration.

Broadband in Nebraska

Current Landscape and Recommendations

2019

The Nebraska Information Technology Commission (nitc.nebraska.gov) promotes the use of information technology in education, health care, economic development, and all levels of government service. The nine-member governor-appointed commission is chaired by Ed Toner, Chief Information Officer for the State of Nebraska.

The Rural Broadband Task Force (rurabroadband.nebraska.gov) was created to "review issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska" by LB 994, which was passed by the Legislature and signed by Governor Ricketts on April 17, 2018. The 14-member task force is chaired by Ed Toner, Chief Information Officer for the State of Nebraska. The task force is required to submit a report to the Legislature by Nov. 1 of every odd-numbered year.

The Nebraska Broadband Initiative (broadband.nebraska.gov) promotes the adoption and utilization of broadband in Nebraska. Project partners include the Nebraska Public Service Commission, University of Nebraska-Lincoln, Nebraska Information Technology Commission, Nebraska Library Commission, and USDA. The initiative was formed to implement the planning component of the Nebraska Public Service Commission's broadband mapping and planning grant from the National Telecommunications and Information Administration (NTIA). The initiative has continued to partner on efforts which promote broadband development and adoption. The development of the 2014 Nebraska broadband plan was funded through a grant to the Nebraska Public Service Commission by the U.S. Department of Commerce's NTIA through the American Recovery and Reinvestment Act.

Foreword

Broadband development and planning is an iterative process involving multiple stakeholders. In 2014, the Nebraska Information Technology Commission approved the state broadband plan, *Broadband in Nebraska: Current Landscape and Recommendations*. The 2014 plan was developed in collaboration with the Nebraska Broadband Initiative. The initiative was formed to implement the planning component of the Nebraska Public Service Commission's broadband mapping and planning grant from the National Telecommunications and Information Administration through the American Recovery and Reinvestment Act. Current Nebraska Broadband Initiative partners include the Nebraska Public Service Commission, University of Nebraska-Lincoln, Nebraska Information Technology Commission, Nebraska Library Commission, and USDA.

Most recently, Nebraska's Rural Broadband Task Force has developed recommendations on accelerating broadband deployment in rural areas of the state. Two members of the NITC, Ed Toner and Dan Spray, are also members of the Rural Broadband Task Force. In order to avoid duplicating the efforts of the Rural Broadband Task Force, the NITC has updated the state's broadband plan by affirming the vision, objectives, goals, and recommendations included in the 2014 broadband plan and appending the Rural Broadband Task Force report.

Vision, Objectives and Goals

Nebraska's broadband vision is that residents, businesses, government entities, community partners, and visitors have access to affordable broadband service and have the necessary skills to effectively utilize broadband technologies.

Objectives

- To increase economic development opportunities, create good-paying jobs, attract and retain population, overcome the barriers of distance, and enhance quality of life in Nebraska by stimulating the continuing deployment of broadband technologies which meet the need for increasing connection speeds.

- To increase digital literacy and the widespread adoption of broadband technologies in business, agriculture, health care, education, government and by individual Nebraskans.

Goals

The following goals and targets help focus attention on key aspects of the plan and provide a way to assess the state's progress in addressing broadband development:

Increase household adoption of broadband

- Over 90% of households statewide will subscribe to broadband by 2020.

- 85% of households in rural Nebraska will subscribe to broadband by 2020.

Increase broadband availability

- Broadband service of 25 Mbps down will be available to 90% of households by 2020.

- Broadband service of 1 gbps down will be available to 25% of households by 2020.

Support broadband-related development by increasing the number and diversity of IT workers

- At least 1,400 degrees in computer and information science, management information systems, computer engineering, and bioinformatics will be awarded annually by Nebraska colleges and universities by 2020.

- Women receive at least 25% of the degrees in computer and information science, management information systems, computer engineering, and bioinformatics will be awarded by Nebraska colleges and universities by 2020.

Recommendations

The following recommendations emerged from discussions with stakeholders:

- Encourage investment in Nebraska's telecommunications infrastructure:

  - By providing support through the Nebraska Universal Service Fund; and

  - By aggregating its demand for telecommunications services and acting as an anchor tenant.

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

- Encourage the development of a skilled IT workforce.
- Support innovation and entrepreneurship.
- Support the use of broadband technologies in businesses and agriculture.
- Support the development of libraries as community anchor institutions.
- Support the use of broadband in education and health care.
- Support the use of broadband by government and public safety entities.
- Support efforts to attract new residents and retain youth.
- Increase digital literacy and broadband access to the Internet.

Nebraska Broadband Goals Update 2019

Measure	Baseline	Most Recent	2020 Target
Subscription to broadband service by households in Nebraska8	82% *(2014, University of Nebraska Survey)*	83.6% of Nebraskans have internet access. (U.S. Census Bureau 2017 American Community Survey 5-Year Data. These figures include those who subscribe to cable, fiber optic, or DSL, satellite, fixed wireless subscription, or mobile broadband plans. University of Nebraska survey data tends to show a higher percentage of internet users than U.S. Census Bureau data)	Over 90%
Subscription to broadband service by households in nonmetropolitan Nebraska	73.6% *(2014, University of Nebraska Survey)*	84% with a fixed internet subscription Another 7% had only a cell phone data plan *(2018 Rural Poll,-University of Nebraska)*	85%
% of households with broadband service of at least 25 Mbps down available	74.9% *(Dec. 2013 Form 477 data, broadbandmap.gov)*	*88.7%* *([FCC Broadband Map, June 2018](#))*	90%
% of households with broadband service of 1 gbps down available	11.5% *(Dec. 2013 Form 477 data, broadbandmap.gov)*	21% at 1 gbps *([FCC Broadband Map, June 2018](#))*	25%
Degrees awarded in computer and information science, by Nebraska colleges and universities10	1,113 *(2012, National Center for Education Statistics)*	1,128 *(2015-2016, National Center for Education Statistics)*	1,400
% of computer and information science, engineering, and engineering technologies degrees awarded to women by Nebraska colleges and universities	20% *(2012, National Center for Education Statistics)*	22.8% *(2015-2016, National Center for Education Statistics)*	At least 25%

NEBRASKA

Rural Broadband Task Force

Findings and Recommendations

October 2019

Rural Broadband
Task Force Members

Ed Toner, Task Force Chair
Chief Information Officer
State of Nebraska
Chair, Nebraska Information
Technology Commission

Senator Curt Friesen
Chair, Transportation and
Telecommunications
Committee
Nebraska Legislature
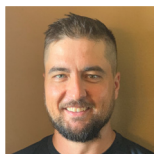
Senator Bruce Bostelman
Nebraska Legislature
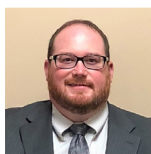
Mary Ridder
Commissioner and Chair
Nebraska Public Service
Commission

Tony Goins
Director
Nebraska Department of
Economic Development

Steve Wellman
Director
Nebraska Department of
Agriculture

Zachary Hunnicutt
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Homestead Bank
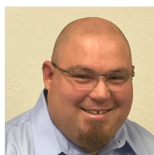
Tom Shoemaker
President
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Daniel Spray
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Precision Technology, Inc.
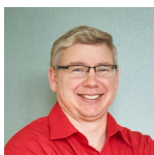
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Contents

Appendices

Available as separate documents at https://ruralbroadband.nebraska.gov

Executive Summary

The Rural Broadband Task Force was created to "review issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska" by LB 994, which was passed by the Legislature and signed by Governor Ricketts on April 17, 2018.[1] The bill was introduced by Senator Curt Friesen, Chair of the Transportation and Telecommunications Committee. The task force is chaired by Ed Toner, CIO for the State of Nebraska and Chair of the Nebraska Information Technology Commission. This report presents the findings and recommendations of the task force as required by LB 994.

Approximately **one in ten** rural Nebraskans report significant limitations from their internet service.

2018 Nebraska Rural Poll

Findings and Recommendations

Broadband Availability

Eighty-nine percent of Nebraskans—but only 63% of rural Nebraskans—have fixed broadband of at least 25 Mbps down/3 Mbps up available, according to the latest data available from the FCC (June 2018).

Broadband Data and Mapping

Current state and federal broadband mapping efforts likely overstate broadband coverage and need to be improved. Nebraska's broadband map currently utilizes Form 477 data released by the FCC. Using Form 477, fixed broadband providers report the type of technology and maximum advertised speeds in Mbps up and down by census block to the FCC. The use of census block reporting can overstate broadband availability in large census blocks. Mobile wireless providers provide polygons of their service area and the minimum speeds that are publicly available. The FCC is currently investigating at least one national mobile wireless provider for overstating coverage.

