

AGENDA
NEBRASKA INFORMATION TECHNOLOGY COMMISSION
Nebraska Public Media - Board Room
1800 N 33rd St
Lincoln, Nebraska
Thursday, November 10, 2022
10:00 a.m. CT

NOTE: Use the NPM East entrance door.

- I. ROLL CALL; MEETING NOTICE; OPEN MEETINGS ACT INFORMATION
- II. PUBLIC COMMENT
- III. APPROVAL OF NOVEMBER 4, 2021, AND MARCH 10, 2022, MEETING MINUTES
(Attachment III) ***
- IV. REPORTS
 - A. EDUCATION COUNCIL (Attachment IV-A)
 - 1. Approval of membership nominations. ***
 - 2. Digital Education and Network Nebraska updates.
 - B. GIS COUNCIL (Attachment IV-B)
 - C. COMMUNITY COUNCIL (Attachment IV-C)
 - 1. Approval of membership nominations. ***
 - 2. Broadband update.
 - D. eHEALTH COUNCIL (Attachment IV-D)
 - 1. Approval of membership nominations. ***
 - E. TECHNICAL PANEL
 - 1. Technical standards and guidelines.
 - a. Proposal 25. Amend provisions of the Information Security Policy.
(Attachment IV-E-1-a) ***
 - b. Proposal 27. Amend mobile device and portable storage device
provisions of the Information Security Policy. (Attachment IV-E-1-b)

 - c. Proposal 28. Amend access control and minimum configuration
provisions of the Information Security Policy. (Attachment IV-E-1-c)

 - d. Proposal 29. Amend GIS data standards. (Attachment IV-E-1-d) ***

2. Enterprise projects. (*Attachment IV-E-2*)
 - a. Enterprise project status dashboard report.
 - b. Close the following enterprise project: Centrex Replacement, Office of the CIO. ***
 - c. Approval of enterprise project designation for the following project: New Budget Management and Request System, Dept. of Administrative Services, State Budget Division. ***
3. Approval of the Recommendations on Technology Investments for the 2023-2025 Biennium. (*Attachment IV-E-3*) ***

F. CHIEF INFORMATION OFFICER

V. APPROVAL OF THE REVISED STATEWIDE TECHNOLOGY PLAN (*Attachment V*)

VI. APPROVAL OF THE PROGRESS REPORT TO THE GOVERNOR AND
LEGISLATURE (*Attachment VI*) ***

VII. OTHER BUSINESS

VIII. ADJOURN
[12:00 p.m.]

*** 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. If you need interpreter services or other reasonable accommodations, please contact the Commission at 402-471-3560 at least five days prior to the meeting to coordinate arrangements.

Meeting notice was posted to the [NITC website](#) and the [Nebraska Public Meeting Calendar](#) on October 12, 2022. The agenda was posted to the NITC website on November 4, 2022.

[Nebraska Open Meetings Act](#) | [Commission Meeting Documents](#)

Attachment III

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Varner Hall - Board Room
3835 Holdrege Street, Lincoln, Nebraska
Thursday, November 4, 2021, 10:00 a.m. CT
MINUTES

MEMBERS PRESENT:

Ed Toner, Chief Information Officer, Chair
Senator Suzanne Geist, Nebraska Legislature
Shane Greckel, Greckel Farms, LLC
Dr. Terry Haack, Bennington Public Schools
Dorest Harvey, General Public
Dan Spray, Precision Technologies, Inc.
Gary Warren, Hamilton Telecommunications
Walter Weir, University of Nebraska

MEMBERS ABSENT: LaShonna Dorsey, Mutual of Omaha and Tom Nutt, Phelps County Commissioner

ROLL CALL; MEETING NOTICE; OPEN MEETINGS ACT INFORMATION

The Chair called the meeting to order at 10:05 a.m. Roll call was taken. A quorum existed to conduct official business. The meeting notice was posted to the NITC website and the Nebraska Public Meeting Calendar on October 28, 2021. The agenda was posted to the NITC website on October 29, 2021. The Nebraska Open Meetings Act was posted on the south wall of the room and a link was included with the agenda.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF JULY 8, 2021 MEETING MINUTES

Commissioner Haack moved to approve the July 8, 2021 minutes as presented. Commissioner Weir seconded. Roll call vote: Toner-Yes, Greckel-Yes, Haack-Yes, Harvey-Yes, and Weir-Yes. Results: Yes-5, No-0, Abstained-0. Motion carried.

Commissioners Spray and Warren arrived at the meeting.

REPORTS

EDUCATION COUNCIL

Tom Rolfes

Digital Education and Network Nebraska updates

The newest Network Nebraska RFP is nearing final form. It contains about 40 leased lit fiber circuits and about 20 Special Construction Matching E-rate Fund circuits for public libraries. Six public libraries took advantage of the Public Service Commission's Special Construction Matching E-rate funds for new fiber for 2021-22: Bancroft, Bayard, Beatrice, Clay Center, Verdigre, and Wymore. The average fiber construction cost per library was \$29,177, or an average of \$2,917 of State Matching Funds per library. Plans are being developed for core network upgrades over the next five to ten years, which may necessitate additional (non-Participant) funding. Network Nebraska has observed an uptick in Distributed Denial of Service attacks throughout the state, which is leading us to revisit our DDoS mitigation capacity.

The Office of the CIO has been involved in the Nebraska statewide eduroam pilot project for 2021-23 and is collaborating on the eduroam website and content to be shared with eligible K-12 entities. Thirty-eight

Participation Agreements have been approved since July 2021 with 17 more in process. The Network Nebraska status page (<https://status.networknebraska.net/>) has had favorable reviews, and the University of Nebraska's new AlertSense communications system is working well.

Network Nebraska is in support of cybersecurity awareness training to be made available to all schools, as well as multi-factor authentication, and external vulnerability testing. Zoom licensing decreased slightly to 33,570 non-University licenses in 2021-22.

Commissioners were given an opportunity for questions and answers. Discussion and questions centered around student driven cybersecurity attacks on the network. Mr. Rolfes will get information to commissioners as to who are participants of Network Nebraska. The question was asked as to who was involved in the Future Ready Digital Learning Collaborative Planning. Mr. Rolfes indicated that the Nebraska Department of Education, the ESU Coordinating Council and the Education Council have been involved in the planning and vetting of proposed activities.

GIS COUNCIL

John Watermolen, GIS State Coordinator

The GIS Council met on August 4 and November 3. The focus on the strategic initiatives will be how to include local governments data into NebraskaMap and how to manage data that has been updated and to keep the older versions. At the August meeting, the US Census Bureau presented about the redistricting data and about the differential privacy algorithms that were used on census data. The data was released in Mid-August. Nebraska was well represented at the 2021 ESRI User conference this year, which was held virtually. Approximately 107 Nebraskans were in attendance. The state's GIS symposium was held Monday, November 1, and Tuesday, November 2. There were a lot of good presentations. There were college students presenting their class projects along with the winners of last year's State Story Map contest. Kansas is creating an open data portal and a separate one for archived data. The council is exploring this possibility.

The council will be reviewing standards and guidelines. LIDAR data will be QL2 and should be available sometime next year. QL2 allows engineers to make design decisions.

Mr. Watermolen will get agency cost savings information to the commissioners. Mr. Watermolen was congratulated on being elected to the National States Geographic Information Council (NSGIC) Board of Directors.

COMMUNITY COUNCIL

Anne Byers

The Community Council met on Monday, October 25 and recommended the nominations of three new members: Debora Robertson, director of the Kilgore Memorial Library in York; Karen Connell, director of the Columbus Public Library; and Rick Nelson, general manager of Custer Public Power District and interim general manager of the Nebraska Rural Electric Association. Resumes and bios were included in the meeting materials.

Commissioner Harvey moved to approve Debora Robertson, Karen Connell and Rick Nelson as new members on the Community Council. Commissioner Warren seconded. Roll call vote: Weir-Yes, Warren-Yes, Spray-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, and Toner-Yes. Results: Yes-7, No-0, Abstained-0. Motion carried.

Nebraska Broadband Bridge Program (NBBP). The Nebraska Broadband Bridge grant program was created by LB 388 which was enacted in 2021. State funding of \$20 million per year for two years was appropriated for the program. The first round of applications were due October 1. Over 70 applications were received requesting approximately \$31 million. Challenges are due November 5. Grants will be announced on January 4, 2022.

Broadband update. The Rural Broadband Task Force approved their 2021 report to the Legislature and Governor Ricketts on October 18. The executive summary is included in the meeting documents. The report is available at <https://ruralbroadband.nebraska.gov/reports/2021/2021Report.pdf>

TECHNICAL PANEL

Ed Toner, Technical Panel member

Technical standards and guidelines

Proposal 20. Amend the remote access standard

Patrick Wright

Mr. Wright reviewed the changes to the remote access standard. The Technical Panel recommends approval.

Commissioner Harvey moved to approve Proposal 20. Commissioner Greckel seconded. Roll call vote: Weir-Yes, Warren-Yes, Spray-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, and Toner-Yes. Results: Yes-7, No-0, Abstained-0. Motion carried.

Projects

Approval of enterprise project designation for the following project: Transfer of OPS Retirement Systems to NPERS (Nebraska Public Employees Retirement System)

The Technical Panel recommended that the project be designated as an enterprise project.

Commission Weir moved to designate the Transfer of the OPS Retirement Systems to NPERS (Nebraska Public Employees Retirement System) as an enterprise project. Commissioner Harvey seconded. Roll call vote: Spray-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, Toner-Yes, Weir-Yes, and Warren-Yes. Results: Yes-7, No-0, Abstained-0. Motion carried.

Enterprise project status dashboard report

Mr. Toner provided an update on the status of the enterprise projects.

CHIEF INFORMATION OFFICER

Ed Toner

Office of the CIO Organizational Changes. Jayne Scofield, Network Services Administrator, has taken a new position with the Legislature. Jeff Cadwallader has taken Jayne's position. Jeff has been with the OCIO Network Services team for several years.

OTHER BUSINESS

There was no other business.

ADJOURNMENT

Commissioner Haack moved to adjourn. Commissioner Warren seconded. All were in favor. Motion carried.

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

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

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Varner Hall - Board Room
3835 Holdrege Street Lincoln, Nebraska
Thursday, March 10, 2022, 10:00 a.m. CT
Virtual Conferencing via Webex

MINUTES

MEMBERS PRESENT:

Ed Toner, Chief Information Officer, Chair
Shane Greckel, Greckel Farms, LLC*
Dr. Terry Haack, Bennington Public Schools*
Dorest Harvey, General Public*
Gary Warren, Hamilton Telecommunications*
Walter Weir, University of Nebraska
* Attended by virtual conferencing.

MEMBERS ABSENT: Senator Suzanne Geist, Nebraska Legislature; Dan Spray, Precision Technologies, Inc.; and Tom Nutt, Phelps County Commissioner

ROLL CALL; MEETING NOTICE; OPEN MEETINGS ACT INFORMATION

The Chair called the meeting to order at 10:05 a.m. Roll call was taken. A quorum was not present. The meeting notice was posted to the NITC website and the Nebraska Public Meeting Calendar on February 18, 2022. The agenda was posted to the NITC website on March 4, 2022. The Nebraska Open Meetings Act was posted on the south wall of the room, and a link was included with the agenda.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF NOVEMBER 4, 2021, MEETING MINUTES

Commissioner Harvey moved to approve the November 4, 2021 minutes as presented.
Commissioner Weir seconded. Roll call vote: Toner-Yes, Greckel-Yes, Harvey-Yes, and Weir-Yes.
Results: Yes-4, No-0, Abstained-0. Motion carried.

Commissioners Spray and Warren arrived at the meeting. A quorum was now present.

REPORTS

EDUCATION COUNCIL

Tom Rolfes

Digital Education and Network Nebraska updates. The Council has met twice since the last NITC meeting. Members have been updating the action items for the Statewide Technology plan. The Statewide Technology Plan will be an action item for approval at the July NITC meeting. Council has been exploring and discussing federal funding opportunities for action item activities. Network Nebraska has experienced an increase in DDoS attacks and threats since the start of the pandemic. RFP 6616 had 9 bidder responses and resulted in 82 successful circuit awards. Internet orders for 2022-23 are up 7.2% for higher education and 9.5% for schools and libraries. The Office of the CIO has a new Public Information Officer, Cole Bauer. He is already working on Network Nebraska publicity.

Mr. Rolfes entertained questions and comments from the Commissioners. Commissioner Weir recommended publicizing Network Nebraska's cost savings to schools and communities. Another suggestion was to hold a summit or conference with other states regarding lessons learned when deploying a statewide network. Commissioner Warren commented that he valued the coordinated

Network Nebraska RFP process. It made a big difference in collaboration and effectiveness for service providers. Commissioner Warren stated that he has seen a lot of progress in connecting farms and agriculture. Commissioner Warren commented that the time of day has an impact on speed testing when triggered from home. Future consideration should be given to address location testing versus census block speed reporting.

GIS COUNCIL

John Watermolen

At the February GIS meeting, there was a discussion about the pilot project to include local data into NebraskaMap, the state's GIS Clearinghouse. The pilot project was very successful. Documentation was provided to the local governments if they are interested in sharing data through NebraskaMap. The Council will be reviewing standards and guidelines, to make sure that they are current and up to date. The Office of the CIO interviewed a candidate for a GIS position and has made a recommendation to HR. The geo-election pilot project that was formerly done in Sarpy County, is now being implemented at the Secretary of State's (SOS) office-election division. They are looking at statewide voting districts and doing a check with the voting registration data to assure the correct voting codes fall within the correct districts. SOS would eventually like to do this similar work at the local level.

Mr. Watermolen entertained questions and comments from the Commissioners. Mr. Rolfes mentioned the 2019 Network Nebraska circuit map, rendered by John Watermolen, as one means to visualize the bandwidth increases and reduced costs brought about by Network Nebraska, as suggested by Commissioner Weir.

COMMUNITY COUNCIL and eHEALTH COUNCIL

Anne Byers

Broadband update. The Nebraska Public Service Commission recently awarded \$19.2 million in funding to 61 projects to connect 12,634 locations in the Nebraska Broadband Bridge program's first grant cycle.

Nebraska is expected to receive more than \$200 million for broadband deployment and broadband-related projects and at least \$7.5 million for digital equity planning and implementation projects from the American Rescue Plan Act and the Infrastructure Investment and Jobs Act.

The Infrastructure Investment and Jobs Act includes requirements for stakeholder involvement in developing state digital equity and broadband deployment plans. The Community and eHealth Councils will likely play a role in facilitating stakeholder involvement, as well as the Education Council.

The Community Council will meet on March 14 and will discuss their involvement in statewide broadband deployment and digital equity planning efforts. The Community Council is also helping with community outreach including developing some additional case studies/lessons learned on developing broadband public-private partnerships. The eHealth Council will meet on March 31 to discuss their involvement in statewide broadband deployment and digital equity planning efforts.