The FCC's Digital Opportunity Data Collection[2] program which was approved on August 1, 2019 and federal legislation being considered would

largely address the shortcomings of the current fixed broadband data collection method.

Key Recommendations

- Leverage the FCC's Digital Opportunity Data Collection program or an alternate broadband mapping program created through federal legislation to improve Nebraska's broadband map.

- To the extent possible, encourage the FCC and/or Congress to improve data collection of mobile wireless coverage data.

- Encourage Nebraskans to participate in crowdsourcing efforts developed to enhance federal broadband mapping.

Alternative Technologies and Providers

Several emerging technologies may be well-suited for rural areas, including fixed wireless using mid-band spectrums, TV white space, and low Earth orbit satellites. However, higher speed technologies like 5G will likely be deployed first in urban areas, potentially exacerbating the speed gap between rural and urban areas.

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[1] See _Appendix 1_ for the text of the statutes pertaining to the Rural Broadband Task Force.

[2] The Report and Order and Second Further Notice of Proposed Rulemaking on establishing the Digital Opportunity Data Collection is available at https://docs.fcc.gov/public/attachments/FCC-19-79A1.pdf

Nebraska Universal Service Fund and Reverse Auction

The Nebraska Universal Service Fund (NUSF) provides support to price cap (Windstream, CenturyLink, and Frontier), rate of return (rural carriers), and mobile wireless carriers in Nebraska. In 2019, the Nebraska Public Service Commission allocated $12,049,546 in high cost support to price cap carriers and $14,100,058 in high cost support to rate of return carriers. In 2018, $3,200,000 was allocated for support for mobile wireless carriers. The Nebraska Public Service Commission has taken steps to move the fund toward a grant-like method of distribution whereby carriers must build first before receiving reimbursement.

The total remittances to the NUSF have decreased from $52 million in 2013 to about $33 million in 2018. However, the Nebraska Public Service Commission has taken steps to stabilize the fund by modernizing the contribution methodology.

Broadband availability varies by incumbent carrier. Approximately 79% of those rural households which do not have broadband available reside in Windstream, CenturyLink, Great Plains or Frontier (Citizens) exchanges.[3] Addressing the rural broadband divide in Nebraska will require strategies which address areas without broadband access served by both price cap and rate of return carriers.

Key Recommendations

- Support the Nebraska Public Service Commission's efforts to modernize the NUSF contribution system and to improve provider accountability by moving to a grant-like system of distribution.

- Encourage the Nebraska Public Service Commission to continue to investigate a state-run reverse auction as a mechanism to spur broadband build out in rural areas.

Public-Private Partnerships and Broadband Planning

Public-private broadband partnerships have primarily been utilized in communities, but not rural areas outside of city or town limits. Some models, however, could be adapted for use in rural areas.

Public power districts and cooperatives could play a role in advancing the deployment of broadband services in rural Nebraska through public-private partnerships. Public power districts and cooperatives may own fiber rings to connect necessary electric controls and data points. The communications network enables public power districts to safely operate and manage the

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Key Definitions

Broadband— *High-speed internet access at 25 Mbps down and 3 Mbps up or greater.*

Connect America Fund (CAF)— *The FCC's universal service high cost program which provides support to carriers for broadband.*

Competitive Local Exchange Carrier (CLEC)— *A telecommunications provider competing with the incumbent local exchange carrier (ILEC).*

Fixed Broadband— *Any broadband transmission method to a home or business including Digital Subscriber Line (DSL), cable modem, fiber, fixed wireless, and satellite. Fixed broadband does not include mobile (cellular) broadband.*

Fixed Terrestrial Broadband— *Any broadband transmission method to a home or business including Digital Subscriber Line (DSL), cable modem, fiber, and fixed wireless. Fixed broadband does not include mobile (cellular) broadband and satellite.*

Incumbent Local Exchange Carrier (ILEC)— *A local telephone company which provided landline service before the market was opened to competitive local exchange carriers.*

Price Cap Carriers— *Include the three largest incumbent exchange carriers in the state: CenturyLink, Windstream, and Frontier (also known as Citizens Telecommunications of Nebraska).*

Rate of Return Carriers— *Smaller, rural incumbent local exchange carriers.*

Rural Area— *Open countryside with population densities less than 500 people per square mile or places with fewer than 2,500 people.*

Terrestrial Broadband— *Land-based methods of broadband transmission (DSL, cable modem, fiber, fixed wireless and mobile wireless). Terrestrial broadband does not include satellite.exchange carrier (ILEC).*

Unserved Areas— *Areas with internet service at less than 10 Mbps down/1 Mbps up.*

Underserved Areas— *Areas which have internet service at 10 Mbps down/1 Mbps up or greater but less than 25 Mbps down/3 Mbps up.*

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[3] *See Appendix 7 Broadband Coverage by ILEC Including Fixed Wireless Coverage by Rural Households Not Covered*

electric grid. The communications network could be leveraged to facilitate the deployment of broadband in rural areas.

Key Recommendations

- Encourage local and regional broadband planning, including communications planning between telecommunications providers and public power districts and cooperatives.

- Explore the creation of broadband cooperatives in unserved and underserved localities.

- Retain the existing prohibition on retail provision of broadband service by public entities.

- Explore ways to make it easier for public entities to lease dark fiber.

- Explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.

- Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.

Digital Inclusion, Homework Gap and Leveraging E-Rate Funding

As more services move online, internet access is becoming a necessity. Students who need to use the internet to complete homework are especially impacted. The term "homework gap" is used to describe the challenge that students who lack home internet access face in completing online assignments.

Libraries are key community partners in providing internet and computer access to students and the general public—especially in rural areas. However, 84% of Nebraska public libraries serving populations less than 2,500 reported internet speeds of less than 24 Mbps down.[4] The E-Rate program, which provides support for telecommunications services by schools and libraries, is underutilized by Nebraska libraries with only 25% of public libraries in Nebraska applying for E-Rate funding in 2019-20.

Key Recommendations

- Increase the number of public libraries applying for E-Rate support;

- Fund four regional technicians to assist public libraries with technology support, upgrades, digital literacy training, and E-Rate filing;

- Implement an E-Rate Special Construction matching fund program with funding from the Nebraska Universal Service Fund to incentivize new fiber construction to public libraries and schools.

- Encourage school districts, ESUs, public libraries, and communities to implement programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.

- Encourage education leaders and public library staff to be part of local community discussions involving broadband services and digital inclusion.

Broadband Infrastructure Funds

Key Recommendation

- Funding opportunities should be monitored and communicated to interested stakeholders, including communities.

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[4]*Information on library broadband availability is from the Nebraska Library Commission. See Appendix 9 for more information on Broadband Adoption Data and Broadband in Nebraska Libraries or the map at*
https://www.zeemaps.com/view?group=3499369&x=-100.053561&y=43.439597&z=11

Findings and Recommendations

Introduction

Broadband and telecommunications service in rural areas of the state should be comparable in download and upload speed and price to urban areas.

-Vision of the Rural Broadband Task Force, adopted September 24, 2018

The Rural Broadband Task Force was created to "review issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska" by LB 994, which was passed by the Legislature and signed by Governor Ricketts on April 17, 2018.[5] This report presents the findings and recommendations of the task force.

Importance of Broadband

Rural broadband is important to Nebraska's economy and to the state's businesses, consumers, agricultural producers, students, educators, patients and health care providers. Rural broadband availability and adoption are associated with:

- Attraction and retention of millennials
- Greater economic growth
- Attraction of new firms
- Higher household incomes
- Small business growth[6]

Definitions and Prioritization

In order to clarify terms and prioritize those areas in most need of assistance, the task force adopted the following definitions and priorities:

Rural areas are defined as open countryside with population densities less than 500 people per square mile or places with fewer than 2,500 people.

Unserved areas are defined as areas with internet service at less than 10 Mbps down/1 Mbps up.

Underserved areas are areas which have internet service at 10 Mbps down/1 Mbps up or greater but less than 25 Mbps down/3 Mbps up.

The task force recommends that policies and available funding target areas based on the following prioritization:

1. Unserved Areas Outside City/Town/Village Limits
2. Unserved Areas Within City/Town/Village Limits
3. Underserved Areas Outside City/Town/Village Limits
4. Underserved Areas Within City/Town/Village Limits

The task force's definition of rural recognizes that some efforts—particularly those involving public-private partnerships and digital inclusion—may require the participation of both small communities and surrounding areas outside municipal boundaries. The definition also recognizes that some small communities may be unserved or underserved.

The Nebraska Public Service Commission allocates high cost funding from the Nebraska Universal Service Fund using a more specific definition of rural. The Nebraska Public Service Commission defines rural areas as areas which meet the following criteria:[7]

- Census blocks that contains fewer than 20 households with a density below 42 households per square mile
- Census blocks not classified as a city or village per census
- Census blocks not within census-designated city limits

The use of this definition to distribute NUSF funds is consistent with the task force's prioritization.

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[5] See *Appendix 1* for the text of the statutes pertaining to the Rural Broadband Task Force.

[6] Gallardo, R., Whitacre, B. and Grant, A. (January 2018). Research and Policy Insights: *Broadband's Impact*. Available at https://www.pcrd.purdue.edu/files/media/Broadbands-Impact-Final.pdf

[7] Some information provided by the Nebraska Public Service Commission on broadband availability, including the information in *Appendix 7* and metrics related to the Nebraska Universal Service Fund, utilize the PSC's definition of rural. Information on broadband availability from the FCC utilizes the U.S. Census Bureau definition of rural which is similar to the Rural Broadband Task Force's definition.

# Findings and Recommendations

Broadband Availability in Nebraska

Determine how Nebraska rural areas compare to neighboring states and the rest of the nation in average download and upload speeds and in subscription rates to higher speed tiers, when available.

−Nebraska Revised Statutes 86-1102(3)(a)

Findings

Rural Nebraskans are less likely to have broadband available. Eighty-nine percent of Nebraskans—but only 63% of rural Nebraskans—have fixed broadband of at least 25 Mbps down/3 Mbps up available.[8] The map below shows where providers reported broadband being available as of June 2018.
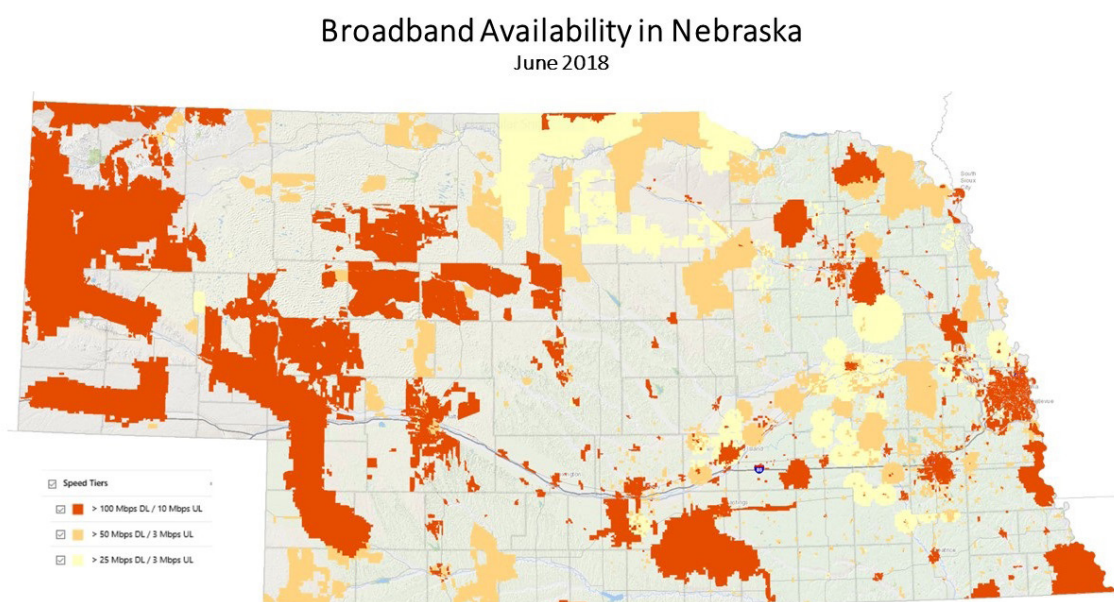
Nebraska Broadband Map using June 2018 FCC Form 477 data, broadbandmap.nebraska.gov

Key Findings

- Rural Nebraskans are less likely to have broadband available.
- Nebraska lags the U.S. and neighboring states in fixed and mobile broadband availability.

- Broadband availability in Nebraska varies by incumbent local exchange carrier.
- Average fixed download and upload speeds increased dramatically from 2016 to 2018.
- Rural consumers are likely to pay more for broadband.

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[8] *FCC Broadband Map (June 2018 Form 477 Data) available at https://broadbandmap.fcc.gov. See Appendix 2 for additional data on broadband availability. Using Form 477, fixed broadband providers report the type of technology and maximum advertised speeds in Mbps up and down by census block to the FCC . The use of census block reporting can overstate broadband availability in large census blocks. Mobile wireless providers provide polygons of their service area and the minimum speeds that are publicly available.*

Findings and Recommendations

Nebraska lags the U.S. and neighboring states in fixed and mobile broadband availability.[9]

- Eighty-nine percent of Nebraskans and 63% of rural Nebraskans have fixed broadband at 25 Mbps down/3 Mbps up available, compared to 94% of Americans and 76% of rural Americans. Nebraska ranks below five of our neighboring states (Colorado, Kansas, Iowa, South Dakota, and Missouri) on broadband availability.

- Nebraska also lags behind the U.S. and most of our neighboring states in the availability of mobile broadband at 10 Mbps down/3 Mbps up. Eighty-three percent of Nebraskans and 56% of rural Nebraskans have mobile broadband available, compared to 89% of Americans and 69% of rural Americans. Among our neighboring states, Nebraska ranks only above Wyoming.

Photo Credit Mary Ridder

Broadband availability in Nebraska varies by incumbent local exchange carrier. Broadband is available to over 90% of households in the exchanges served by nine incumbent carriers, but is available to less than 25% of households in the exchanges served by seven incumbent carriers.[10]

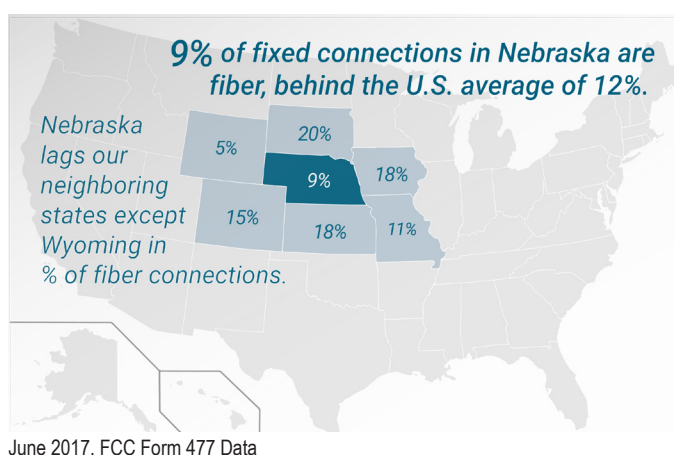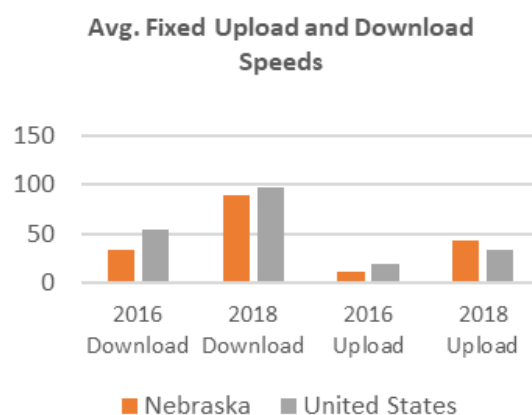**Broadband availability in Nebraska varies by county.** Broadband availability in Nebraska ranges from 99.2% in Boyd County to 0.3% in Deuel County.[11] See the map below.

Source: FCC Broadband Map (June 2018 Form 477 Data) available at https://broadbandmap.fcc.gov

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[9] *2018 FCC Communications Marketplace Report Appendix D-1 available at https://docs.fcc.gov/public/attachments/FCC-18-181A9.pdf.*

[10] *Based on June 2018 FCC Form 477 data. More information is available in Appendix 7.*

[11] *FCC Broadband Map (June 2018 Form 477 Data) available at https://broadbandmap.fcc.gov.*

More information is available in Appendix 2 and FCC Broadband Map (June 2018 Form 477 Data) available at https://broadbandmap.fcc.gov.