Discussion followed regarding role of the NITC to talk to senators about legislation and advocate for funding. Commissioner Toner stated that the NITC serves in an advisory role to the Governor and Legislature. The NITC was not established as an advocacy group. Commissioners, as individuals or in their professional roles, can advocate.

Commissioners requested a draft copy of the Statewide Technology Plan for review and contribution prior to the July meeting.

Commissioner Warren credited the work of the NITC and Rural Broadband Task Force with influencing recent broadband legislation.

TECHNICAL PANEL

Kirk Langer

Technical standards and guidelines. Mr. Langer reported that the Technical Panel met in December. The panel is presenting three proposals for the NITC's review and approval. Patrick Wright, State Information Security Officer, was acknowledged for his work on the proposals.

Proposal 21. Amend the web domain name standard.

Mr. Langer introduced the proposal. The Technical Panel recommends approval.

Commissioner Harvey moved to approve Proposal 21. Commissioner Greckel seconded. Roll call vote: Weir-Yes, Warren-Yes, Harvey-Yes, Haack-Yes, Greckel-Yes, and Toner-Yes. Results: Yes-6, No-0, Abstained-0. Motion carried.

Proposal 22. Amend access control provisions of the Information Security Policy.

Mr. Langer introduced the proposal. The Technical Panel recommends approval.

Commissioner Harvey moved to approve Proposal 22. Commissioner Haack seconded. Roll call vote: Warren-Yes, Weir-Yes, Toner-Yes, Greckel-Yes, Haack-Yes, and Harvey-Yes. Results: Yes-6, No-0, Abstained-0. Motion carried.

Proposal 23. Adopt a new section relating to Internet of Things (IoT) devices.

Mr. Langer introduced the proposal. The Technical Panel recommends approval.

Commissioner Harvey moved to approve Proposal 23. Commissioner Warren seconded. Roll call vote: Greckel-Yes, Toner-Yes, Weir-Yes, Warren-Yes, Harvey-Yes, and Haack-Yes. Results: Yes-6, No-0, Abstained-0. Motion carried.

Enterprise project status dashboard report.

Mr. Langer reviewed the enterprise project status dashboard report. Projects are all progressing with no major issues.

CHIEF INFORMATION OFFICER

Ed Toner

Mr. Toner highlighted progress on the OCIO's Strategic Initiatives. The Office of the CIO's Project Management Office is now included in monitoring the entire list of enterprise projects. It has helped projects be successful. The single sign-on initiative has five applications completed. Approximately 100 applications have been decommissioned using the Application Portfolio Management process. This has resulted in cost savings. The Application Process Maturation DevOps team is still in progress. The DBA teams will be consolidated. The Enterprise Content Management initiative will use standardized tools rather than writing its own code.

The OCIO Service Desk does a customer survey every year which measures six areas of customer feedback on a scale of 1-5. Below are the results:

- 4.48 Service portal
- 4.55 Communication
- 4.56 Solutions
- 4.56 Time it takes to resolve an issue
- 4.90 Professionalism
- 4.61 Overall rating of the OCIO (over 90% approval rating)

OTHER BUSINESS

The NITC has five exiting Commissioners: Walter Weir, Dr. Terry Haack, Gary Warren, Dorest Harvey and Thomas Nutt. Exiting Commissioners will receive an appreciation plaque. Commissioner Toner thanked the Commissioners for their service to the NITC and the State of Nebraska.

ADJOURNMENT

With no further business and without objection, the Chair adjourned the meeting.

The NITC meeting was adjourned 12:05 p.m.

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

Attachment IV-A

TO: NITC Commissioners
FROM: Becca Kingery, Education I.T. Manager
DATE: 11/03/2022
RE: Network Nebraska and Digital Education Initiative Reports

Education Council update: The Education Council has met on 5 occasions this year and will be meeting again on December 21. Progress continues to be made on the NITC Action Items as technological needs of schools and students evolve. The Education Council also saw the departure of long-term manager, Tom Rolfes, in July of 2022.

Network Nebraska Update:

1. Prepare for the future of Network Nebraska as a statewide, multipurpose, high capacity, scalable telecommunications network

- a. The newest Network Nebraska RFP has been turned into the State Purchasing Bureau. It contains about 40 leased lit fiber circuits and about 30 Special Construction Matching E-rate Fund circuits for public libraries.
- b. Three public libraries took advantage of the Public Service Commission's Special Construction Matching E-rate funds for new fiber for 2022-23: Nancy Fawcett Memorial Library (Lodgepole), Fairmont Public Library, and Kimball Public Library. The total estimated feet of fiber construction were 3,595 with an average cost of \$23.01 per foot. The average fiber construction cost per library was \$19,606.00, or an average of \$1,960.60 of State Matching Funds per library.
- c. Network Nebraska was able to utilize GEER I funding for Backbone equipment upgrades to better serve participants.
- d. Network Nebraska continued to observe an uptick in Distributed Denial of Service attacks throughout the state, as a result GEER I funding was utilized for a DDoS equipment refresh.

2. Effectively communicate to current and potential Network Nebraska Participants

- a. The Office of the CIO has been involved in the Nebraska statewide eduroam pilot project for 2021-23 and is collaborating on the eduroam website and content to be shared with eligible K-12 entities. Nebraska K-12 entities currently have a participation rate of 63% across the state, serving approximately 50% of Nebraska students.
- b. The Network Nebraska status page (<https://status.networknebraska.net/>) has had favorable reviews, and the University of Nebraska's new AlertSense communications system is working well.

3. Identify needs and deliver advanced services to meet the growing needs of its membership

- a. Network Nebraska is in support of cybersecurity awareness training to be made available to all schools, as well as multi-factor authentication, and external vulnerability testing.

Digital Education Update:

1. Disseminate informational reports to insure the success of Nebraska digital education

- a. Work is continuing with the Nebraska Department of Education and the ESU Coordinating Council on the Future Ready Digital Learning Collaborative Planning. Next steps include future planning for the STEADfast project, a speed test project spearheaded by Educational Service Unit 10 for utilization across the state.

2. Expand awareness and address the need for equity of access

- a. As the STEADfast project continues to be developed, we will have a more accurate model of lack of equity of access across Nebraska; this information will be vital in future project planning.

- b. Office of the CIO staff have continued to monitor the development of wireless and satellite technologies to gauge their potential in narrowing the Homework Gap in sparsely populated areas where student households are unserved or underserved.

Biographical Sketches – Nominated Members

Mr. Nick Muir

Nick Muir is currently the Chief Information Officer at Wayne State College (WSC), a role he has served in since 2022. Since starting within the Network and Technology Services department at WSC in 2001 Nick's primary focus has always been on customer service and service delivery. In addition to continuous improvement of IT Service desk operations, he has managed technology deployments for several building renovations and other IT-related endeavors and has acquired knowledge and responsibilities within IT procurement. Nick looks forward to growing his strategic skills and continues to expand his knowledge through collaborative efforts with leadership within the campus, the community, and external partnerships.

Mr. Jeremiah Ourada

Jeremiah Ourada has served in the role of Director of the Technology and Resource Center at Nebraska Wesleyan University (NWU) since 2021. Jeremiah has extensive experience in Information Technology ranging from repair, and technical support services to leadership and management. He has a firm foundation in higher education technology services having been employed with the University of Nebraska for several years prior to his current role.

Attachment IV-B

November 2, 2022

To: NITC Commissioners

From: Casey DunnGossin, State GIS Coordinator

Ryan Werner, Chair, GIS Council

Tim Erickson, Vice Chair, GIS Council

Subject: GIS Council Report

General Staffing Update

In July 2022, Mr. John Watermolen, State GIS Coordinator, retired from Nebraska. In August 2022, Ms. Casey DunnGossin was hired as the new State GIS Coordinator.

GIS Council Update – May 2022

The GIS Council met in May with a quorum and voted to recommend the NITC adopt the current USGS (US Geological Survey) 3D Nation Standards by reference as the Elevation standard for Nebraska. By aligning the Nebraska Elevation standard to the USGS 3D Nation standard the Nebraska standard will remain current, with periodic reviews and recommendations by the GIS Council as needed.

The GIS Council that the Boundary Working Group met, and that the Legislature decided to conduct an Interim Study ([LR 370](#)). One of the reasons for the study was due to discrepancies discovered during the redistricting initiative.

The GIS Council discussed that a public entity received funding for a lidar project in Eastern Nebraska that covered several counties in the Omaha-Metro Area. The project will provide better than QL1 lidar¹ with 6-in contours².

GIS Council Update – August 2022

The GIS Council met in August, but a quorum was not present to conduct official business. The GIS Council discussed need to send an updated recommendation to the Tech Panel and NITC related to Street Centerline and Address Point Standards. The updated NENA standard was created to update URLS and fix some errors in the previous version.

The GIS Council also discussed adding interested members to the Boundary Working group.

¹ QL1 – contour accuracy is 1 foot.

² “Contours are lines that connect locations of equal value in a raster dataset that represents continuous phenomena such as elevation, temperature, precipitation, pollution, or atmospheric pressure.”
(<https://pro.arcgis.com/en/pro-app/latest/tool-reference/3d-analyst/how-contouring-works.htm>)

The USGS discussed the completed 3DEP projects in Nebraska and acknowledged that accessing data and deliverables from the USGS is not as simple as it was via FTP.

The GIS Council also discussed that the lidar acquisition for the Omaha-Metro Area was signed and had been collected in March and April 2022. All of Douglas, Sarpy, 70% of Washington, City of Fremont, and parts of Lancaster County were completed. Deliverables from the project are expected in September 2022.

GIS Council Update – November 2022

The GIS Council met in November 2022 with a quorum to conduct official business. The GIS Council voted to recommend the NITC adopt the current NENA (National Emergency Number Association) Street Centerline and Address Point Standards by reference.

The GIS Council also nominated and voted Mr. Christian Nielsen (Public Service Commission) to be the Vice Chair for 2023.

The GIS Council was presented information from the USGS on the status of the final federally funded lidar project in Nebraska as part of the 3D Elevation Program (3DEP). The USGS also shared that because Nebraska has lidar coverage that meets 3DEP standards, there are no plans to refresh lidar data on a set schedule and it is unlikely other federal agencies will fund large lidar projects in Nebraska. The USGS shared information on the [3D National Topography Model and the 3D Hydrography Program](#) that will use lidar data collected for 3DEP.

The GIS Council discussed the Legislature Interim Study ([LR 370](#)). The Study identified 336 statutes that reference: “boundary/boundaries”, “GIS/Geographic Information Systems”, and other terms that may indicated identifying an area spatially in Nebraska. Once the statutes have been reviewed the boundary working group will meet to discuss the findings.

The GIS Council was presented with information on the lidar data collected in the Omaha-Metro Area. The data returns are being delivered to the departments, and QC has started. One county noted that the data is such high quality that they can identify street light arms and are looking forward to conducting additional data analysis and modeling.

Attachment IV-C

Nov. 2, 2022

To: NITC Commissioners
From: Anne Byers
Subject: Broadband and Community Council update

State Broadband Funding

[LB 388](#) which was enacted in 2021 created [the Broadband Bridge Grant Program](#). \$20 million a year for two years was appropriated for the program. The first round of grants were awarded in January and February 2022. Sixty-one grants were awarded totaling \$19.2 million to connect 12,640 locations. Awards for the second round will be announced in December 2022. The Nebraska Broadband Bridge program will provide the framework for the distribution of federal broadband funding.

Federal Broadband Funding

Federal broadband funding received by the State of Nebraska is being coordinated by the Connect Nebraska Working Group--interagency working group comprised of staff members from the State Budget Office, Governor's Policy Research Office, Nebraska Public Service Commission, and the Nebraska Information Technology Commission/Office of the CIO.

Capital Projects. [LB 1024](#) which was enacted in 2022, allocated funding from the Capital Projects Fund by Congressional District. On August 30, 2022, the U.S. Department of the Treasury approved an award of \$87.7 million to connect 21,000 homes and businesses to affordable, reliable high-speed internet services in Congressional Districts 1 and 3. The Nebraska Public Service Commission will distribute the funding through the Nebraska Broadband Bridge grant program in early 2023. The press release is at <https://home.treasury.gov/news/press-releases/jy0931>. The Public Service Commission anticipates opening a round of the Broadband Bridge Grant Program in early 20223 to distribute the funding.

An application for approximately \$41 million in funding has been submitted for funding for multi-purpose community facilities in qualified census tracts in Omaha for Congressional District 2. The Nebraska Department of Economic Development will administer this funding.

BEAD. The State of Nebraska has also applied for funding from the National Telecommunications and Information Administration Broadband Equity, Access and Deployment (BEAD) program. Nebraska will receive at least \$100 million for broadband deployment projects through the BEAD program. The State of Nebraska expects to receive \$5 million in planning funds in November 2022 to develop a five-year broadband deployment plan. The Nebraska Public Service Commission will administer the BEAD funding.

State Digital Equity Planning Grant. Nebraska will receive \$600,000 to develop a state digital equity plan through the State Digital Equity Planning Grant in November 2022. States which complete digital equity plans will be able to apply for a minimum of \$7.2 million over 5 years to set up a state digital equity grant program. The Nebraska Information Technology Commission/Office of the CIO will administer the State Digital Equity Planning Grant. A one-page summary of the grant and a fact sheet are included in the meeting materials. The Community and eHealth Councils will both be supporting the state digital equity planning effort.

Broadband Mapping

The current broadband maps overstate broadband availability. The FCC has implemented a new data collection process. The first iteration of the improved map of broadband availability is expected in November 2022. The NTIA expects to use the second iteration of the FCC map which is expected in the spring of 2023 to determine final BEAD funding allocations for states. The Nebraska Public Service Commission is working to identify a vendor to develop a state broadband map using BEAD funding.

Community Council Membership

The Community Council has recommended the nomination of Jason Tuller. I will be asking you to approve his nomination. His bio is below:

Jason Tuller

Jason Tuller, MBA has over 15 years of experience in Economic Development in Nebraska. He is an Extension Educator in Rural Prosperity Nebraska. His areas of focus are Economic Development and People Attraction. He has worked as a Small Business Consultant as well as a local Economic Development Director. He helped clients in all stages of business from start-up to transition. He worked directly with over 750 clients. These interactions led to 66 new business startups, over 200 new business plans, and created or saved over 375 jobs over his seven years as a small business consultant. More than \$35 million dollars of investment were used in new businesses and expansions. As an economic development director Jason managed a 75 acre mixed use development park. There were twenty homes built in the development park as well as four commercial buildings built, which totaled over \$10 million dollars invested in the community of Imperial, NE. One of his last projects in Imperial was working with a group of local investor/owners for Gigabit to secure LB 840 financing for a project that would bring fiber to every home and business in Imperial. As an Extension Educator, Jason has worked on a team that researched Grocery Store Transitions, built a Web First Impressions program, and worked on the local Broadband Activation Team for Thayer County.