Average fixed download and upload speeds increased dramatically from 2016 to 2018. The average fixed download speed in Nebraska increased from 34 Mbps in 2016 to 89 Mbps in 2018. Average fixed upload speeds in Nebraska increased as well from 11 Mbps in 2016 to 44 Mbps in 2018. Nebraska ranked in the middle of our neighboring states in average download speeds, but behind the U.S. average of 96 Mbps in 2018. Nebraska ranked second among neighboring states in average upload speeds and was above the U.S. average of 33 Mbps.[12] Unfortunately, recent data on average download and upload speeds in rural areas is not available.

Avg. Fixed Upload and Download Speeds

9% *of fixed connections in Nebraska are fiber, behind the U.S. average of 12%.*

Nebraska lags our neighboring states except Wyoming in % of fiber connections.

June 2017, FCC Form 477 Data

Average mobile broadband speeds in Nebraska lag behind U.S. average and neighboring states except Iowa and Wyoming. The average mobile download speed in Nebraska is 20.8 Mbps, compared to 27.3 in the U.S.[13]

Nebraska lags the U.S in broadband subscriptions to 25 Mbps or greater service, but leads neighboring states in subscriptions to 100 Mbps service, resulting in a speed divide.[14]

- Just over half (51%) of fixed terrestrial connections in Nebraska had speeds of at least 25 Mbps down in December 2017. Nebraska lags the U.S (60%), Colorado (68%), South Dakota (64%), and Wyoming (55%) in the percent of connections at 25 Mbps down or greater.

- Twenty-nine percent of fixed connections in Nebraska and the U.S. are at least 100 Mbps down. Nebraskans subscribe to broadband of at least 100 Mbps at a higher rate than all of our neighboring states.

Rural consumers are likely to pay more for broadband. U.S. households in zip codes in the bottom 10 percent of population density pay up to 37 percent more on average for wired broadband than those in the top 10 percent.[15]

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[12] *2016 and 2018 Ookla Speed Tests available at https://www.speedtest.net/reports/united-states/2016/; https://www.speedtest.net/reports/united-states/2018/#fixed. More information is available in Appendix 2.*

[13] *2016 and 2018 Ookla Speed Tests available at https://www.speedtest.net/reports/united-states/2016/; https://www.speedtest.net/reports/united-states/2018/#mobile. More information is available in Appendix 2.*

[14] *2018 FCC Communications Marketplace Report, Appendix D-8 available at https://docs.fcc.gov/public/attachments/FCC-18-181A9.pdf. More information is available in Appendix 2.*

[15] *Based on data collected from October to December 2018 and reported in Broadband Research's Digital Divide: Broadband Pricing by State, Zip Code and Income Level (January 2019). Available at https://broadbandnow.com/research/digital-divide-broadband-pricing-state-zip-income-2019*

Metrics

Fixed Broadband Availability	
Measure	**2019 Most Recent Data** **25 Mbps down/3 Mbps up** **June 2018, FCC Form 477**
The percent of Nebraskans with access to fixed broadband	89%
The percent of rural Nebraskans with access to fixed broadband	63%
How Nebraska compares with neighboring on fixed broadband availability	6th out of 7
How Nebraska compares with the U.S. on fixed broadband availability	Nebraska lags the U.S. 94% of Americans and 76% of rural Americans have access to fixed broadband.

Mobile Broadband Availability	
Measure	**2019 Most Recent Data** **10 Mbps down/3 Mbps up** **December 2017, FCC Form 477**
The percent of Nebraskans with access to mobile broadband	83%
The percent of rural Nebraskans with access to mobile broadband	56%
How Nebraska compares with neighboring on mobile broadband availability	6th out of 7
How Nebraska compares with the U.S. on mobile broadband availability	Nebraska lags the U.S. 89% of Americans and 69% of rural Americans have access to broadband.

Average Fixed Speeds	
Measure	**2019 Most Recent Data** **2018, Ookla**
Average fixed download speed in Nebraska	89 Mbps
How Nebraska compares with neighboring states on average fixed download speeds	4th out of 7
How Nebraska compares with U.S. on average fixed download speeds	Nebraska lags the U.S. average fixed download speed of 96 Mbps.
Average fixed upload speed in Nebraska	44 Mbps
How Nebraska compares with neighboring states on average fixed upload speeds	2nd out of 7
How Nebraska compares with U.S. on average fixed upload speeds	Nebraska beats the U.S. average upload speed of 33 Mbps.

Average Mobile Speeds	
Measure	**2019 Most Recent Data** **2018, Ookla**
Average mobile download speed in Nebraska	20.8 Mbps
How Nebraska compares with neighboring states on average mobile download speeds	5th out of 7
How Nebraska compares with U.S. on average mobile download speeds	Nebraska lags the U.S. average mobile download speed of 20.8 Mbps
Average mobile upload speed in Nebraska	7.72 Mbps
How Nebraska compares with neighboring states on average mobile download speeds	5th out of 7
How Nebraska compares with U.S. on average mobile download speeds	Nebraska lags the U.S average mobile upload speed of 8.63 Mbps

Broadband Data and Mapping

Determine other issues that may be pertinent to the purpose of the task force.

Findings

Current state and federal broadband mapping efforts likely overstate broadband coverage and need to be improved.[16]

- Nebraska's broadband map currently utilizes Form 477 data released by the FCC. Providers of fixed broadband (which includes providers of services via DSL, coaxial cable, fiber optic cable, fixed wireless, and satellite) report the type of technology, maximum advertised speeds in Mbps up and down, and whether the service is residential, business, or both by census block to the FCC. Providers must report every census block where service is provided or could be provided within a reasonable amount of time without an extraordinary commitment of resources.

- The use of census block reporting can overstate broadband availability in large census blocks. Census blocks are statistical areas that can be as small as 1/1,000 of a square mile up to 200 square miles. Census blocks which are greater than two square miles cover about 50% of Nebraska geographically.

- Mobile wireless providers provide polygons of their service area and the minimum speeds that are publicly available. The FCC is currently investigating at least one national mobile wireless provider for overstating coverage.

- The FCC collects the data twice per year (March 1 for broadband availability as of Dec. 30 and September 1 for broadband availability as of June 30). There is not a set schedule for data releases, but data is usually released a year or more after the reporting date.

- Supplementing data from providers with speed test data or other sources of data can help verify data submitted by providers.

Because states are limited in their authority to compel providers to submit broadband coverage data, federal data collection efforts should be leveraged if feasible. Leveraging federal data collection efforts

Key Recommendations

- Leverage the FCC's Digital Opportunity Data Collection program or an alternate broadband mapping program created through federal legislation to improve Nebraska's broadband map.

- To the extent possible, encourage the FCC and/or Congress to improve data collection of mobile wireless coverage data.

- Encourage Nebraskans to participate in crowdsourcing efforts developed to enhance federal broadband mapping.

Photo Credit Mary Ridder

will also minimize state costs for data collection.

The FCC's Digital Opportunity Data Collection[17] program which was approved on August 1, 2019

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[16] *For additional information, see Appendix 4 Supplemental Information--Broadband Data and Mapping.*

[17] *The Report and Order and Second Further Notice of Proposed Rulemaking on establishing the Digital Opportunity Data Collection is available at https://docs.fcc.gov/public/attachments/FCC-19-79A1.pdf*

and federal legislation being considered, including the Broadband DATA Act (SB 1822),[18] would largely address the shortcomings of the current fixed broadband data collection method.

Mobile wireless coverage data submitted through the Form 477 is insufficient to support sound policymaking and funding decisions, and needs to be improved either through further rulemaking by the FCC or federal legislation such as the Broadband DATA Act (SB 1822).

Photo Credit Mary Ridder

Recommendations

- Leverage the FCC's Digital Opportunity Data Collection program or an alternate broadband mapping program created through federal legislation to improve Nebraska's broadband map.

- To the extent possible, encourage the FCC and/or Congress to improve data collection of mobile wireless coverage data.

- Urge FCC and Congressional policy to support efforts to improve broadband data collection for both fixed and mobile broadband technologies.

- The Nebraska Information Technology Commission, Nebraska Public Service Commission and other stakeholders should explore strategies to encourage Nebraskans to participate in crowdsourcing efforts developed to enhance federal broadband mapping.

Broadband Impacts Rural Health Care

Broadband connectivity is playing a greater role in healthcare, with more than three-fourths of U.S. hospitals connecting with patients and consulting practitioners through video and other technology.

With broadband service, rural residents can:

- Research health topics online
- Access electronic health records
- Make appointments and communicate with health care providers
- Access health primary and specialty care via telemedicine
- Participate in home monitoring telehealth services

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Sources: Statement of the American Hospital Association for the Energy and Commerce Subcommittee on Communications and Technology of the U.S. House of Representatives: Realizing the Benefits of Rural Broadband: Challenges and Solutions. (July 2018). Available at https://www.aha.org/system/files/2018-07/180717-statement-rural-broadband.pdf

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[18] Information on S. 1822 is available at https://www.congress.gov/bill/116th-congress/senate-bill/1822/

Alternative Technologies and Providers

Review the feasibility of alternative technologies and providers in accelerating access to faster and more reliable broadband service for rural residents.

−**Nebraska Revised Statutes 86-1102(3)(c)**

Findings

A review of broadband technologies found that several emerging technologies may be well-suited for rural areas:[19]

- Fixed wireless technologies using mid-band spectrums could potentially provide service of 100 Mbps or greater in rural areas. Several telecommunications providers are using or planning to use mid-band fixed wireless providers to meet their Connect America Fund obligations to provide broadband to rural areas.

- TV white space may be suited for lower bandwidth agricultural internet of things applications. With Microsoft's support, the cost of customer service equipment has been coming down. Future reductions in the prices of customer service equipment to about $100 would likely make this technology economically feasible.

- Low Earth orbit satellites could potentially provide 100 Mbps or greater service with low latency by mid-2020.

- AT&T's AirGig may be another technology to watch. AirGig uses antenna modules called eggs which are clamped on power lines to

> ## Key Findings
>
> - Several emerging technologies may be well-suited for rural areas, including fixed wireless using mid-band spectrums, TV white space, and low Earth orbit satellites. AT&T's AirGig technology may be another technology to watch.
>
> - Higher speed technologies like 5G will likely be deployed first in urban areas, potentially exacerbating the speed gap between rural and urban areas.

send data signals which cling to the wire. A demonstration in September 2018 showed data capacity of 90 gigabits per second. The technology will reportedly be available for commercial use in 2021.

A number of emerging and currently technologies may provide speeds of one gigabit per second of more. It is likely that most of these technologies—particularly 5G—will be deployed first in urban areas, potentially exacerbating the speed gap between rural and urban areas.
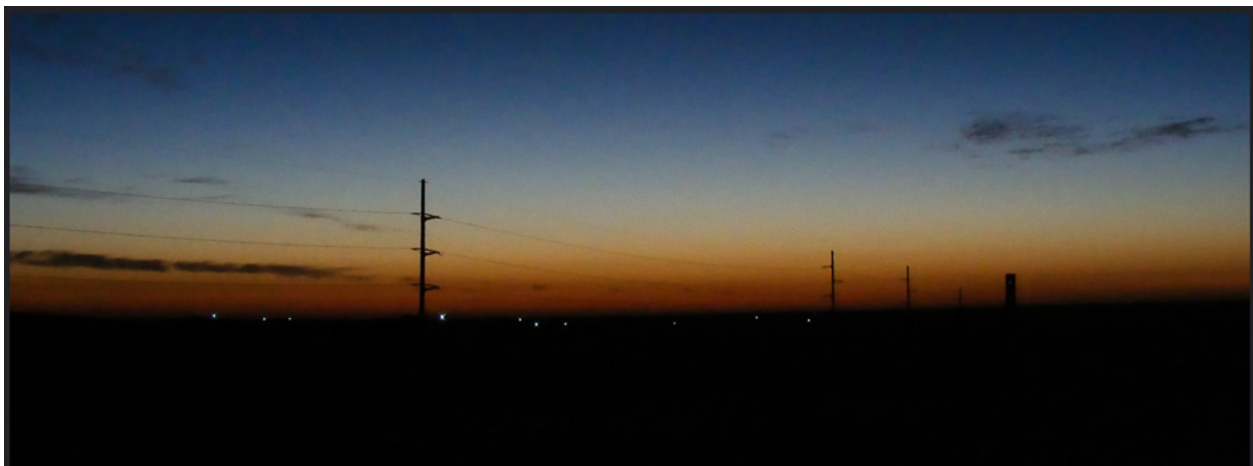
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[19] *See Appendix 5 Supplemental Information−Broadband Technologies*

Nebraska Universal Service Fund and Reverse Auction

Examine the role of the Nebraska Telecommunications Universal Service Fund in bringing comparable and affordable broadband services to rural residents and any effect of the fund in deterring or delaying capital formation, broadband competition, and broadband deployment.

—Nebraska Revised Statutes 86-1102(3)(b)

Examine alternatives for deployment of broadband services to areas that remain unserved or underserved, such as reverse auction programs described in section 4 of this act, public-private partnerships, funding for competitive deployment, and other measures, and make recommendations to the Public Service Commission to encourage deployment in such areas.

—Nebraska Revised Statutes 86-1102(3)(d)

Findings

The Nebraska Universal Service Fund (NUSF) provides support to price cap, rate of return, and mobile wireless carriers in Nebraska. In 2019, the Nebraska Public Service Commission allocated $12,049,546 in high cost support to price cap carriers and $14,100,058 in high cost support to rate of return carriers.[20]

Providers must be accountable for the support received from the Nebraska Universal Service Fund. The Nebraska Public Service Commission has taken steps to move the fund toward a grant-like method of distribution whereby carriers must build first before receiving reimbursement.

The total remittances to the NUSF have decreased from $52 million in 2013 to about $33 million in 2018. However, the Nebraska Public Service Commission has taken steps to stabilize the fund by modernizing the contribution methodology. Even with steps to stabilize the fund, however, the size of the fund is not sufficient to provide support for fiber deployment to all Nebraska residences and businesses.[21]

In order for providers to make decisions about broadband infrastructure investments, support from the NUSF should be sustainable and predictable.

Broadband availability varies by incumbent carrier. Approximately 79% of those rural households which do not have broadband available reside in Windstream, CenturyLink, Great Plains or Frontier (Citizens) exchanges.[22] Addressing the rural broadband divide in Nebraska will require strategies which address areas without broadband access served by both price cap and rate of return carriers.

Implementing a reverse auction-like component could potentially maximize the impact of limited NUSF dollars in underserved areas of the state. The current NUSF high cost distribution processes do not provide opportunities for entities that are not the incumbent carriers to compete for state universal service fund support.

Key Recommendations

- Support the Nebraska Public Service Commission's efforts to modernize the NUSF contribution system and to improve provider accountability by moving to a grant-like system of distribution.

- Encourage the Nebraska Public Service Commission to continue to investigate a state-run reverse auction as a mechanism to spur broadband build out in rural areas.

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[20] See *Appendix 6 NUSF Overview and Support Allocations for more information.*

[21] See *Appendix 6 NUSF Overview and Support Allocations for more information.*

[22] See *Appendix 7 Broadband Coverage in ILEC Territories by Any Provider*

The FCC implemented a reverse auction, allocating $1.488 billion in support in August 2018 to be distributed over 10 years to expand rural broadband service in unserved areas in 45 states. Awarded bids came in at 70% of the reserve/model costs for the block groups. Over $4 million was awarded to four carriers to serve 8,900 locations in Nebraska. Most locations in Nebraska are to receive service of 100 Mbps down/20 Mbps up via fixed wireless. Providers must build out to 40 percent of the assigned homes and businesses in a state within three years of becoming authorized to receive support. Buildout must increase by 20 percent in each subsequent year, until complete buildout is reached at the end of the sixth year.[23]

Nebraska Legislative Bill 994, enacted in 2018, permits the Nebraska Public Service Commission to withhold support from the Nebraska Universal Service Fund "to any telecommunications company that has not served, to the commission's satisfaction, those areas with service that meets the criteria for successful investment of funding from the Nebraska Telecommunications Universal Service Fund."

- LB 994 further permits the Nebraska Public Service Commission to "use the funding that is withdrawn to implement and operate a reverse auction program, except that any funding that is withdrawn shall be utilized in the exchange area

for which the funding was originally granted."

Photo Credit Mary Ridder

- On March 12, 2019, the Nebraska Public Service Commission opened a docket, Rule and Regulation #202, to adopt Reverse Auction and Wireless Registry rules in accordance with LB 994. The process of developing rules and regulations is expected to take approximately one year.[24]

- **The NUSF Subcommittee found no evidence that the Nebraska Universal Service Fund has deterred or delayed capital formation, broadband competition, and broadband deployment in conversations with stakeholders or in the subcommittee's research efforts.**

Recommendations

- Support the Nebraska Public Service Commission's efforts to stabilize the Nebraska Universal Service Fund by modernizing the contribution system.

- Support the Nebraska Public Service Commission's efforts to modernize the distribution method and improve provider accountability through the system of grant-like awards for broadband infrastructure projects.