Connect Nebraska Digital Opportunities Plan

With funding from the NTIA, the State of Nebraska will be developing a plan to ensure Nebraskans have internet connectivity, devices such as laptops and smartphone, and the skills to meaningfully use internet technologies. The grant will also promote the use technologies such as telehealth and precision agriculture which are in the early stages of adoption and have the potential to significantly impact the lives of Nebraskans and the state's economy.

The Nebraska Information Technology Commission (NITC)/Office of the CIO will be leading the planning effort with the assistance of the state's regional economic development districts and the Nebraska Library Commission. The one-year grant is expected to start in October of 2022. States which complete plans can apply for \$7.2 million or more in funding over 5 years to implement a state digital access, skills and opportunities grant program.

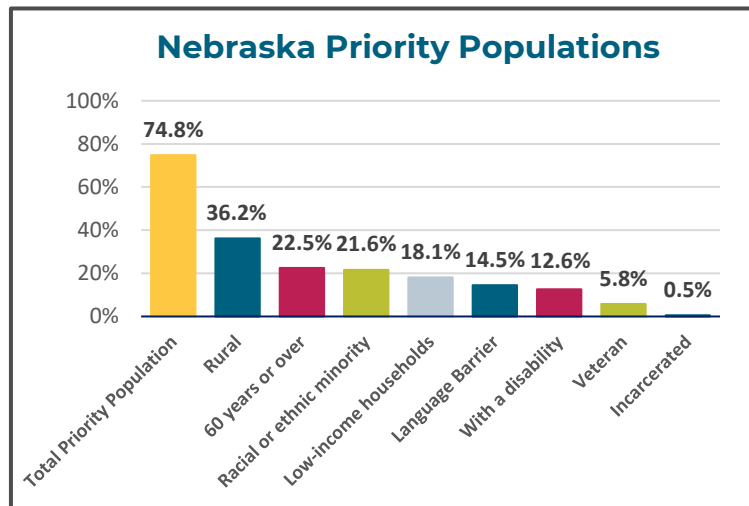
Priority Populations. Planning efforts will focus on eight priority populations shown in the chart to the right. Approximately 75% of Nebraska's population is included in one or more priority populations. Those living in rural areas and older adults are Nebraska's largest priority populations.

Library Capacity. Libraries play an important role in digital equity efforts. However, only 15% of Nebraska's libraries have broadband service of 100 Mbps down or greater. Planning efforts will address the capacity of libraries—particularly small, rural libraries—to participate in digital equity efforts.

Planning Activities. Planning activities will include:

- Inventory of digital inclusion assets and identification of best practices
- Webinars on priority populations, best practices and other topics
- Listening sessions focused on priority populations
- The development of regional digital equity plans
- A statewide planning conference

Coordination with BEAD Planning. The NITC/OCIO will coordinate planning efforts with the Nebraska Public Service Commission's BEAD 5-year deployment planning efforts.



For more information

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Connect Nebraska

Digital Opportunities

Nebraska Digital Connectivity Facts

October 2022



90% of Nebraska households
have an internet subscription

Source: ACS 2020 5-year estimates



85% of Nebraska farms & ranches
have an internet subscription

Source: 2021 Farm Computer Usage and Ownership.



51%



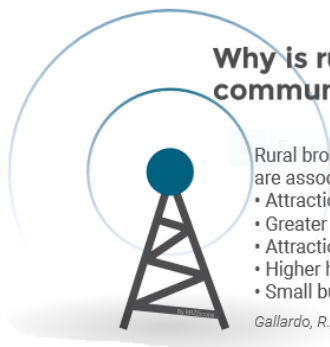
of Nebraska
farmers and ranchers
use precision agriculture
practices to manage
crops or livestock

Source: 2021 Farm Computer Usage and Ownership



Only 15%
of Nebraska libraries
have internet service of
100 Mbps or greater

Source: Nebraska Library Commission, 2020-2021 Nebraska
Public Library Survey



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).

Older adults & those with lower incomes are less likely to be connected



27% of Nebraskans age 65 and older
do not have an internet connection at home



37% of Nebraskan households with household income
of less than \$20,000 do not have an internet connection at home

Source: ACS 2020 5-year estimates

13%

of employed Nebraskans
work from home
up nearly **3X** from 2019



Source: U.S. Census, 2021 & 2019 ACS 1-year estimates



Nebraska ranks 4th in the use of precision agriculture

Source: USDA NASS 2021 Farm Computer Usage and Ownership



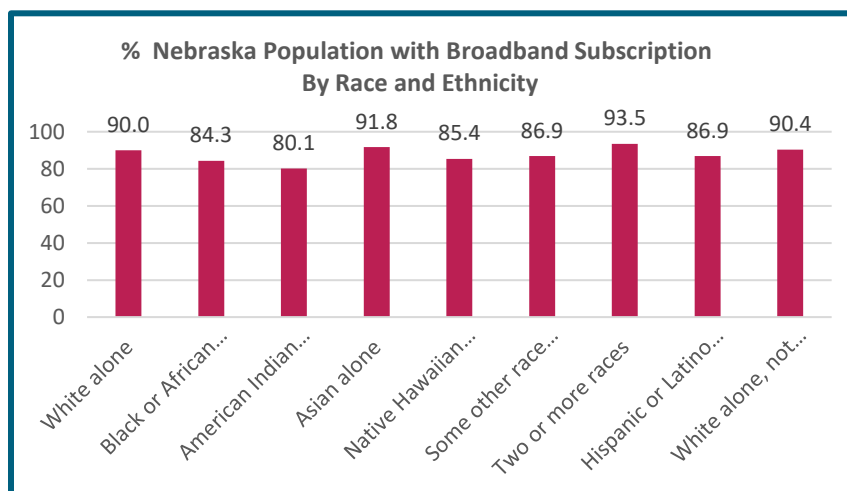
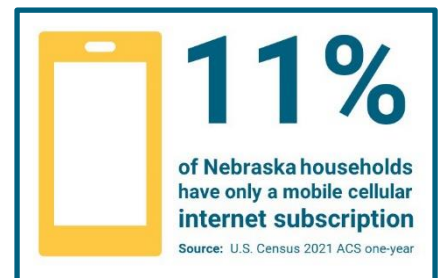
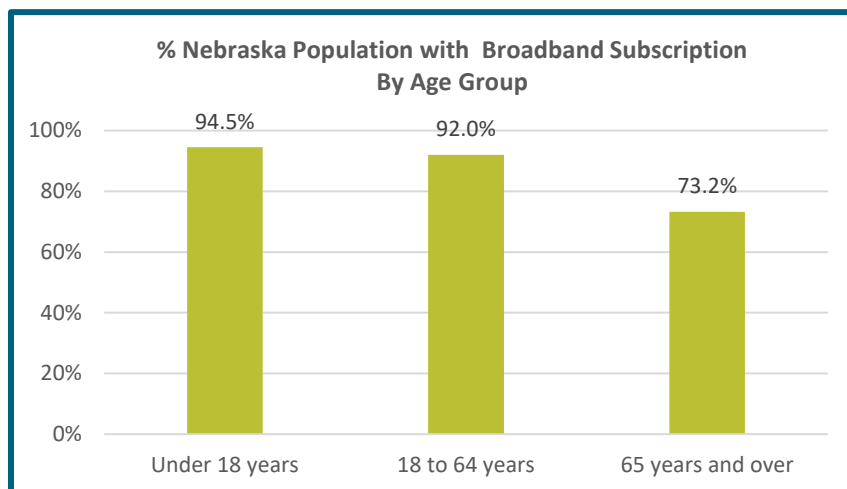
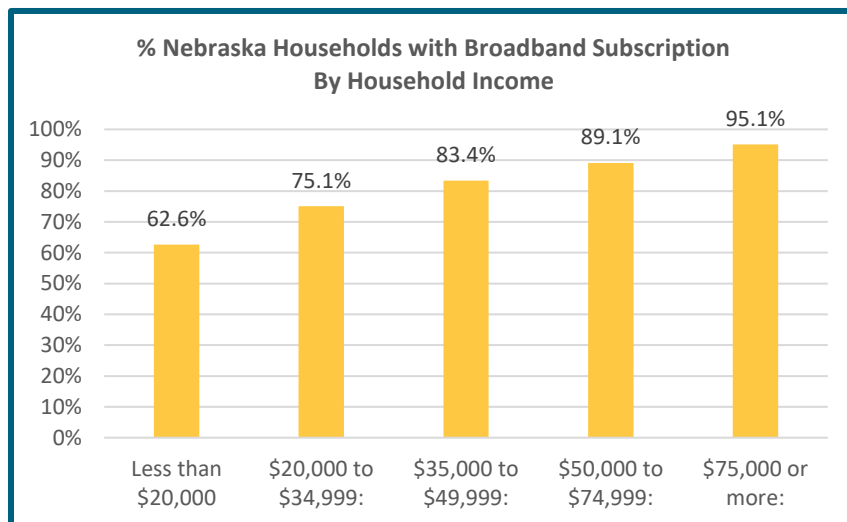
Nebraska Information
Technology Commission



NROC
Nebraska Regional
Officials Council



Nebraska
Library Commission



For more information

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Source: U.S. Census Bureau American Community Survey 2020 5-year estimates

Federal Broadband Funding for Nebraska

Application Year	2022 Application Period			2023-2024 Application Period
Enabling Legislation	American Rescue Plan Act	Infrastructure Investment and Jobs Act		
Funding Program Federal Agency Administering	Capital Projects U.S. Department of Treasury	Broadband Equity, Access & Deployment Program (BEAD) U.S. Department of Commerce NTIA	State Digital Equity Capacity Grant Program Planning Grants U.S. Department of Commerce NTIA	State Digital Equity Capacity Grants U.S. Department of Commerce NTIA
Award date	\$87.7 million in broadband deployment funding for Congressional Districts 1 and 3 awarded August 30, 2022. Funding for multi-purpose community facilities for Congressional District 1 is pending.	Planning Funds expected to be awarded in November 2022	Funds are expected to be awarded in October or November 2022	TBD-The application period will probably open in late 2023 or early 2024
Funding available	Nebraska: \$128,740,178 Each Tribal Government: \$167,504	Nebraska: \$100,000,000+	Nebraska: \$600,000	Nebraska: \$7.2+ million over 5 years
State Agency Administering	Nebraska Public Service Commission (broadband deployment) Nebraska Department of Economic Development (community facilities)	Nebraska Public Service Commission	Nebraska Information Technology Commission/OCIO	
	The Connect Nebraska Working Group is coordinating the administration of broadband funding. More information is available at https://broadband.nebraska.gov			
Match Requirements	None specified	25% match for subgrantees except in high cost areas	None specified	None specified
Eligible Uses	Directly enable work, education and health monitoring & address critical needs Broadband Infrastructure Projects Digital Connectivity Projects Multi-Purpose Community Facility Projects	Unserved and underserved service projects Data collection and broadband mapping Connecting anchor institutions Service to multi-family buildings Broadband Adoption	Development of a State Digital Equity Plan one year from the date of the award	Implement the State Digital Equity Plan and pursue digital inclusion activities consistent with the State Digital Equity Plan Evaluate the efficacy of the digital inclusion efforts
Planning Requirement		States must complete and submit a 5-year state broadband deployment plan in order to receive funding for state broadband grant program.	States must complete and submit a state digital equity plan.	Submission and approval of a state digital equity plan is a requirement for receiving funding from this program.
Administrative/ Planning Funding Available	5% or \$6.4 million	5% Pre-Deployment Planning 2% Administration of grant	All planning and administration	3% Administration
Required Completion/ Obligation Dates	All funds must be expended by December 31, 2026.	Broadband service to all customers 4 years after receipt of the subgrant	One year from date of award	5 years from date of award
Areas eligible for broadband funding	Areas without reliable wireline 100/20 (encouraged). If justified, can fund projects in areas with other funding commitments.	Unserved (lacking 25/3) and Underserved (lacking 100/20)	N/A	N/A
Build out requirements	100/100 Mbps- (unless impracticable) Fiber preference	100/20 Mbps	N/A	N/A

Attachment IV-D

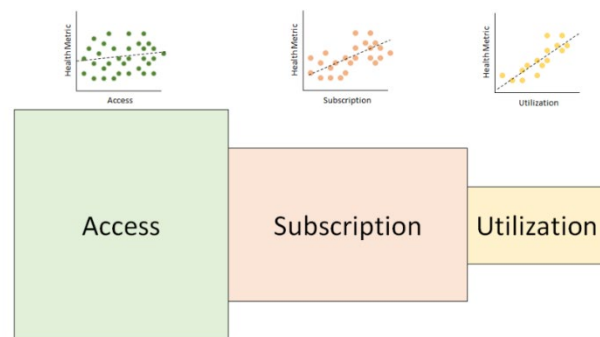
Nov. 3, 2022

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

What does the eHealth Council have to do with digital equity?

Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Studies estimate that clinical care impacts only 20 percent of county-level variation in health outcomes, while social determinants of health (SDOH) affect as much as 50 percent. Within SDOH, socioeconomic factors such as poverty, employment, and education have the largest impact on health outcomes.¹

Internet access is considered a social determinant of health. In 2015 the FCC formed the Connect2Health Task Force (C2HFCC Task Force) to study the relationship between internet access and health. In their analysis, the FCC suggested that there is a “connectivity continuum” influencing health.²



Internet access is becoming increasingly important for health. We use the internet for a number of health-related applications, including:

- Researching information on medical conditions
- Managing appointments and prescriptions
- Checking lab results
- Telehealth consultations
- Home health monitoring

¹ <https://aspe.hhs.gov/sites/default/files/documents/e2b650cd64cf84aae8ff0fae7474af82/SDOH-Evidence-Review.pdf>

² Public Notice, FCC Seeks Comment and Data on Actions to Accelerate Adoption and Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies, GN Docket No. 16-46 August 26, 2020

Research is showing the impact of internet access on mortality and health outcomes:

- Places with limited internet access had higher mortality rates, especially in urban areas.³
- In a cohort study of 9,378 patients, participation in a remote monitoring program was associated with lower odds of hospitalization for patients testing positive for COVID-19.⁴

The state digital equity plan will try to leverage the investments that the state has made in health information exchange and health technologies. Nebraska continues to be a leader in health information exchange with near universal participation in the statewide health information exchange, CyncHealth. LB 411 which was signed by Governor Ricketts on May 24, 2021, mandated participation in the state health information exchange by ambulatory surgical centers, critical access hospitals, intermediate care facilities, long-term care hospitals, mental health substance use treatment centers, PACE centers, pharmacies, psychiatric or mental hospitals, public health clinics, and rehabilitation hospitals. In particular, there are a couple of services provided by CyncHealth that are related to digital equity:

- CyncHealth also offers a solution to address social determinants of health (SDOH) and to help connect patients to resources including food, housing, transportation, mental health support, state benefits, and employment services. Internet access is considered a social determinant of health.
- The MyCyncHealth patient portal is available for Medicaid patients. The portal is at [Mycynchealth.org](https://mycynchealth.org).