- Encourage the Nebraska Public Service Commission to continue to investigate, through their Rules and Regulations 202 docket, a state-run reverse auction as a mechanism to spur broadband build out in rural areas.

- Monitor the implementation of the FCC's Connect America Fund II Reverse Auction to evaluate the success of the program and to identify any key lessons learned.

- Encourage the Nebraska Public Service Commission to explore alternate methods for redirecting support that allow for more collaboration between not only the incumbent and competitive carriers, but also the local business community, both main street and agriculture, as well as hospitals, schools, libraries, municipalities, counties, and public power providers.[25]

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[23] *More information on the Connect America Fund Phase II reverse auction is available at* https://www.fcc.gov/auction/903. *A map of winning bids is available at* https://www.fcc.gov/reports-research/maps/caf2-auction903-results.

[24] *See* https://psc.nebraska.gov/administration/proposed-rules-regulations *for information on the docket.*

[25] *See comments submitted by the Rural Telecommunications Coalition of Nebraska (RTCN) on April 18, 2019 available at* https://psc.nebraska.gov/sites/psc.nebraska.gov/files/doc/administration/2019-04-18%20Comments%20of%20RTCN.pdf.

- Examine how the Nebraska Public Service Commission currently collects information from carriers at the exchange level:
  - On what they built out the previous year and how the build out was funded, and
  - What their build out plans are for the next 3 to 5 years and how they intend to pay for that.

  Determine if the collection of this data could be improved.

Metrics

NUSF	
Measure	**2019 Most Recent Data** **Nebraska Public Service Commission**
Annual contributions to the Nebraska Universal Service Fund (By Calendar Year)	2017 - $35,321,380 2018 - $32,796,228 2019 - $18,333,749 (Through 1st Half, 2019)
Annual allocations from the Nebraska Universal Service Fund (By Calendar Year)	2017 − $40,087,483 2018 - $33,139,591 2019 - $30,056,117 (Additional allocations may still be made in 2019)
The number of households and businesses in Nebraska which have broadband (25/3 Mbps Down/Up) available as a result of CAF II funding	A-CAM (2016-2018) − 3,828 Locations CAF II (Price Cap Carriers) − 677 locations
The number of households and businesses in Nebraska which have, or will have broadband available as a result of NUSF funding (Includes only High Cost programs, NUSF-99 and NUSF-108)	NUSF-99 Projects (2016-Present) − 8,092 NUSF-108 Projects (2019) − 346 (Includes project notices received as of 8/9/2019)

Community and Regional Planning Can Drive Broadband-Related Development

Broadband planning and development usually starts with representatives from key organizations and groups in the community or region coming together to address the challenges facing the community or region. Groups and organizations represented may include:

- Business and industry,
- Community foundation,
- Local government,
- Local or regional economic development organizations,
- Education,
- Health care,
- Financial institutions,
- Telecommunications providers,
- Local public power district or cooperative,
- Nonprofit organizations, and
- Key populations

Broadband-related development doesn't require community leaders who know all of the answers. It does, however, require community leaders who have the passion and commitment to find the answers.

Community leaders assess what assets are available in the community and areas in which improvements need to be made. Community partners then work together on projects which address:

- Broadband availability and affordability,
- Developing a skilled IT workforce,
- Innovation and entrepreneurship,
- Digital literacy and inclusion,
- Technology adoption, and
- Quality of life

Photo Credit: 2019 Wilber Czech Festival (58th Annual) by Shannonpatrick12 is licensed under Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic (CC BY-NC-ND 2.0). See photo credits on back page.

It doesn't take a lot of money or resources to get started. Roberto Gallardo, a rural broadband advocate and researcher from Purdue University advises: "Don't scratch your head wondering where in the world you will get the money to pay for it. Often, all it takes is time and passion for your community. Resources will surface if true partnerships are established, volunteers are utilized, and the community commits to the priority of transitioning to the digital age. The important question really is: Does the community want to make the transition?"

For additional information, see the broadband resources for communities in Appendix 8.

Public-Private Partnerships and Broadband Planning

Examine alternatives for deployment of broadband services to areas that remain unserved or underserved, such as reverse auction programs described in section 4 of this act, public-private partnerships, funding for competitive deployment, and other measures, and make recommendations to the Public Service Commission to encourage deployment in such areas.

–Nebraska Revised Statutes 86-1102(3)(d)

Findings

Public-private broadband partnerships have primarily been utilized in communities, but not rural areas outside of city or town limits. Some models, however, could be adapted for use in rural areas.[26] Stakeholders should take the following considerations into account:

- Public-private partnerships should include consumer protections and ensure quality of service.

- Stakeholders should be aware that forming a public-private partnership takes time.

- Stakeholders should be careful of forming a public-private partnership that addresses business needs only and leaves out residential and/or rural areas.

Public power districts and cooperatives could play a role in advancing the deployment of broadband services in rural Nebraska through public-private partnerships. Public power districts and cooperatives may own fiber rings to connect necessary electric controls and data points. The communications network enables public power districts to safely operate and manage the electric grid. The communications network could be leveraged to facilitate the deployment of broadband in rural areas. Possible models are described below:

- A public power district or cooperative could work with a local telecommunications provider to put fiber in to connect electric communication needs. The local telecommunications provider could sell some of the fiber to the public power district or cooperative. The telecommunications provider could also connect homes and businesses passed by the newly installed fiber.

- A public power district or cooperative could work with a local telecommunications provider to put fiber in to connect electric communication needs and could then lease services from the telecommunications provider. The telecommunications provider

Key Recommendations

- Encourage local and regional broadband planning, including communications planning between telecommunications providers and public power districts and cooperatives.

- Explore the creation of broadband cooperatives in unserved and underserved localities.

- Retain the existing prohibition on retail provision of broadband service by public entities.

- Explore ways to make it easier for public entities to lease dark fiber.

- Explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.

- Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.

could also connect homes and businesses passed by the newly installed fiber.

- As public power districts replace aging infrastructure, fiber could be placed overhead at a cost of a few dollars per foot. The dark fiber could be leased to telecommunications providers.

- Public power districts and other public entites could aggregate their demand for telecommunications services through a joint RFP which could be put out for bid by the State of Nebraska Office of the CIO

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[26] See *Appendix 8 Supplemental Information--Public-Private Partnerships for more information*.

or Network Nebraska. Telecommunications providers could connect homes and businesses passed by the newly installed fiber.

- An electric cooperative could create a communications subsidiary and provide retail service, however a public power district could not.

The formation of broadband cooperatives may be an option for unserved and underserved areas.

Photo Credit Anne Byers

Neb. Revised Statutes Section 86-577 places restrictions on leasing of dark fiber by public entities. The current legislation requires public entities to lease dark fiber at the market rate, have the lease price and profit distribution approved by the public service commission, and contribute 50 percent of the profit to the Nebraska Internet Enhancement Fund.

This process adds additional time and uncertainty to a provider's implementation schedule. Currently one lease is in place. The burden of complying with the restrictions may factor into the low number of leases. However, it is likely that other factors are involved. Factors cited by telecommunications providers include:

- Existing public power-owned leasable fiber is not "last-mile fiber."
- Existing fiber is limited in quantity in routes and number of fibers.
- Existing public owned fiber is generally in areas that have alternative private sector fiber available.
- Private sector fiber is generally connected to a much more robust and established set of telecommunications carrier networks.
- Existing fiber may primarily be aerial fiber.
- There may not be any appreciable cost savings.

As more fiber is deployed by public entities, however, leasing could become more attractive in the future.

Another issue appears to be a lack of trust between the public power and telecommunications industries and a lack of familiarity with the other industry's regulatory structure.

It is unclear if private easements set up for telephone and electric use could also be used for communications. Legislation clarifying that communications is an approved use for private easements set up for telephone and electric use would eliminate uncertainty and litigation.

Recommendations

- **Encourage local and regional broadband planning.** Each community, county or region is different and will likely require a unique solution. Bringing stakeholders together to develop a local, county or regional plan can lay the groundwork for public-private partnerships.

- **Encourage each county or region to have a broadband coordinator to facilitate broadband planning and coordination.**

- **Encourage communications planning between telecommunications providers and public entities, such as public power districts and other private entities, such as cooperatives.** This could be done in a number of ways, including:

  » Convening local or regional meetings of telecommunications providers and public power districts to explore how the communications needs of public power could be leveraged to improve broadband availability in rural areas.

  » Developing a joint RFP for public power districts which could be put out for bid by Network Nebraska or the Nebraska Office of the CIO.

- **Explore the creation of broadband cooperatives in unserved and underserved localities.**

- **Establish a state broadband coordinator position to provide assistance to local and regional broadband coordinators and to coordinate with state agencies, telecommunications providers, local governments and other stakeholders.**

- **Explore the creation of a statewide broadband association.** The association could include telecommunications providers, public power districts, schools, hospitals, municipalities, counties, and other stakeholders interested in advancing broadband in Nebraska. The association could convene regional and statewide discussions and develop and distribute resources such as model or sample agreements.

- **Retain the existing prohibition on retail provision of broadband service by public entities.** The public power industry has stated that it is not interested in retail provision of broadband services. In some states, municipalities are providing retail broadband service. Public provision of broadband without regional planning may erode the business case for providing broadband in surrounding rural areas.

- **The public power industry, telecommunications industry, and the Transportation and Telecommunications Committee should work together to reach an agreement on what steps which should be taken to make it less burdensome for public entities to lease dark fiber.** Possible steps include:

  » The Nebraska Public Service Commission (PSC) could work with the Nebraska Rural Electric Association (NREA) and Nebraska Public Power District (NPPD) to communicate information on the current process to provide additional clarity and address any misperceptions about the process.

  » The current legislation could be modified to ease the restrictions. Options include:

    - Public entities could be required to file their lease rate with the Public Service Commission. The PSC would publish the rate for 30 days. If no protest is filed, the PSC would approve the lease. If a protest is filed, a hearing would be scheduled.

    - The percent of profits contributed to the Nebraska Internet Enhancement Fund could be reduced or eliminated.

    - All of the restrictions on leasing dark fiber could be eliminated.

- The NREA and NPPD should work with the members of the Transportation and Telecommunications Committee to explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.
- **Identify funding for public-private partnerships.** Possible funding sources for public-private partnerships include LB 840 funds, USDA broadband grants and loans, Community Reinvestment Act, and New Market Tax Credits. Additional sources of funding such as a state broadband grant program would facilitate the development of public-private partnerships. Approximately 25 states have created broadband grant funds.
- **Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.**

Metrics

Measure	2019 Most Recent Data Nebraska Public Service Commission
The number of leases of dark fiber from public entities	1

Broadband, Precision Ag Technologies Would Add $47 to $65 Billion to U.S. Economy

Broadband and precision agricultural technologies are becoming increasingly important for agriculture. The USDA estimates that fully utilizing precision agricultural technologies would generate approximately $47-$65 billion annually in additional gross benefit for the U.S. economy. The USDA identified the following economic and environmental benefits of precision agriculture:

- 40% less fuel burned due to variable rate technologies
- 20% or greater reduction in water usage
- Up to 80% reduction in chemical application

Precision agriculture is in use by the early majority of row crop producers, with guidance systems used on approximately 50% of the planted acres of some row crops in the United States. The use of precision agriculture in specialty crops and livestock is still in the early stages of adoption, however.

Precision agricultural equipment requires both GPS and mobile broadband connectivity. Wired broadband can facilitate the transfer of the vast amounts of data generated by precision agricultural equipment from the field to the cloud where the data can be stored and analyzed. Currently 75% of agricultural producers in Nebraska have internet access. Many of these producers may lack sufficient upload speeds

Photo Credit Mary Ridder

to transfer large amounts of data, necessitating the transfer of data via sneakers or the mail.

Sources: USDA. (April 2019). A Case for Rural Broadband: Insights on Rural Broadband Infrastructure and Next Generation Precision Agriculture Technologies. Available at https://www.usda.gov/sites/default/files/documents/case-for-rural-broadband.pdf
USDA. (August 2017). Farm Computer Usage and Ownership. Available at https://usda.library.cornell.edu/concern/publications/h128nd689

Rural Broadband and Cooperatives

By Gregory McKee, University of Nebraska-Lincoln

Cooperatives provide goods and services throughout the economy. Recent efforts to expand rural broadband access have led to questions about using the cooperative business model to provide broadband.

What Is a Cooperative?

Cooperatives are user-owned and user-controlled businesses formed to benefit a group of members.

Cooperatives are designed to reward use, encourage users to commit to using the business's services, and encourage users to voice opinions about how the business is doing.

Cooperatives Provide Rural Broadband

Cooperatives are being used around the United States to provide broadband service.

Photo Credit Mary Ridder

1. **Cooperatives deploy broadband.** Some telecommunications cooperatives have expanded their service offerings to include broadband. Electricity distribution cooperatives have expanded infrastructure to provide broadband services themselves, through a subsidiary, or through an affiliate business. Hundreds of business arrangements, each unique to the circumstances and needs of the users, among these cooperatives can be found.

2. **Cooperatives facilitate community organization for broadband service.** Less common than utility cooperative affiliations are cooperatives organized to facilitate broadband availability. Maryland Broadband Cooperative, Mid-Atlantic Broadband Cooperative, and Michigan Broadband Cooperative work with local partners to facilitate community broadband demand, leverage existing infrastructure, or help design partnerships among broadband access providers. These cooperatives may also provide shared administrative services for internet service providers.

For additional information on rural broadband and cooperatives, see Appendix 8.

Digital Inclusion, Homework Gap and Leveraging E-Rate Funding

Determine other issues that may be pertinent to the purpose of the task force.

–Nebraska Revised Statutes 86-1102(3)(g)

Recommend state policies to effectively utilize state universal service fund dollars to leverage federal universal service fund support and other federal funding.

–Nebraska Revised Statutes 86-1102(3)(e)

Findings

As more services move online, internet access is becoming a necessity. Students who need to use the internet to complete homework are especially impacted. The term "homework gap" is used to describe the challenge that students who lack home internet access face in completing online assignments.

Approximately 16% of Nebraskans and 12% of Nebraskans under 18 years of age lack a home internet subscription.[27] In addition, approximately 17% of Nebraskans only have mobile-broadband internet, which may be limited by data caps.[28] Mobile-only broadband users may also lack a computer or tablet which can make some tasks like applying for jobs or completing homework online more difficult.

In some schools, the percent of students without internet access may be greater than 30%.[29]

Libraries are key community partners in providing internet and computer access to students and the general public—especially in rural areas.

84% of Nebraska public libraries serving populations less than 2,500 reported internet speeds of less than 24 Mbps down, with 68% reporting speeds of less than 13 Mbps.[30]

Key Recommendations

- Increase the number of public libraries applying for E-Rate support.

- Fund four regional technicians to assist public libraries with technology support, upgrades, digital literacy training, and E-Rate filing.

- Implement an E-Rate Special Construction matching fund program with funding from the Nebraska Universal Service Fund to incentivize new fiber construction to public libraries and schools.

- Encourage school districts, ESUs, public libraries, and communities to implement programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.

- Encourage education leaders and public library staff to be part of local community discussions involving broadband services and digital inclusion.

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[27] Source: U.S. Census Bureau 2017 American Community Survey 5-Year Estimate Data available at https://factfinder.census.gov/ . Note: The percent population with broadband internet subscription from the U.S. Census Bureau 2017 American Community Survey 5-Year Estimate includes those who subscribe to cable, fiber optic, or DSL, satellite or a fixed wireless service as well as those who only use mobile broadband plans for internet access.

[28] Pew Internet Research Center. Internet/Broadband Fact Sheet. Available at https://www.pewinternet.org/fact-sheet/internet-broadband/

[29] In a recent survey of Nebraska teachers, 49% of teachers from ESU 19 (Omaha Public Schools) and 32% of teachers from ESU 1 (Wakefield/Northeast Nebraska) estimated that over 30% of their students lacked internet access at home. See Appendix 10 Supplemental Information--Addressing the Homework Gap and Leveraging Funding.

[30] Information on library broadband availability is from the Nebraska Library Commission. See Appendix 9 for more information on Broadband Adoption Data and Broadband in Nebraska Libraries or the map at https://www.zeemaps.com/view?group=3499369&x=-100.053561&y=43.439597&z=11

Having high bandwidth of at least 100 Mbps available in public libraries would not only provide patrons with ample bandwidth for internet-dependent applications, but would also demonstrate high bandwidth capabilities to community members.

Some school districts, ESUs, public libraries, and communities in Nebraska and in the United States are exploring or implementing programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.

Strategies which address the homework gap can also help improve internet access for other demographic groups who lack internet access as well.

The federal E-Rate program provides support for broadband connections in schools and libraries under two categories of service:

- Category 1 services to a school or library (telecommunications, telecommunications services and Internet access),

- Category 2 services that deliver Internet access within schools and libraries (internal connections, basic maintenance of internal connections, and managed internal broadband services).