Several health systems are using telehealth. We will be reaching out to them to learn how the State of Nebraska can advance the use of telehealth and health monitoring.

The eHealth Council will be supporting the state digital equity planning effort. I have followed up with several members of the eHealth Council to get information and to identify opportunities to work with other organizations.

eHealth Council Membership

The eHealth Council has recommended the nomination of Professor Liaquat Hossain. I will be asking you to approve his nomination. His bio is included in the meeting materials.

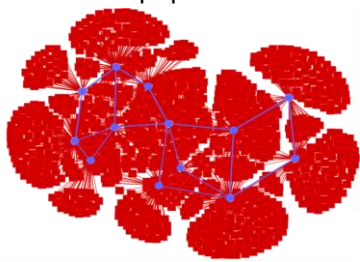
³ Qinyun Lin, PhD; Susan Paykin, MPP; Dylan Halpern, MCP; Aresha Martinez-Cardoso, PhD; Marynia Kolak, PhD. Assessment of Structural Barriers and Racial Group Disparities of COVID-19 Mortality With Spatial Analysis. JAMA Network Open. March 4, 2022. Accessed Oct. 12, 2022.

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789619>

⁴ Bradley H. Crotty, MD, MPH; Yilu Dong, PhD; Purushottam Laud, PhD et al. Hospitalization Outcomes Among Patients With COVID-19 Undergoing Remote Monitoring. JAMA Network Open. July 7, 2022. Accessed Oct. 12, 2022. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793927>

Integrated Science for Complexity, Resilience and Systems

We live in an increasingly complex world comprising many layers of micro to macro systems complexity. These complex interactions of different macro and micro systems can lead to positive, negative or improved outcome in different types of systems and sub systems. The solution to complex physical, environmental, cyber and societal systems therefore requires a holistic approach to study the environment constituting highly interconnected and interdependent systems and their sub systems. Our understanding of complex networks has also significantly promoted the studies on social agents and social connections, which is coupled with the advances in the knowledge from the areas as diverse as Physics and Biology; Mathematics and Sociology; Organizational science and Psychology. We can now make observation of real-world complex phenomena using large-scale user-generated data, which provides us with unprecedented opportunity to investigate global health behavior of different systems and their interconnections with a large scale spatial-temporal behavioral and institutional interactions data. My work discusses the importance of integrated science for exploring security, catastrophes, i.e., epidemic disasters and resilience. I focus on developing theoretical and methodological foundations for complexity science and integrated science together with its application to security (both cyber and physical), epidemics, health, biological systems modelling for exploring resilience across different systems, i.e., disaster medicine and public health preparedness. My on-going work relates to developing Computational Approaches to Surveillance in Ebola Disasters and Dynamic Evolutionary Networks of Digital Disease Surveillance: A Meta-analysis of Ten Years of Research. My research can further contribute in areas of computational modelling of large scale biosecurity threats, cybersecurity, terrorism, Health Systems, Disasters Health Promotion and Risk Reduction as well as modelling of complex health issues for vulnerable populations.



Brief Bio of Prof Liaquat Hossain, Ph.D.

I am currently the Ron and Carol Cope Professor and Department Chair of the newly created Department of Cyber Systems at University of Nebraska at Kearney USA. I served on a variety of senior leadership roles such as Head of School, Associate Dean and Sub Dean at the University of Sydney's Faculty of Engineering and IT and was promoted to Full Professor (Tenured) in 2010, Information School of Syracuse University and the University of Hong Kong's Department of Information and Technology Studies from 2001-2019. I also spent a year Visiting Professor at the Department of Informatics of the Lund University's (Sweden) School of Economics and Business from 2011-2012.

I completed my PhD in Information and Communications Technology from the University of Wollongong Australia in 1998 and was invited to work as a Postdoctoral Fellow under the guidance of Professor Lee W McKnight in Information Economics at Centre for Technology, Policy and Industrial Development of Massachusetts Institute of Technology. This was a joint project between MIT Information Economics and Policy and Harvard's Kennedy School of Government led by Professor Lewis M. Branscomb. For the past 10 years I have given numerous invited keynotes at prestigious institutions in Australia (ANU, University of Sydney, UNSW, UWA, Monash); the USA (Johns Hopkins, UMBC, Syracuse, Maine, Indiana, UC Santa Barbara, University of Kentucky, UC Santa Cruz, Northeastern, Ohio); Canada (UBC, SFU), UK (LSE, Edinburgh, Sheffield, Queens); Sweden (Stockholm, Lunds, Uppsala); Ireland (Trinity and UCC); Denmark (DTU); Finland (Helsinki, TUT); Singapore (NUS); Hong Kong; and China (BNU, Jilin).

I have been investigating the functioning and robustness of hierarchical structures and potential problem leading to disruption or delay in the adaptation of behaviours for optimal functioning. I consider the examination of feedback systems leading to effectiveness and efficiency in learning, correcting or intervention to changed behaviour an important step towards

understanding performance outcome of different networks in cyber, social, organizational and market systems. In my research, I draw theoretical and methodological foundations from information and computational sciences, mathematical organizational theory and sociology, non-linear dynamical systems in psychology, theoretical physics and statistical mechanics for exploring resilience across systems in dealing with adverse events such as tsunami, flood, fire, disease outbreaks (both foodborne and zoonotic) and bio-security threats. This requires understanding not only existing multi-jurisdictional formal coordinating structures, but also access to and sharing of local situated knowledge through digital interventions and cultivation of community-based ad hoc networks. Using this trans-disciplinary systems approach as theoretical and methodological foundation, I am able to bridge the disciplines such as social and behavioural sciences, business and economics, physical and human geography, information sciences, public health and engineering management for addressing communications and responses related to natural and man-made disasters.

I am the Specialty Editor in Chief of Frontiers in Science journal on Frontiers in Psychology ([2nd most cited psychology journal with ISI Impact Factor of 2.560](#)) and Frontiers in Communications with a focus in Disaster Communications. I have been appointed as Associate Editor for BMC Health Services Journal with ISI Impact Factor of 1.87. I have secured more than US\$10M in competitively research funding from sources such as HK Research Council, EU FP 7 framework, National Medical and Health Research Council Australia, ARC Australian Research Council, Commonwealth Research Centre for Financial Markets and CRC Bushfire and US ARDA Advanced Research Development Agency. I have published over 200 international peer reviewed research papers and being recognized as one of the University of HU Scholars in the Top 1% of the world based on the Essential Science Indicators covering a 10-year plus 4-month period, January 1, 2008-April 30, 2018. From my publications, 116 ISI/Scopus index journal papers and over 100 in most prestigious international conferences in the fields of Information, Communications and Knowledge Networks; Decision Support & Complex Emergencies; and Disaster Medicine & Public Health Preparedness. My h-index is 28 with 58 g-index and over 4100 citations which shows my productivity as a researcher as well as 33.41 for RG Score which is higher than 92/5% of ResearchGate members.

Attachment IV-E-1-a

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Proposal 25. Amend provisions of the Information Security Policy.

RECOMMENDED ACTION: Approve Proposal 25.

BACKGROUND: The proposal includes the following provisions:

Section 1 adds a new definition for CIS, the Center for Internet Security. Future security related standards will reference certain documentation published by that organization.

Section 2 amends the system maintenance standard.

Section 3 adds a new standard for low-code/no-code and containerized development. There are currently no NITC standards specifically relating to this type of development.

RECOMMENDED BY: State Information Security Officer
Security Architecture Workgroup
Technical Panel

State of Nebraska
Nebraska Information Technology Commission
Technical Standards and Guidelines

Proposal 25
Final

A PROPOSAL relating to the Information Security Policy; to add a definition; to amend section 8-507; to adopt a new section 8-608 relating to low-code/no-code and containerized development; and to repeal the original sections.

Section 1. Section 1-101 is amended to add the following new subsection, and renumbering the existing subsections accordingly:

“CIS” is an abbreviation for Center for Internet Security, Inc., a nonprofit entity, which develops controls, benchmarks, and best practices for securing IT systems and data. [https://www.cisecurity.org/]

Sec. 2. Section 8-507 is amended to read:

8-507. System maintenance.

The following are system maintenance standards:

(1) All systems involved in the processing, storage, or access to any ~~CONFIDENTIAL or RESTRICTED~~ State information must be maintained per manufacturer specifications.

Maintenance personnel must be approved for this activity by the state information security officer and must be briefed on the requirements for protecting sensitive information;

(2) Maintenance activity must be logged to include the date/time of the maintenance, activity performed, the person or organization who performed the maintenance, the name and department of the escort (if applicable), and a detailed list of any equipment removed or replaced during the maintenance. This list should include serial numbers, if applicable;

(3) Prior to removing any equipment from the secured environment to which it is assigned, the equipment must be approved for release and validated by the state information security officer that all non-public information has been encrypted, secured, or permanently deleted from the equipment. When equipment is returned, it must be inspected for unauthorized systems, settings, or services to ensure the integrity of the security systems before reloading data or placing back into the environment;

(4) All tools used for maintenance must be tested. The Office of the CIO must maintain a list of approved maintenance tools that is reviewed and updated at least annually;

(5) Nonlocal or remote maintenance must be approved in advance by the state information security officer or the Office of the CIO, and must also comply with all agency and Office of the CIO requirements for remote access;

(6) All remote maintenance activity must be logged and reviewed;

(7) Maintenance of agency-developed software must follow the state's change management process to ensure changes are authorized, tested and accepted by agency management. All known security patches must be reviewed, evaluated and appropriately prioritized;

~~(8) Critical patches must be applied within 24 hours of receipt. High risk patches must be applied within 7 days of receipt. All other patches must be appropriately applied in a timely manner as determined by the agency.~~ Vendor patches must be applied in an order based on organizational risk and must be applied within thirty days of receipt; and

(9) All vendor supplied software deployed and operational must be currently supported by the vendor.

Sec. 3. The following new section is adopted:

8-608. Low-code/no-code and containerization development.

Low-code/no-code and containerization development platforms are types of visual software development environments that allow enterprise developers to drag and drop application components, connect them together and create mobile or web apps and microservices. These

1 types of environments allow for the dynamic allocation of resources. While these types of
2 environments allow for swift and agile development without the necessity to write fully coded
3 applications, the platforms also present architectural, security and governance challenges. The
4 following are low-code/no-code and containerization development standards:

5 (1) All projects involving low-code/no-code in the cloud must be reviewed and approved
6 by the OCIO Cloud Review Board;

7 (2) Low-code/no-code projects must maintain compliance with all applicable standards;
8 and

9 (3) All vendor supplied software deployed and operational must be supported by the
10 vendor.

11 Sec. 4. Original sections 1-101 and 8-507 are repealed.

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

Attachment IV-E-1-b

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Proposal 27. Amend mobile device and portable storage device provisions of the Information Security Policy.

RECOMMENDED ACTION: Approve Proposal 27.

BACKGROUND: The proposal includes the following provisions:

Section 1 adds new definitions for “mobile device” and “portable storage device.” These definitions are based on definitions used by the National Institute of Standards and Technology.

Section 2 renames and amends the portable storage device standard.

Section 3 amends the minimum mobile device configuration standard.

RECOMMENDED BY: State Information Security Officer
Security Architecture Workgroup
Technical Panel

State of Nebraska
Nebraska Information Technology Commission
Technical Standards and Guidelines

Proposal 27
Final

A PROPOSAL relating to mobile device and portable storage device provisions of the Information Security Policy; to add definitions; to amend sections 8-205 and 8-506; and to repeal the original sections.

Section 1. Section 1-101 is amended by adding the following new subsections, and renumbering the existing subsections accordingly:

“Mobile device” means a portable computing device that has a small form factor such that it can easily be carried by a single individual; is designed to operate without a physical connection (e.g., wirelessly transmit or receive information); possesses local, non-removable data storage; and is powered on for extended periods of time with a self-contained power source. Mobile devices may also include voice communication capabilities, on-board sensors that allow the device to capture (e.g., photograph, video, record, or determine location) information, and/or built-in features for synchronizing local data with remote locations. Examples include smart phones, tablets, and e-readers. [Source: NIST SP 800-53, REV. 5]

“Portable storage device” means a system component that can communicate with and be added to or removed from a system or network and that is limited to data storage—including text, video, audio or image data—as its primary function (e.g., optical discs, external or removable hard drives, external or removable solid-state disk drives, magnetic or optical tapes, flash memory devices, flash memory cards, and other external or removable disks). [Source: NIST SP 800-53, REV. 5]

Sec. 2. Section 8-205 is amended to read:

1 **8-205. Portable ~~IT~~storage devices.**

2 (1) ~~CONFIDENTIAL or RESTRICTED~~ data must not be stored on portable ~~IT~~
3 storage devices unless it has been encrypted using OCIO-approved technology ~~approved by~~
4 ~~the state information security officer or the agency information security officer.~~

5 (2) Portable storage devices must not be left in a vehicle unattended.

6 Sec. 3. Section 8-506 is amended to read:

7 **8-506. Minimum mobile device configuration.**

8 All mobile ~~computing~~ devices accessing the state network or containing state
9 information must be provisioned to meet these security policies and be approved by the Office
10 of the CIO. All devices that will be connected to the state network must be logged with device
11 type and approval date. The following are minimum mobile device configuration standards:

12 (1) Mobile ~~computing~~ devices must be shut down or locked when not in use. These
13 devices must not be left unattended in a public access area. They must be locked in a secure
14 cabinet or room, or kept on the person. Devices should not be shared;

15 (2) Mobile ~~computing devices and mobile storage devices~~ must not be left in a vehicle
16 unattended;

17 (3) Storing CONFIDENTIAL or RESTRICTED information on any mobile device ~~or any~~
18 ~~removable or portable media (e.g., CDs, thumb drives, DVDs)~~ is prohibited unless
19 arrangements and mechanisms for securing the data has been explicitly approved by the state
20 information security officer. In those cases, ~~all mobile computing devices or portable media~~
21 ~~shall~~ the device must be encrypted using OCIO-approved technology ~~that is approved by the~~
22 ~~state information security officer;~~

23 (4) Personally owned mobile devices (e.g., smartphones and tablets) may be used for
24 approved state purposes, including email, when configured to access the state information
25 through a managed interface or sandbox only. Devices that are not configured to use the
26 authorized interface are prohibited from accessing any state information, including email;

1 (5) The device must have security settings that block users from changing mandatory
2 settings;

3 (6) Strong passwords are required, and passwords must change regularly per state policy
4 regarding passwords;

5 (7) The device must lock after no more than 5 minutes of inactivity and must require the
6 re-entry of a password or PIN code to unlock;

7 (8) After 10 unsuccessful password attempts, the device or the state container will be
8 erased. In the event that the device becomes lost or stolen, the Office of the CIO must have the
9 capability to remotely locate, lock, and erase the device;

10 (9) The device should have all data backed up at the state data center;

11 (10) Devices need to be cleared of all information from the prior user before being issued to
12 a new user;

13 (11) The device OS must be up to date and patched. New versions of the OS must be
14 vetted for security posture and supportability;

15 (12) Devices must be properly disposed of using mechanisms approved by the state
16 information security officer. State data must be cleared and devices properly disposed of or
17 recycled. The disposition process is required to be documented and periodically audited; and

18 (13) New devices are required to be configured and operate within established security
19 guidelines and help desk support must be established before these devices can be operational.
20 New devices need to be validated before being made available for users to request.