Discounts for support depend on the level of poverty and whether the school or library is located in an urban or rural area. The discounts range from 20 percent to 90 percent of the costs of eligible services.

Photo Credit Mary Ridder

The E-Rate program is underutilized by Nebraska libraries. Only 25% of public libraries in Nebraska applied for Category 1 (external connections) funding, and 3% of Nebraska public libraries applied for Category 2 (internal connections) funding in 2019-20.

Reasons cited for not participating in the E-Rate program include the perceived difficulty in applying for funding, lack of time to learn the process and apply, and concerns about requirements for filtering internet content for children.

If all Nebraska libraries fully participated in the E-Rate program, it would increase the level of USF support by:

- an estimated $210,000 in Category 1 E-Rate support per year;

- and an estimated $3.25 million in E-Rate support for Category 2 over the next five years.

The E-Rate Program includes a matching program for special construction charges for high-speed broadband. The E-Rate Program will increase an applicant's discount rate for these charges up to an additional 10 percent to match the state funding on a one-to-one dollar basis. States participating in the matching program include Arizona, California, Colorado, Florida, Idaho, Illinois, Indiana, Kansas, Massachusetts, Maryland, Maine, Michigan, Missouri, Montana, Nevada, North Carolina, New Hampshire, New Mexico, New York, Oklahoma, Texas, Virginia, Washington, and Wisconsin.

If the State of Nebraska provided matching funds for the construction of fiber network facilities to 22 libraries per year for 4 years (estimated at $55,000 per year or $220,000 over 4 years), the FCC would contribute a match of $220,000, the E-Rate program would contribute an additional $1.54 million in support, and libraries would contribute $220,000 (based on a statewide average E-Rate discount of 70%).

Nearly all Nebraska public school districts applied for E-Rate Category 1 (100%) and E-Rate Category 2 funding (98%) for 2019-20.5[31]

[31] Source: Universal Service Administrative Corporation (USAC) Data Retrieval Tools: https://slpin.universalservice.org/DRT/Default.aspx

Findings and Recommendations

Recommendations

- Support the efforts of the Nebraska Library Commission to increase the number of public libraries applying for Category 1 and Category 2 E-Rate support in FY 2020-21 and beyond.

- Support funding for four regional technicians to assist public libraries with technology support, upgrades, digital literacy training, and E-Rate filing, starting in FY2020-21.

- Encourage the Nebraska Public Service Commission to implement an E-Rate Special Construction matching fund program with funding from the Nebraska Universal Service Fund to incentivize new fiber construction to public libraries and schools, starting in FY 2021-22.

- Encourage school districts, ESUs, public libraries, and communities to implement programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.

- Encourage education leaders and public library staff to be part of local community discussions involving broadband services and digital inclusion.

- Network Nebraska should map its fiber Ethernet circuits showing the location, name of the provider, bandwidth capacity, monthly recurring costs, cost per Mbps, number of bidders, and

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kbps per student in order to determine areas where advanced services would be cost-prohibitive.

Metrics

Percent of Nebraskans Lacking Home Internet Subscriptions or Subscribing to Mobile Only	
Measure	**Most Recent Data**
Percent of Nebraskans who lack a home internet subscription	16% 2017, ACS 5-Year
Percent of Nebraskans under 18 years of age who lack a home internet subscription	12% 2017, ACS 5-Year
Percent of U.S. adults with a mobile only broadband subscription	17% 2019, Pew Research Center

| Percent Nebraska Libraries and School Districts Applying for E-Rate	
Measure	**Most Recent Data**
Percent of Nebraska Libraries Applying for Category 1 (External Connections) E-Rate	25% 2019-20, USAC
Percent of Nebraska Libraries Applying for Category 2 (Internal Connections) E-Rate funding	3% 2015-20, USAC
Percent of Nebraska K-12 public school districts Applying for Category 1 (External Connections) E-Rate	100% 2019-20, USAC
Percent of Nebraska K-12 public school districts Applying for Category 2 (Internal Connections) E-Rate funding	98% 2015-20, USAC

Nebraska Library Broadband	
Measure	**Most Recent Data**
Percent of Nebraska Libraries Serving Populations of Less than 2,500 with Internet Access of Less than 12 Mbps	42% FY 2017-2018, Nebraska Library Commission
Percent of Nebraska Libraries Serving Populations of Less than 2,500 with Internet Access of Greater than 24 Mbps	16% FY 2017-2018, Nebraska Library Commission
Percent of Nebraska Libraries Serving Populations of Less than 2,500 with Internet Access of 100 Mbps or Greater	0.6% FY 2017-2018, Nebraska Library Commission

Survey Gauges Impact of Homework Gap on Students, Teachers

In order to better gauge the impact of the homework gap on teachers and students in Nebraska, a survey was disseminated via e-mail to 21,443 Nebraska teachers during July 2019.[32] Nearly 7,000 (6,919) teachers responded for a response rate of 32%.

The survey found:

- Over three-fourths (77%) of teachers agreed that if all students had broadband internet access at home, it would positively impact student learning/achievement.

- Nearly half of teachers (48%) agreed that the absence of home internet access for some students affects the level or amount of homework assigned.

- Most teachers report using digital resources for a minority of their homework assignments, with 64% of respondents indicating that less than 25% of their homework assignments are dependent on digital or internet-based resources.

- Overall, 37% of teachers estimated that 21% to greater than 40% of students do not have home internet access.

- Teacher estimates of the proportion of students not having home internet access varied by ESU and community size. The percent of teachers estimating that the percent of students lacking home internet access was 21% or greater increased with the size of the community, with 45% of those teaching in communities of 25,000 or larger estimating that at least 21% of students lacked home internet access (See Figure 1). The percent of teachers estimating that at least 21% of students lacked home internet access by ESU ranged from a low of 23% in ESU 11 (Holdrege) to a high of 65% in ESU 19 (Omaha Public Schools).

Teacher Estimates of % of Students without Home Internet Access By Community Size
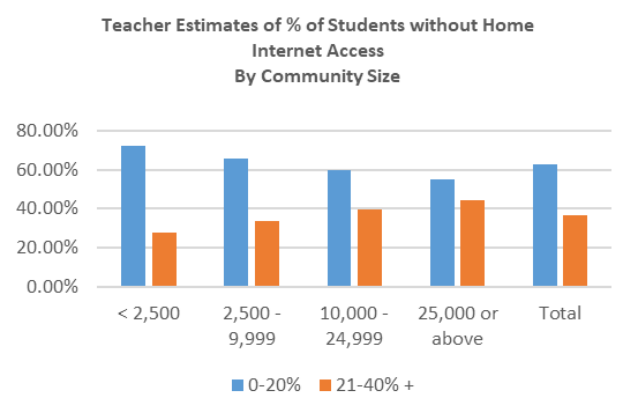
Most teachers (90%) reported that accommodations are made to address students' lack of home internet access. The accommodations most often cited included:

- Providing more class time to complete homework assignments (55%);

- Providing some students with printed materials that otherwise would be internet-based (41%); and

- Providing before-school and after-school time to complete homework assignments (33%).

[32]*See [Appendix 10 Nebraska Homework Gap Survey Results](#) for complete survey results.*

Federal Rural Broadband Infrastructure Funds

Make recommendations to the Governor and Legislature as to the most effective and efficient ways that federal broadband rural infrastructure funds received after the operative date of this section should be expended if such funds become available.

−Nebraska Revised Statutes 86-1102(3)(f)

Recommendations

Funding opportunities should be monitored and communicated to interested stakeholders, including communities.

If federal rural broadband infrastructure funds or other sources of funds become available, the Rural Broadband Task Force will immediately activate a subcommittee to review any rules or requirements associated with the funding and will draft recommendations on how the funds should be expended. The subcommittee will address the following questions and any other issues identified in the rules and requirements:

- Who should administer the funds? Should other agencies/entities be involved/consulted in the development of guidelines and selection criteria?

- How should the distribution of infrastructure funds be coordinated with the NUSF?

- Should the funds be distributed through a grant program, a reverse auction, or other mechanism?

- What criteria should be used to evaluate grant applications or bids?

- Should the funds be available to all carriers or just eligible telecommunications carriers (ETCs)?

- Should rural communities be involved in the process? How could they be involved?

- How could other local, state and federal funds be leveraged to assist the effort?"

Photo Credits

Copies of the executive summary, full report, and appendices are available at:
https://ruralbroadband.nebraska.gov

Photo Credit: Abe Bingham

Attachment 6

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).