21 Sec. 4. Original sections 1-101, 8-205 and 8-506 are repealed.

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

Attachment IV-E-1-c

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Proposal 28. Amend access control and minimum configuration provisions of the Information Security Policy.

RECOMMENDED ACTION: Approve Proposal 28.

BACKGROUND: The proposal includes the following provisions:

Section 1 amends the identification and authorization standard to use general terms for a unique identifier and identity management system rather than specific references to Active Directory.

Section 2 amends the privileged access accounts standard by adding a requirement for multifactor authentication where technically feasible and authorizing the state information security office to grant exceptions.

Section 3 amends the minimum workstation configuration standard.

Section 4 repeals prior versions of the standards.

Section 5 outright repeals the minimum laptop configuration standard. Laptops have the same configuration requirements as workstations and any additional requirements are included in the existing remote access standard (section 8-301).

RECOMMENDED BY: State Information Security Officer
Security Architecture Workgroup
Technical Panel

State of Nebraska
Nebraska Information Technology Commission
Technical Standards and Guidelines

Proposal 28
Final

A PROPOSAL relating to access control and minimum configuration provisions of the Information Security Policy; to amend sections 8-303, 8-304, and 8-504; to repeal the original sections; and to outright repeal section 8-505.

Section 1. Section 8-303 is amended to read:

8-303. Identification and authorization.

(1) All employees and other persons performing work on behalf of the state, authorized to access any state information or IT resources, that have the potential to process, store, or access non-public information, must be assigned a unique identifier~~State of Nebraska user ID~~ which resides in ~~the a~~ State of Nebraska identity management system~~Active Directory domain~~ with the minimum necessary access required to perform their duties to align with the least privilege methodology.

(2) Staff are required to secure their user IDs from unauthorized use.

(3) Sharing user IDs is prohibited.

(4) To reduce the risk of accidental or deliberate system misuse, separation of duties must be implemented where practical. Whenever separation of duties is impractical, other compensatory controls such as monitoring of activities, increased auditing and management supervision must be implemented. At a minimum, the audit of security must remain independent and segregated from the security function.

Sec. 2. Section 8-304 is amended to read:

8-304. Privileged access accounts.

Privileged access accounts include administrator accounts, embedded accounts used by one system to connect to another, and accounts used to run service programs. These accounts are used by systems and personnel to access sensitive files, execute software, load and configure policies and configuration settings, and set up or maintain accounts.

Due to the elevated access levels these accounts typically have, the following standards and procedures must be followed to minimize the risk of incidents caused by these accounts:

(1) All privileged access accounts must be assigned to an individual with an approved business need for the privileged access. These accounts must not be shared;

(4)(2) All privileged access accounts must use OCIO-approved multifactor authentication where technically possible.

(2)(3) Service accounts must not be used to interactively log in to a system or resource;

(3)(4) Default administrator accounts must be renamed, removed or disabled. Default passwords for renamed or disabled default administrator accounts must be changed;

(4)(5) Default system account credentials for hardware and software must be either disabled, or the password must be changed. Use of anonymous accounts is prohibited, and unassigned accounts must be assigned to an individual prior to use. When no longer needed, the account must be disabled. At all times, the state requires individual accountability for use of privileged access accounts;

(5)(6) Privileged access accounts must have enhanced activity logging enabled and reviewed at least quarterly;

(6)(7) Privileged access through remote channels will be allowed for authorized purposes only and must include multi-factor authentication;

(7)(8) Passwords for these accounts must be changed every 60 days;

(8)(9) The password change process must support recovery of managed systems from backup media. Historical passwords should remain accessible in a history table in the event that they are needed to activate a backup copy of a system; and

(10) Privileged access accounts must be approved, provisioned, and maintained by the Office of the CIO.

Exceptions to this policy may be granted by the state information security officer.

Sec. 3. Section 8-504 is amended to read:

8-504. Minimum workstation configuration.

Improperly configured workstations are at risk to be compromised. Without proper adherence to these workstation security standards, the state is at increased risk to have data lost, stolen, or destroyed. This standard is necessary to protect the state from unauthorized data or activity residing or occurring on state equipment. It is also necessary to reduce the likelihood of malicious activity propagating throughout the state networks or launching other attacks. All managed workstations that connect to the state's network are required to meet these standards. The Office of the CIO is responsible for maintaining these standards and for configuring and managing the hardware, software, and imaging processes for all managed workstations. Workstation standards should be securely maintained and stored in a centralized documentation library. The degree of protection of the workstation should be commensurate with the data classification of the resources stored, accessed, or processed from this computer. The following are minimum workstation configuration standards:

(1) OCIO-approved endpoint security (anti-virus) software, ~~approved by the Office of the CIO,~~ must be installed and enabled;

(2) The host-based firewall must be enabled ~~if the workstation is removed from the state network;~~

(3) The operating system must be configured to receive automated updates;

(4) The system must be configured to enforce password complexity standards on accounts;

(5) Application software should only be installed if there is an expectation that it will be used for state business purposes. Application software not in use should be uninstalled;

(6) All application software must have security updates applied as defined by patch management standards and be of a vendor supported version;

(7) Web browsers settings should be selected or disabled as appropriate to increase security and limit vulnerability to intrusion;

(7)(8) CIS Level 1 Controls should be maintained on all state managed workstations, where technically feasible;

(8)(9) Shared login accounts are prohibited unless approved in advance and configured by IT. Shared login accounts are only acceptable if approved through the policy exception process and alternate mechanisms or access layers exist to ensure the ability to individually identify personnel accessing non-public information;

(9)(10) Shared login accounts are forbidden on multi-user systems where the manipulation and storage of CONFIDENTIAL or RESTRICTED information takes place;

(10)(11) Users need to lock their desktops when not in use. The system must automatically lock a workstation after 5 minutes of inactivity;

(11)(12) Users are required to store all CONFIDENTIAL or RESTRICTED information on IT managed servers, and not the local hard drive of the computer. Local storage may only be used for temporary purposes when the data stored is not sensitive, and where loss of the information will not have any detrimental impact on the state;

(12)(13) All workstations must ~~shall~~ be re-imaged with standard load images prior to re-assignment; and

(14) Equipment scheduled for disposal or recycling must be cleansed following agency media disposal guidelines.

Sec. 4. Original sections 8-303, 8-304 and 8-504 are repealed.

Sec. 5. The following section is outright repealed: Section 8-505.

Sec. 6. This proposal takes effect when approved by the commission.

Attachment IV-E-1-d

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Proposal 29. Amend GIS data standards.

RECOMMENDED ACTION: Approve Proposal 29.

BACKGROUND: The proposal includes the following provisions:

Section 1 adopts a new standard for lidar by reference to the most recent version of the USGS standard.

Section 2 amends the street centerlines standard to reference the most recent version of the NENA standard.

Section 3 amends the address points standard to reference the most recent version of the NENA standard.

RECOMMENDED BY: GIS Council
Technical Panel

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

**Proposal 29
Final**

A PROPOSAL relating to the GIS data; to amend sections 3-203, 3-205, and 3-206; and to repeal the original sections.

Section 1. Section 3-203 is replaced in its entirety with the following:

3-203. Lidar standard.

The commission adopts by reference the most recent version of the Lidar Base Specification (LBS) standards released by the U.S. Geological Survey (USGS) [<https://www.usgs.gov/ngp-standards-and-specifications/lidar-base-specification-online>] for elevation acquisition using lidar.

Sec. 2. Section 3-205 is amended to read:

3-205. Street centerlines.

(1) The commission adopts by reference the most recent version of sections 2, 3, and 3.1 of the NENA Standard for NG9-1-1 GIS Data Model released by the National Emergency Number Association [<https://www.nena.org/page/ng911gisdatamodel>] ~~(National Emergency Number Association, NENA STA-006.1 2018, June 16, 2018,~~
~~<https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-006-ng9-1-1-gis-dat.pdf>~~) for GIS data that consists of street centerlines.

(2) The following are optional additional attributes for street centerlines:

From Road Level	FromLevel	O	P	1
To Road Level	ToLevel	O	P	1

FromLevel: Specifies the 'elevation' of a segment FROM node (start point). This

field does not require actual elevation in terms of real-world measurements. The value is only used to determine whether a turn is allowed from one street to a street that intersects it in a 2-dimensional space, similar to floors in a building. Nodes at the lowest level would be assigned 0, with overlapping nodes representing additional level(s)/overpass(es) will be assigned the next sequential integer value accordingly.

ToLevel: Specifies the 'elevation' of a segment TO node (end point). This field does not require actual elevation in terms of real-world measurements. The value is only used to determine whether a turn is allowed from one street to a street that intersects it in a 2-dimensional space, similar to floors in a building. Nodes at the lowest level would be assigned 0, with overlapping nodes representing additional level(s)/overpass(es) will be assigned the next sequential integer value accordingly.

Sec. 3. Section 3-206 is amended to read:

3-206. Address points.

The commission adopts by reference the most recent version of sections 2, 3, and 3.2 of the NENA Standard for NG9-1-1 GIS Data Model released by the National Emergency Number Association [https://www.nena.org/page/ng911gisdatamodel] ~~(National Emergency Number Association, NENA STA-006.1-2018, June 16, 2018, https://nrtc.nebraska.gov/standards/pdf/3-206_pages_from_nena_sta-006-ng9-1-1_gis-dat.pdf)~~ for GIS data that consists of address points.

Sec. 4. Original sections 3-203, 3-205, and 3-206 are repealed.

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

Attachment IV-E-2

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Enterprise projects.

RECOMMENDED ACTIONS: (1) Close the following enterprise project: Centrex Replacement, Office of the CIO.

(2) Designate the following project as an enterprise project: New Budget Management and Request System, Dept. of Administrative Services, State Budget Division.

BACKGROUND: The commission is responsible for designating certain information technology projects as “enterprise projects.” With that designation, the responsible agency is then required to coordinate with the Technical Panel to have periodic updates on the progress of the project. The commission has adopted a policy for the designation of enterprise projects (Section 1-206).

The Technical Panel makes recommendations to the commission on the designation and closure of enterprise projects.

(1) At their meeting on April 12, 2022, the panel recommended closure of the Centrex Replacement project. The project was successfully completed.

(2) At their meeting on August 9, 2022, the panel recommended designating the New Budget Management and Request System project by the Dept. of Administrative Services, State Budget Division as an enterprise project.

LINKS: [Section 1-206](#). Enterprise projects.

RECOMMENDED BY: Technical Panel

Projects Status Dashboard









October 2022

Enterprise Projects - Current









Agency/Entity	Project	NITC Designated
Nebraska Council of Regions	Nebraska Regional Interoperability Network	03/15/2010
Office of the CIO	Centrex Replacement	07/12/2018
Department of Health and Human Services	iServe Nebraska	11/12/2020
Department of Transportation	Financial Systems Modernization Project	07/08/2021
Nebraska Public Employees Retirement Systems	OPS Retirement Plan Management Transfer	11/04/2021

Note: Status is self-reported by the agency

Project Storyboard: Nebraska Regional Interoperability Network (NRIN)

Project Manager	Krogman, Sue	Status Report Date	10/4/22	Project Dates			Status Report Indicators		
Project Type	Major Project	Status	Approved		Start	Finish	Overall		
Stage	Build	Progress	Started	Plan	10/1/10	8/31/23	Schedule		
Total Estimated Cost	\$12,500,000.00	Estimate to Complete	83.24%	Baseline	10/1/10	8/31/23	Scope		
Actual Cost To Date	\$10,405,204.00			Days Late	0	0	Cost and Effort		
Project Description				Key Accomplishments					
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.				Fiber has been installed from Hartington to the Center Dispatch and on to O’Neill Dispatch					
Status Report Update				Upcoming Activities					
UPDATE FOR OCTOBER 2022 – Fiber has been installed from Hartington to the Center Dispatch and on to O’Neill Dispatch. This will be a considerable help to that area where microwave is just not feasible because of the lack of usable towers and the long distance between. The Amelia tower is almost complete and the installation from Burwell to Amelia to O’Neill can be finished.				The Amelia tower is almost complete and the installation from Burwell to Amelia to O’Neill can be finished.					
Issues by Priority		Risks by Priority		Current Issues					
<div></div>		<div></div>		No matching records were found					

Project Storyboard: Centrex Conversion

Project Manager		Weekly, Andy	Status Report Date	1/5/22	Project Dates			Status Report Indicators		
Project Type			Status	Approved		Start	Finish	Overall		
Stage		Launch	Progress	Completed	Plan	10/10/17	01/04/22	Schedule		
Total Estimated Cost		\$2,800,000.00	Estimate to Complete	100%	Baseline	10/10/17	12/31/22	Scope		
Actual Cost To Date		\$933,481.12			Days Late	0	0	Cost and Effort		
Project Description					Key Accomplishments					
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.					Between December 3 and January 4, here is the progress; Ported 113 numbers Ported and Reserved 459 numbers Ported 88 Soft Phones Disconnected 5 Windstream numbers Disconnected 1 CenturyLink/Lumens numbers					
Status Report Update					Upcoming Activities					
It was a busy month for Allo and the OCIO Voice Team. The numbers as of January 4... 10,546 lines have been removed from Windstream and CenturyLink (Lumens). 666 lines in the month of December! Ported 113 numbers Port and Reserve 459 numbers Ported 88 Soft Phones Disconnected 5 Windstream numbers Disconnected 1 CenturyLink/Lumens numbers 10,000 lines were in the RFP to be taken off of the Centrex contracts from Windstream and CenturyLink territory. We have surpassed those numbers on this project. In parallel with this project, over 1000 softphones have been deployed using the same resources assigned to this project.					I recommend closing the project for Enterprise Reporting and begin the clean-up efforts.					
Issues by Priority		Risks by Priority		Current Issues						
<div></div>		<div></div>		No matching records were found						

Project Storyboard: iServe Nebraska

Project Manager		Agarwal, Ankush		Status Report Date		9/21/22		Project Dates			Status Report Indicators			
Project Type		Major Project		Status		Approved			Start	Finish	Overall			
Stage		Design		Progress		Started		Plan	4/6/20	12/30/22	Schedule			
Total Estimated Cost		\$33,524,476.00		Estimate to Complete		93.13%		Baseline	4/6/20	4/30/22	Scope			
Actual Cost To Date		\$31,220,094.00						Days Late	244	244	Cost and Effort			
Project Description								Key Accomplishments						
<p>The Nebraska Department of Health and Human Services (DHHS) has embarked on the iServe Nebraska Program to improve access, outcomes, cost, accountability and quality of DHHS services through an integrated, consumer-centric model of practice, across all programs. DHHS intends the iServe Nebraska Program to be adaptive and incrementally deliver new business capabilities, enabling the state to move from a siloed and program-based business model, to an integrated service delivery model that is family and person-centered, focused on improving the overall health and well-being of all family members.</p>								<p>Ongoing Production Support for Launch 1 (L1). Completed Minor Prod Release 1.5, including fix from 1.4. Finalized and Socialized Program and Solution Roadmaps. Ongoing development and refactoring continues for Launch 2. iServe Bridge project is ongoing, PI-0 is complete and PI-1 is in progress. Benefit Discovery re-work is near completion. IBEEM Planning has commenced. Continued coordination with CMS and FNS on IAPD-U approval.</p>						
Status Report Update								Upcoming Activities						
<p>Work continues for upcoming iServe minor and major releases. Multiple minor releases have been incrementally deployed since Launch 1 (April 2022). Incremental delivery to Prod will continue with upcoming minor releases.</p>								<p>Continue iServe Launch 1 Production Support, as needed. Complete Testing, Prod Deployment of Releases 1.6 and 1.7. Complete estimation of refactoring work to finalize Launch 2 date. Continue iServe Bridge Project PI-1 development work. Obtain approval and/or answer questions on I-APD(U) from CMS and FNS. Continue IBEEM Planning work activities.</p>						
Issues by Priority				Risks by Priority				Current Issues						
<div></div>				<div></div>				No matching records were found						

Project Storyboard: NDOT Financial System Modernization

Project Manager		Lusero, Cody	Status Report Date	10/12/22	Project Dates			Status Report Indicators		
Project Type		Major Project	Status	Approved		Start	Finish	Overall		
Stage		Design	Progress	Started	Plan	4/11/22	6/28/24	Schedule		
Total Estimated Cost		\$5,945,871.00	Estimate to Complete	0.64%	Baseline	4/11/22	6/28/24	Scope		
Actual Cost To Date		\$37,984.60			Days Late	0	0	Cost and Effort		

Project Description		Key Accomplishments			
275056 - NDOT Financial System Modernization		Task 1.1 - Governance Team Meetings - DAS is creating committees and held initial User Committee to plan future meeting formats. Task 1.4 - TFE Development - NDOT system is in Production and in use, shutting down use of Mainframe RFE system. - Modifications made to more easily integrate with E1 cost screens being developed by DAS/OCIO. Task 1.6 - Transfer GL Functionality - GL gaps re-opened and reviewed again with NDOT, DAS and OCIO resources to identify new options in an attempt to keep project schedule intact. - Team was able to work through issues and solution new General Ledger which eliminates custom development by DAS/OCIO team. - NDOT database tables in E1 are being replicated to NDOT database which was a key component to GL solution and continued NDOT reporting. Task 1.7 - Transfer JV Functionality - NDOT nightly cost distribution solutioning has begun identifying tasks and resources who will be involved. User stories being built. - DAS/OCIO has given multiple demos to NDOT, continue development work on JV header and description screens. - NDOT is testing screens completed including Batch Management.			

Status Report Update		Upcoming Activities			
E1 Governance teams are being identified and meetings have begun. NDOT work on financial edit system is complete in terms of what is required for E1 integrations including edit logic updates. DAS/OCIO is close to completing the integration call and response to this system which is integral to our solution. General Ledger solution has been chosen and will fit inside already defined phase 1 project schedule. Solution will include a combination of E1 out of box general ledger functionality with a reporting solution built by NDOT in their data warehouse. DAS/OCIO continues to build and refine Journal Voucher screens which are being shown to NDOT resources through demo meetings. NDOT resources will begin testing these screens and closing out user stories. Journal Voucher is the key item in terms of us staying on schedule.		Task 1.4 - TFE Development - Begin work on nightly distribution which will involved edit validations being run against all cost records. Task 1.6 - Transfer GL Functionality - NDOT complete reporting queries to summarize GL data. - NDOT complete creation of combined cost table view which pulls together both mainframe and E1 cost records. - Extract GL information from E1 system and load to NDOT Data Warehouse for comparison reporting. Task 1.7 - Transfer JV Functionality - Continue refinement on JV header, description and detailed processes in E1. - Begin work on NDOT nightly cost distribution edit validations, PFS and B&R cost distributions. - DAS/OCIO will establish meetings to continue user role discussions and demos of JV system. Task 1.8 - Phase 2 Work Plan - Identify key resources for Phase 2 Implementation. - Create Work Plan Draft for Phase 2.			

Project Storyboard: NDOT Financial System Modernization









Issues by Priority

Risks by Priority

1

Current Risks						More Risks...
Risk	Probability	Impact	Priority	Status	Target Resolution	Owner
Resource Allocation	!	✖	!	Open		Lusero, Cody

Project Storyboard: OPS Retirement Plan Management Transfer

Project Manager		Deshpande, Jaydeep	Status Report Date	10/5/22	Project Dates			Status Report Indicators		
Project Type		Major Project	Status	Approved		Start	Finish	Overall		
Stage		Requirements	Progress	Started	Plan	10/1/21	8/31/24	Schedule		
Total Estimated Cost		\$4,200,000.00	Estimate to Complete		Baseline	10/1/21	8/31/24	Scope		
Actual Cost To Date					Days Late	0	0	Cost and Effort		
Project Description					Key Accomplishments					
NPERS OPS (Omaha Public School) project - data and document migration from the OPS environment to NPRIS and OnBase.										
Status Report Update					Upcoming Activities					
<div>1. RFP Development update:<div>a. Response sent for 1st of questions from vendors on September 16th</div><div>b. Response sent for the 2nd set of questions from vendors on September 30th</div><div>i. Response included notifying vendors on restrictions on access to data for consultants, data obfuscation and data migration requirements.</div></div> <div>2. Procurement Timeline:<div>a. Proposal Opening is on October 19th</div><div>b. Proposal Evaluation completion by NPERS November 10th</div><div>c. Vendor interviews will be in the week of November 14th</div><div>d. Intent to Award will be done on november 28th</div><div>e. Final contract negotiations completed by December 22nd</div><div>f. Implementation project start on January 9th</div></div>										
Issues by Priority		Risks by Priority		Current Issues						
<div></div>		<div></div>		No matching records were found						

Attachment IV-E-3

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Recommendations on Technology Investments for the 2023-2025 Biennium.

RECOMMENDED ACTION: Approve the draft report.

BACKGROUND: Neb. Rev. Stat. § 86-516(8) provides that the commission shall: “By November 15 of each even-numbered year, make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel ...”

This year four projects were submitted by agencies as part of the biennial budget process. Each project was reviewed and scored by three individual reviewers assigned by the Technical Panel. The submitting agencies were then given the opportunity to submit a written response to the reviewer scores and comments. Finally, the projects were reviewed by the Technical Panel at their meeting on October 21, 2022. The Technical Panel provided their review comments and made recommendations for prioritization of each project.

A draft report was prepared for the commission’s approval. The final approved report will be submitted to the Governor and Legislature by November 15, 2022.

LINKS: [Full text](#) of the project proposals.

[Section 1-202](#). Project reviews; information technology projects submitted as part of the state biennial budget process.

RECOMMENDED BY: Technical Panel

November 15, 2022

Report to the Governor & Legislature

Recommendations on Technology
Investments for the 2023-2025 Biennium



Nebraska Information
Technology Commission

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Nebraska Information Technology Commission
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Project #	Agency	Project Title	
09-01	SECRETARY OF STATE	Business Services Filing System	4
46-01	DEPT OF CORRECTIONAL SERVICES	Electronic Health Records	10
46-02	DEPT OF CORRECTIONAL SERVICES	Radio System Upgrade	15
65-01	DEPT OF ADMINISTRATIVE SERVICES; STATE BUDGET DIVISION	New Budget Management and Request System	19

Introduction

This report contains the Nebraska Information Technology Commission's recommendations on technology investments for the 2023-2025 biennium. It is submitted pursuant to the commission's statutory responsibility to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel ..." NEB. REV. STAT. § 86-516(8).

This report contains the following sections:

- **Section 1** is a prioritized list of projects.
- **Section 2** includes the summary sheets for each of the projects.

A copy of this report and the full text of all of the project proposals are posted at: <https://nitc.nebraska.gov/commission/reports/reports.html>. The project review process is described in detail in NITC § 1-202.

SECTION 1: NITC Recommendations - Project Prioritization

Category	Description
Mandate	Required by law, regulation, or other authority.
Tier 1	Highly Recommended. Mission critical project for the agency or the state.
Tier 2	Recommended. Project with high strategic importance for the agency or the state.
Tier 3	Other. Project with strategic importance for the agency or the state; but, in general, has an overall lower priority than the Tier 1 and Tier 2 projects.
Insufficient Information	Insufficient information to make a recommendation.

Project #	Agency	Project Title	FY2024	FY2025	Total Project Cost †
Mandate					
None					
Tier 1					
09-01	SECRETARY OF STATE	Business Services Filing System		\$2,500,000	\$3,000,000
46-01	DEPT OF CORRECTIONAL SERVICES	Electronic Health Records	\$750,000	\$750,000	\$1,500,000
46-02	DEPT OF CORRECTIONAL SERVICES	Radio System Upgrade	\$3,324,469	\$2,576,523	\$5,900,992
Tier 2					
65-01*	DEPT OF ADMINISTRATIVE SERVICES; STATE BUDGET DIVISION	New Budget Management and Request System	\$210,230	\$172,308	\$1,209,574
Tier 3					
None					
Insufficient Information					
None					

† Total project cost may include prior year or future planned costs in addition to biennial budget request amounts.

* Not submitted as an agency budget issue. Project will not require additional appropriations.

SECTION 2: Project Summary Sheets

Summary Sheet Contents:

- Summary of Request
- Financial Summary
- Proposal Score
- Reviewer Comments
- Technical Panel Comments
- Advisory Council Comments
- NITC Comments
- Agency Response to Reviewer Comments (if any)

09 - Secretary of State

Proposal Name: Business Services Filing System

NITC ID: 09-01



PROJECT DETAILS

Project Contact: Chad Sump

Agency: 09 - Secretary of State

NITC Tier Alignment:

Agency Priority: 1

SUMMARY OF REQUEST

The purpose of this project is to replace the existing custom software utilized by the Business Services Division of the Secretary of State's Office. Our existing software has been unreliable and the vendor for this software has not been able to remedy the issues or provide adequate maintenance and support for the software. We are seeking to replace the software to prevent future outages and to enhance and increase the reliability and functionality of the system.

The business services software is used to file and generate large number of essential documents within the Secretary of State's Office. These documents include all Nebraska business filings and filings made pursuant to the Uniform Commercial Code (UCC), revised article 9. The software is also utilized to file federal and state tax liens, farm product security filings, trade names and trademarks, and a variety of other statutory filings. The software interacts with an image library and online filing services.

FINANCIAL SUMMARY

Expenditures

	Fiscal Year 2024	Fiscal Year 2025	Total
Contractual Services:	\$0.00	\$2,500,000.00	\$2,500,000.00
Telecommunications:	\$0.00	\$0.00	\$0.00
Training:	\$0.00	\$0.00	\$0.00
Project Costs:	\$0.00	\$0.00	\$0.00
Capital Expenditures:	\$0.00	\$0.00	\$0.00
Total Estimated Costs:	\$0.00	\$2,500,000.00	\$2,500,000.00

Comments: \$500,000 of Contractual Services requested in future years.

Funding

	Fiscal Year 2024	Fiscal Year 2025	Total
General Fund:	\$0.00	\$0.00	\$0.00
Cash Fund:	\$0.00	\$2,500,000.00	\$2,500,000.00
Federal Fund:	\$0.00	\$0.00	\$0.00
Revolving Fund:	\$0.00	\$0.00	\$0.00
Other Fund:	\$0.00	\$0.00	\$0.00
Total Requested Funding:	\$0.00	\$2,500,000.00	\$2,500,000.00

Comments: \$500,000 of Cash Funds requested in future years.

PROPOSAL SCORE

		Reviewer 1	Reviewer 2	Reviewer 3	Average
Average	Goals, Objectives and Projected Outcomes (15)	15	15	12	14
	Project Justification / Business Case (25)	25	25	23	24
	Technical Impact (20)	20	20	19	20
	Preliminary Plan for Implementation (10)	10	10	8	9
	Risk Assessment (10)	8	9	9	9
	Financial Analysis and Budget (20)	20	20	10	17
	Total Score	98	99	81	93

REVIEWER COMMENTS

Goals, Objectives and Projected Outcomes

Review Score = 15/15

Strengths: Modern interface with built in efficiencies for users and support staff

09 - Secretary of State

Proposal Name: Business Services Filing System

NITC ID: 09-01



Weaknessess:

Project Justification / Business Case

Review Score = 25/25

Strengths: Remove reliance on unreliable vendor that has not maintained updated code or made enhancements.

Enhanced reliability

Utilized by other states

Weaknessess:

Technical Impact

Review Score = 20/20

Strengths: Easy migration path and easily supported by OCIO and Sec of State

Weaknessess:

Preliminary Plan for Implementation

Review Score = 10/10

Strengths: Well done plan with realistic timelines and expectations.

Weaknessess:

Risk Assessment

Review Score = 8/10

Strengths:

Weaknessess: Possible dependency on existing vendor to transition existing data.

Financial Analysis and Budget

Review Score = 20/20

Strengths: Business case is strong and realistic

Weaknessess:

Goals, Objectives and Projected Outcomes

Review Score = 15/15

Strengths: Very clear and concise goals, objectives, and projected outcomes.

Weaknessess: None

Project Justification / Business Case

Review Score = 25/25

Strengths: Good, clear justification. Ongoing un-resolved issues with the current system and recurring system failures a valid justifications for moving in a different direction for certain.

Weaknessess: None

Technical Impact

Review Score = 20/20

Strengths: Clear and concise. Use of a proven solution, that is utilized in other states as well, is a good direction.

Cloud based solution makes solid technical sense.

Weaknessess: None

Preliminary Plan for Implementation

Review Score = 10/10

Strengths: Although aggressive, it's well thought out and clearly planned.

Weaknessess: None

Risk Assessment

Review Score = 9/10

Strengths: Good

Weaknessess: Taking a cloud solution approach invites some additional risk over traditional implementations.

Financial Analysis and Budget

Review Score = 20/20

Strengths: Clear and concise.

Weaknessess:

Goals, Objectives and Projected Outcomes

Review Score = 12/15

Strengths: The objective to replace the existing system is clear and the selection criteria aligns with expected outcomes. The project is included in the agency's comprehensive IT plan and leverages some existing resources.

Weaknessess: The measurement criteria of system testing and monitoring deliverables is vague and doesn't account for reconciling desired outcomes with actual user experience.

Project Justification / Business Case

Review Score = 23/25

Strengths: The business case includes clear examples of existing system deficiencies. In addition to the hardship and inconvenience system outages create for State employees and online users, the potential economic impact is considerable. A "love it or list it" analysis was performed and adequate time has been committed to migrate to a new system.

09 - Secretary of State

Proposal Name: Business Services Filing System

NITC ID: 09-01



Weaknesses: There is limited information about any gap analysis beyond a comparison of the existing system shortcomings and clear benefits of the new proposed system. This work may well have been done, however, there is no specific mention to verify what is an important consideration in any system replacement process.

Technical Impact

Review Score = 19/20

Strengths: The proposed system will provide the benefit of moving to a modern, supportable infrastructure, allow for role-based access, extricate the State from unsupported software, and provide an enhanced environment for online users without the need for a separate portal. The proposed environment is specifically designed and optimized for the desired use.

Weaknesses: No assurance that the updated UI meets accessibility standards. While this is presumably addressed as part of the procurement process, it is an important enough consideration to be included in a summary of the technology impact.

Preliminary Plan for Implementation

Review Score = 8/10

Strengths: An ostensibly experienced project team that includes IT and subject matter experts. Clear set of project milestones, and plans for staff training, knowledge transfer and ongoing system support.

Weaknesses: There is no mention of data migration and verification plans. It seems unlikely that there will be no ingestion of existing data and such plans would ordinarily be documented in any preliminary implementation plan.

Risk Assessment

Review Score = 9/10

Strengths: Project risks have been considered and standard risk mitigation strategies are documented.

Weaknesses: Data migration risk is mentioned but specific related mitigation steps are not.

Financial Analysis and Budget

Review Score = 10/20

Strengths: Apparent total project cost is listed.

Weaknesses: There is insufficient information to render any analysis. This is not to say that the authors haven't carefully considered the budget but this reviewer can't make any analysis with what little is provided.

TECHNICAL PANEL COMMENTS

Does the project: (a) create efficiencies; and/or (b) reduce or eliminate risks? Yes

Is the proposed technology appropriate for the project? Yes

Can the technical elements be accomplished within the proposed timeframe and budget? Yes

Tier Recommendation: Tier 1

Comments:

NITC COMMENTS

AGENCY RESPONSE (OPTIONAL)

See attachment (09-01 agency response.pdf) for agency response.

Goals, Objectives, and Projected Outcomes

Weaknesses Identified:

The measurement criteria of system testing and monitoring deliverables is vague and doesn't account for reconciling desired outcomes with actual user experience.

Response:

We recognize that significant system testing will be necessary to determine that all functional requirements of the system have been met. We anticipate that this will be an iterative process which will be ongoing during the implementation of the system. We also anticipate that the vendor will perform load and stress tests to determine that the system is reliable and performing efficiently. Because we know of other states that use this system, have spoken to those states, and have received favorable information regarding the system and vendor, we are confident that the system has a favorable user experience. We have also seen several demonstrations of the system, so we have seen the user experience firsthand. With respect to monitoring deliverables, we will have a detailed schedule with deliverables and payment milestones based upon acceptance of specified deliverables. Payment will not be made until the specified deliverable has been met.

Project Justification/ Business Case

Weaknesses Identified:

There is limited information about any gap analysis beyond a comparison of the existing system shortcomings and clear benefits of the new proposed system. This work may well have been done, however, there is no specific mention to verify what is an important consideration in any system replacement process.

Response:

We have a general sense of some of the areas where further gap analysis will be needed. We have discussed internally possible policy changes/legislation that may be necessary to further assist our office in processing filings and assist with system implementation. We are unable to complete this work until we have the vendor committed to the project and we begin in-depth gap analysis with the vendor. We feel it would be best to do this work in conjunction with the vendor so that we have the level of specificity and detail needed to make decisions regarding gaps that are discovered and determine the best path forward for any gaps identified.

Technical Impact:

Weakness Identified:

No assurance that the updated UI meets accessibility standards. While this is presumably addressed as part of the procurement process, it is an important enough consideration to be included in a summary of the technology impact.

Response:

We anticipate purchasing this system through a state contract which includes as part of the terms and conditions compliance with NITC standards including the accessibility policy to ensure accessibility and usability by individuals with disabilities.

Preliminary Plan for Implementation

Weakness Identified:

There is no mention of data migration and verification plans. It seems unlikely that there will be no ingestion of existing data and such plans would ordinarily be documented in any preliminary implementation plan.

Response:

Yes, data conversion will be a significant aspect of this project and is listed as a major milestone/deliverable in section 10 of the project proposal.

Risk Assessment

Weakness Identified:

Data migration risk is mentioned but specific related mitigation steps are not.

Response:

We will be continually auditing data migration as it occurs through the project. We will work with the vendor to develop a data conversion plan and mapping fields to the new system. The data will be available in the vendor's test application then staff will verify data, filings, and documents before moving into production.

Financial Analysis and Budget

Weakness Identified:

There is insufficient information to render any analysis. This is not to say that the authors haven't carefully considered the budget but this reviewer can't make any analysis with what little is provided.

Response:

The total amount requested, approximately \$3 million (over two bienniums), is based upon an estimate from the vendor we are considering for this project. As a predominately cash funded agency, our budget request reflects cash funds we believe will be available to use for this project over the next two bienniums. We believe our budget request is reasonable and justified based upon the estimate we have received.

46 - Department of Correctional Services

Proposal Name: Electronic Health Records

NITC ID: 46-01



PROJECT DETAILS

Project Contact: Chad Cole

Agency: 46 - Department of Correctional Services

NITC Tier Alignment:

Agency Priority:

SUMMARY OF REQUEST

A fully integrated Electronic Health Records (EHR) system is a strategic priority of the Nebraska Department of Corrections (NDCS) in order to provide the highest quality health care to the inmates in our custody in an efficient manner at a reasonable cost to the Nebraska taxpayer. It will provide a secure and complete Health Services Case File, which allows for improved tracking and continuity of care in the areas of Medical Services, Behavioral Health Services, Substance Use and Sex Offender Services and Programming, and Social Work Services from intake through reentry back into the community.

Implementation of the EHR system began in 2019. However, shortly thereafter progress on the project was affected by COVID. Efforts are now well underway. To date, the main components completed are the Behavioral Health Intake Appraisal and the Update Appraisal, with the implementation of the Medical Intake Appraisal to occur soon. The behavioral Health Intake Appraisal and the Update Appraisal create the foundation upon which further E-HR components will be built. The Diagnosis Codes have also been completed. These efforts include 17 Behavioral Health screens, as well as Diagnosis and Document screens, which are shared by both Behavioral Health and Medical. Nine medical modules are either already in production or staged to go live in the next 60 days. Additionally, there are two Discharge Review screens included as part of the E-HR project already in production and two ADA related screens soon to be moved into production, and diagnosis codes have been updated to match current community standards.

The Nebraska Department of Corrections, working with OCIO staff, is building a tailored and efficient EHR in-house that will expand on functionality currently in the existing Nebraska Inmate Case Management System (NICaMS) to include Health Services appointment/resource scheduling and electronic charting for key clinical data and medical history. The system will be utilized by NDCS staff, telemedicine staff, and external providers who have contracted services with the department. Security protocols will be put in place to ensure confidentiality to an inmate's private health data.

FINANCIAL SUMMARY

Expenditures

	Fiscal Year 2024	Fiscal Year 2025	Total
Contractual Services:	\$750,000.00	\$750,000.00	\$1,500,000.00
Telecommunications:	\$0.00	\$0.00	\$0.00
Training:	\$0.00	\$0.00	\$0.00
Project Costs:	\$0.00	\$0.00	\$0.00
Capital Expenditures:	\$0.00	\$0.00	\$0.00
Total Estimated Costs:	\$750,000.00	\$750,000.00	\$1,500,000.00

Comments:

Funding

	Fiscal Year 2024	Fiscal Year 2025	Total
General Fund:	\$750,000.00	\$750,000.00	\$1,500,000.00
Cash Fund:	\$0.00	\$0.00	\$0.00
Federal Fund:	\$0.00	\$0.00	\$0.00
Revolving Fund:	\$0.00	\$0.00	\$0.00
Other Fund:	\$0.00	\$0.00	\$0.00
Total Requested Funding:	\$750,000.00	\$750,000.00	\$1,500,000.00

Comments:

PROPOSAL SCORE

46 - Department of Correctional Services

Proposal Name: Electronic Health Records

NITC ID: 46-01



		Reviewer 1	Reviewer 2	Reviewer 3	Average
Average	Goals, Objectives and Projected Outcomes (15)	12	10	13	12
	Project Justification / Business Case (25)	16	12	23	17
	Technical Impact (20)	13	10	20	14
	Preliminary Plan for Implementation (10)	5	5	8	6
	Risk Assessment (10)	6	5	9	7
	Financial Analysis and Budget (20)	13	10	20	14
	Total Score	65	52	93	70

REVIEWER COMMENTS

Goals, Objectives and Projected Outcomes

Review Score = 12/15

Strengths: The project has merit and will achieve many of the objectives outlined for improvement.

Weaknesses: I want to see clinical assessments happen quicker than 30 days of intake. For many people with severe medical conditions, a lot can happen in 30 days.

Project Justification / Business Case

Review Score = 16/25

Strengths: The project will reduce paper documentation and medical error.

Weaknesses: Developing the product in-house will significantly increase the project timeline and risk, as in-house developers get tasked with other duties and responsibilities. How will the code be scanned for deficiencies and security flaws?

Technical Impact

Review Score = 13/20

Strengths: I have no doubt that NDCS has collected massive amounts of data and would want to continue to leverage that data.

Weaknesses: A modular and incremental approach to building the application will stretch the project timeline and increase risk.

Major hospitals are able to replace EHRs with COTS solutions with little to no patient care interruption. I don't see why NDCS can't. Any more COTS solutions are customizable to the environment they are being deployed in. By using an incremental approach and developing code in-house, what NDCS will save on COTS, they will pay for in time to complete the project. By developing a custom in-house solution, NDCS is also creating issues with long-term code supportability and future incompatibility, along with losing interoperability with local area hospitals for sharing and transferring of patient information as patients move in and out of local hospitals for care.

Preliminary Plan for Implementation

Review Score = 5/10

Strengths: I like the model NDCS uses in working with the OCIO staff.

Weaknesses: No funds or time is allocated for staff and end-user training on new software. This will significantly increase the risk of medical error due to untrained staff on new software being deployed.

Risk Assessment

Review Score = 6/10

Strengths: Some risks were identified, however not complete.

Weaknesses: The downtime was a reason for not using a COTS solution, but what are the expected downtimes of in-house development? Not allocating any funds or time to staff training on new applications or modules deployed is a risk that should have been identified.

Financial Analysis and Budget

Review Score = 13/20

Strengths:

Weaknesses: This is going to take longer and cost more than NDCS thinks it will.

Goals, Objectives and Projected Outcomes

Review Score = 10/15

Strengths: The goals of the project are clear within the context of the agency's service mission.

Weaknesses: The goals of the project within an IT context are vague. There are no project measurement and assessment methods defined.

Project Justification / Business Case

Review Score = 12/25

Strengths: The advantages of electronic record keeping are enumerated.

46 - Department of Correctional Services

Proposal Name: Electronic Health Records

NITC ID: 46-01



Weaknessess: It is unclear whether there is an existing system or if this is a migration from exclusively paper-based documentation. Regardless, in-house development of an EHR system is a considerable undertaking given the highly consequential nature of the data. Further, the information security considerations are paramount given the highly private nature of the data. The sole basis for the decision to build in-house is cost which leaves the reviewer to consider whether the true costs of in-house development have been adequately measured.

Technical Impact

Review Score = 10/20

Strengths: Some consideration of the integration of the desired system with existing data sources is apparent.

Weaknessess: The technical elements of the existing environment and integration with a new system is not clear beyond the earnest desire to provide better service. The technical issues section is not completed. While the technical elements section does include some mention of issues, it does not enumerate technical issues with any degree of specificity.

Preliminary Plan for Implementation

Review Score = 5/10

Strengths: Closely working with the OCIO is a project strength.

Weaknessess: Key members of the project team are listed as TBD include subject matter experts. Only one section is completed.

Risk Assessment

Review Score = 5/10

Strengths: Some general project risks are enumerated.

Weaknessess: There are no risk mitigation strategies defined.

Financial Analysis and Budget

Review Score = 10/20

Strengths: The costs listed are distributed within the categories in credible overall proportions.

Weaknessess: The cost estimates are "high level" and it is not possible for the reviewer to make any meaningful assessment of the proposed budget. At the risk of putting too fine a point on this, the provided budget bears a striking resemblance to a tabular representation of "napkin math."

Goals, Objectives and Projected Outcomes

Review Score = 13/15

Strengths: Strong goal and sensible goals. Progress seems well in hand considering externalities over the prior biennium.

Weaknessess: Would prefer a richer description of measuring goal achievement as well as relationship to broader IT plan.

Project Justification / Business Case

Review Score = 23/25

Strengths: Reduction in paperwork requirements and improvement to patient outcomes through improved accuracy / clarity is clear and relative savings compare to commercial systems would seem to make sense.

Weaknessess: No discussion of relevant state or federal mandates.

Technical Impact

Review Score = 20/20

Strengths: In house development permits leveraging of existing investments. Incremental approach seems to promise reduced downtime and improved integration

Weaknessess: None Noted.

Preliminary Plan for Implementation

Review Score = 8/10

Strengths: Agile approach is a smart choice for development with strong needs for SME feedback and assessment.

Weaknessess: The agile iteration time feels surprisingly long, over twice as long as I would usually expect, but this may be necessary for an agile approach to fit well into the overall culture of this environment?

Risk Assessment

Review Score = 9/10

Strengths: Realistic risk assessment and understanding of potential confounds.

Weaknessess: Would like to see more detail on identified risks/potential responses to external interface issues.

Financial Analysis and Budget

Review Score = 20/20

Strengths:

Weaknessess:

TECHNICAL PANEL COMMENTS

46 - Department of Correctional Services

Proposal Name: Electronic Health Records

NITC ID: 46-01



Does the project: (a) create efficiencies; and/or (b) reduce or eliminate risks? Yes

Is the proposed technology appropriate for the project? No

Can the technical elements be accomplished within the proposed timeframe and budget? No

Tier Recommendation: Tier 1

Comments: The Technical Panel strongly recommends that the agency reconsider the decision to build their own system rather than purchasing a commercially available system. The panel recognizes that this recommendation may require an increased budget amount over that in the current proposal.

NITC COMMENTS

AGENCY RESPONSE (OPTIONAL)

See attachment (46-01 agency response.pdf) for agency response.

NEBRASKA

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DEPT OF CORRECTIONAL SERVICES



Pete Ricketts, Governor

DATE: November 2, 2022

TO: Nebraska Information Technology Commission

FROM: Robin Spindler, Deputy Director 

RE: NDCS Review Response

NDCS has received and reviewed the comments and recommendations submitted by the Nebraska Information Technology Commission (NITC) concerning information services projects submitted as part of the 2023 – 2025 Biennium Budget Request. This includes the proposal for an electronic health records system.

NDCS plans to attend the Commission meeting on November 10 to provide any additional information or clarification. If there is a particular time you would like us to schedule that appearance, please let us know.

C: Diane Sabatka-Rine, Interim Director

Diane Sabatka-Rine, Interim Director
Department of Correctional Services

P.O. Box 94661 Lincoln, NE 68509-4661
Phone: 402-471-2654 Fax: 402-479-5623

corrections.nebraska.gov

46 - Department of Correctional Services

Proposal Name: Radio System Upgrade

NITC ID: 46-02



PROJECT DETAILS

Project Contact: Chad Cole

Agency: 46 - Department of Correctional Services

NITC Tier Alignment:

Agency Priority:

SUMMARY OF REQUEST

The Nebraska Department of Correctional Services has a need to update end-of-life radio equipment consisting of end-user radios, tower radios, and control radio consoles. This upgrade is vital to maintaining communications to keep inmates and staff safe while providing the ability to integrate with state/local first responders. Upgrading the radios and system infrastructure will allow standardized management and support that will provide long term upgradeability over the life of the equipment. This allows the department to align the radio communications strategy with the state radio system bringing the department up to the state standards of public safety radio communications.

The Nebraska Department of Correctional Services along with OCIO Public Safety Communications have worked together to integrate the new radio system with the state radio system giving centralized access for radios to work across the state at the respective facilities that can provide public safety radio access. The radio solution will be utilized by custody staff and maintenance staff who work within the facilities and are responsible for inmate transport outside of the facilities.

FINANCIAL SUMMARY

	Expenditures		
	Fiscal Year 2024	Fiscal Year 2025	Total
Contractual Services:	\$0.00	\$0.00	\$0.00
Telecommunications:	\$0.00	\$0.00	\$0.00
Training:	\$0.00	\$0.00	\$0.00
Project Costs:	\$0.00	\$0.00	\$0.00
Capital Expenditures:	\$3,324,469.00	\$2,576,523.00	\$5,900,992.00
Total Estimated Costs:	\$3,324,469.00	\$2,576,523.00	\$5,900,992.00

Comments:

	Funding		
	Fiscal Year 2024	Fiscal Year 2025	Total
General Fund:	\$3,324,469.00	\$2,576,523.00	\$5,900,992.00
Cash Fund:	\$0.00	\$0.00	\$0.00
Federal Fund:	\$0.00	\$0.00	\$0.00
Revolving Fund:	\$0.00	\$0.00	\$0.00
Other Fund:	\$0.00	\$0.00	\$0.00
Total Requested Funding:	\$3,324,469.00	\$2,576,523.00	\$5,900,992.00

Comments:

PROPOSAL SCORE

		Reviewer 1	Reviewer 2	Reviewer 3	Average
Average	Goals, Objectives and Projected Outcomes (15)	15	9	13	12
	Project Justification / Business Case (25)	25	25	23	24
	Technical Impact (20)	20	15	18	18
	Preliminary Plan for Implementation (10)	8	5	9	7
	Risk Assessment (10)	8	10	10	9
	Financial Analysis and Budget (20)	18	18	18	18
	Total Score	94	82	91	89

REVIEWER COMMENTS

46 - Department of Correctional Services

Proposal Name: Radio System Upgrade

NITC ID: 46-02



Goals, Objectives and Projected Outcomes

Review Score = 15/15

Strengths: Aligning with, and connecting to, the Statewide Radio System using Project 25 digital standards provides clear and encrypted internal communications, and interoperability with first responders.

Communications are available across the state utilizing the Statewide Radio System. This is required when transporting inmates.

Leveraging the current system buildout reduces overall costs compared to building a completely new system. Additional capabilities of recording talkgroups using current State equipment ensures compliance with records retention laws.

Weaknesses:

Project Justification / Business Case

Review Score = 25/25

Strengths: Considering the age of the current system, a complete replacement of the equipment is necessary.

Adding encryption capable radios increases officer safety and security.

Utilizing the system logging recorder allows centralized management and distribution of information across facilities using the Statewide Radio System

Weaknesses:

Technical Impact

Review Score = 20/20

Strengths: The proposal leverages currently built-out and available repeaters and technology. It adds encryption and availability of multiple talk paths for increased security. The Statewide Radio System was built with sufficient capacity to provide the infrastructure necessary without detrimental impact to current users. The proposal includes state of the art standards based equipment.

Weaknesses:

Preliminary Plan for Implementation

Review Score = 8/10

Strengths: Timelines are reasonable and achievable. Implementation of similar projects has been successful.

Weaknesses: Site preparation and remediation can be expensive and increase installation time. Equipment lead times could delay final implementation.

Risk Assessment

Review Score = 8/10

Strengths: Current radio system is not supported by manufacturer.

Proposed system uses frequencies dedicated to Public Safety reducing the amount of interference. The higher frequency was chosen because of the increased ability to penetrate buildings.

Training has been included as a part of the implementation.

Cutover to the new system will utilize parallel operations between new and old increasing officer safety during that period and allowing a fall back position.

Weaknesses: Training should include a second session a few months after implementation.

Financial Analysis and Budget

Review Score = 18/20

Strengths: Pricing is based on current State Contract #14534 OC with Motorola

Weaknesses: Increases to prices due to inflation may cause budget constraints.

Goals, Objectives and Projected Outcomes

Review Score = 9/15

Strengths: Goals are clear. Projected benefits are clear.

Weaknesses: Incomplete responses.

Measurement and assessment methods that will verify the project outcomes would be helpful.

Project Justification / Business Case

Review Score = 25/25

Strengths:

Weaknesses:

Technical Impact

Review Score = 15/20

Strengths: Benefits of the standardization is clearly stated.

Weaknesses: Incomplete responses.

Narratives of technical elements of the project and their impact would be helpful.

Preliminary Plan for Implementation

Review Score = 5/10

Strengths:

Weaknesses: Incomplete responses for training and staff development, ongoing support.

Include number of facilities that will be involved and timeframe for project completion aligning requested budget for each FY would be helpful.

Risk Assessment

Review Score = 10/10

46 - Department of Correctional Services

Proposal Name: Radio System Upgrade

NITC ID: 46-02



Strengths:

Weaknesses:

Financial Analysis and Budget

Review Score = 18/20

Strengths:

Weaknesses: Unclear provided pricing (\$5,700,219), its relationship with the total funding request FY24 (\$3,324,469) and FY(2,576,523). An explanation would be helpful.

Goals, Objectives and Projected Outcomes

Review Score = 13/15

Strengths:

Weaknesses:

Project Justification / Business Case

Review Score = 23/25

Strengths:

Weaknesses:

Technical Impact

Review Score = 18/20

Strengths: Aligns with statewide radio system

Weaknesses:

Preliminary Plan for Implementation

Review Score = 9/10

Strengths:

Weaknesses:

Risk Assessment

Review Score = 10/10

Strengths: Importance of a modern system that has parts/replacements available is important compared to current legacy solution.

Weaknesses:

Financial Analysis and Budget

Review Score = 18/20

Strengths:

Weaknesses:

TECHNICAL PANEL COMMENTS

Does the project: (a) create efficiencies; and/or (b) reduce or eliminate risks? Yes

Is the proposed technology appropriate for the project? Yes

Can the technical elements be accomplished within the proposed timeframe and budget? Yes

Tier Recommendation: Tier 1

Comments:

NITC COMMENTS

AGENCY RESPONSE (OPTIONAL)

See attachment (46-02 agency response.pdf) for agency response.

NEBRASKA

Good Life. Great Mission.


DEPT OF CORRECTIONAL SERVICES



Pete Ricketts, Governor

DATE: November 2, 2022

TO: Nebraska Information Technology Commission

FROM: Robin Spindler, Deputy Director 

RE: NDCS Review Response

NDCS has received and reviewed the comments and recommendations submitted by the Nebraska Information Technology Commission (NITC) concerning information services projects submitted as part of the 2023 – 2025 Biennium Budget Request. This includes the proposal for an electronic health records system.

NDCS plans to attend the Commission meeting on November 10 to provide any additional information or clarification. If there is a particular time you would like us to schedule that appearance, please let us know.

C: Diane Sabatka-Rine, Interim Director

Diane Sabatka-Rine, Interim Director
Department of Correctional Services

P.O. Box 94661 Lincoln, NE 68509-4661
Phone: 402-471-2654 Fax: 402-479-5623

corrections.nebraska.gov

65 - Administrative Services

Proposal Name: New Budget Management and Request System

NITC ID: 65-01



PROJECT DETAILS

Project Contact: Lee Will

Agency: 65 - Administrative Services

NITC Tier Alignment:

Agency Priority: 1

SUMMARY OF REQUEST

The State of Nebraska has used the Nebraska Budget Request and Reporting System (NBRRS) for the past 15 years. The State Budget Division seeks to take advantage of improvements in software and methodologies in budget management and request submission process of agencies, boards, and commissions of the state.

After reviewing seven different products, we have chosen Anaplan as the best product for a new budget management and request system. Additionally, the division has chosen Allitix as the company to implement the needed configuration of Anaplan.

The Division believes this new system will allow for the management of the state's budget from beginning to end.

FINANCIAL SUMMARY

Expenditures

	Fiscal Year 2024	Fiscal Year 2025	Total
Contractual Services:	\$0.00	\$0.00	\$0.00
Telecommunications:	\$0.00	\$0.00	\$0.00
Training:	\$8,000.00	\$0.00	\$8,000.00
Project Costs:	\$0.00	\$0.00	\$0.00
Capital Expenditures:	\$202,230.00	\$172,308.00	\$374,538.00
Total Estimated Costs:	\$210,230.00	\$172,308.00	\$382,538.00

Comments: \$654,650 from FY22 Appr/Reappr

Funding

	Fiscal Year 2024	Fiscal Year 2025	Total
General Fund:	\$210,230.00	\$172,308.00	\$382,538.00
Cash Fund:	\$0.00	\$0.00	\$0.00
Federal Fund:	\$0.00	\$0.00	\$0.00
Revolving Fund:	\$0.00	\$0.00	\$0.00
Other Fund:	\$0.00	\$0.00	\$0.00
Total Requested Funding:	\$210,230.00	\$172,308.00	\$382,538.00

Comments: \$654,650 from FY22 Appr/Reappr

PROPOSAL SCORE

		Reviewer 1	Reviewer 2	Reviewer 3	Average
Average	Goals, Objectives and Projected Outcomes (15)	15	15	15	15
	Project Justification / Business Case (25)	25	25	25	25
	Technical Impact (20)	20	20	20	20
	Preliminary Plan for Implementation (10)	10	10	10	10
	Risk Assessment (10)	10	10	10	10
	Financial Analysis and Budget (20)	18	20	20	19
	Total Score	98	100	100	99

REVIEWER COMMENTS

Goals, Objectives and Projected Outcomes

Review Score = 15/15

Strengths: Modern system eliminates manual work and reduces errors

Enhanced customer experience

65 - Administrative Services

Proposal Name: New Budget Management and Request System

NITC ID: 65-01



Weaknessess:

Project Justification / Business Case

Review Score = 25/25

Strengths: Eliminates manual process that is subject to human error.

Weaknessess:

Technical Impact

Review Score = 20/20

Strengths: Minimal technical impact and risk.

Eliminates legacy systems

Weaknessess:

Preliminary Plan for Implementation

Review Score = 10/10

Strengths: Realistic timelines and steps

Weaknessess:

Risk Assessment

Review Score = 10/10

Strengths: Low risk. Current system will remain in place until new system has been fully tested.

Weaknessess:

Financial Analysis and Budget

Review Score = 18/20

Strengths:

Weaknessess: Actual costs to be determined

Goals, Objectives and Projected Outcomes

Review Score = 15/15

Strengths: All points are clearly addressed and comprehensible.

Weaknessess:

Project Justification / Business Case

Review Score = 25/25

Strengths: All points are clearly addressed with convincing Justifications.

Weaknessess:

Technical Impact

Review Score = 20/20

Strengths: All points are clearly addressed including features come with the cloud based solution.

Weaknessess:

Preliminary Plan for Implementation

Review Score = 10/10

Strengths: All points are clearly addressed. A well thought out preliminary implementation plan.

Weaknessess:

Risk Assessment

Review Score = 10/10

Strengths: All points are clearly addressed.

Weaknessess:

Financial Analysis and Budget

Review Score = 20/20

Strengths: The proposal indicated no additional appropriation would be required.

Weaknessess:

Goals, Objectives and Projected Outcomes

Review Score = 15/15

Strengths:

Weaknessess:

Project Justification / Business Case

Review Score = 25/25

Strengths:

Weaknessess:

Technical Impact

Review Score = 20/20

Strengths:

Weaknessess:

Preliminary Plan for Implementation

Review Score = 10/10

Strengths:

65 - Administrative Services

Proposal Name: New Budget Management and Request System

NITC ID: 65-01



Weaknessess:

Risk Assessment

Review Score = 10/10

Strengths:

Weaknessess:

Financial Analysis and Budget

Review Score = 20/20

Strengths:

Weaknessess:

TECHNICAL PANEL COMMENTS

Does the project: (a) create efficiencies; and/or (b) reduce or eliminate risks? Yes

Is the proposed technology appropriate for the project? Yes

Can the technical elements be accomplished within the proposed timeframe and budget? Yes

Tier Recommendation: Tier 2

Comments:

NITC COMMENTS

AGENCY RESPONSE (OPTIONAL)

Attachment V

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Approval of the revised Statewide Technology Plan

RECOMMENDED ACTION: Approve the draft plan.

BACKGROUND: The commission is responsible for developing a statewide technology plan. Historically, the commission has updated the entire plan every two years and updated the action items, if necessary, in the interim years.

The commission has adopted six strategic initiatives to provide the basic structure of the plan with related action items under each initiative. The six initiatives are: State Government IT Strategy, Nebraska Spatial Data Infrastructure, Network Nebraska, Digital Education, Rural Broadband and Community IT Development, and eHealth.

Staff and the advisory councils have prepared a draft revised plan for the commission's approval.

RECOMMENDED BY: Staff



Nebraska Information
Technology Commission

Transforming Government, Education, Healthcare & Communities

Nebraska's Statewide Technology Plan



November 10, 2022

Nebraska Information Technology Commission

www.nitc.nebraska.gov

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Foreword

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

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

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

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

Ed Toner
Chief Information Officer
Chair, Nebraska Information Technology Commission





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NITC

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Executive Summary

The Nebraska Information Technology Commission (NITC) was established by the Legislature in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state. The NITC is chaired by Ed Toner, Chief Information Officer for the State of Nebraska. Commissioners are appointed by the Governor and represent elementary and secondary education, postsecondary education, communities, the Governor, and the general public. Much of the NITC's work is conducted through its advisory groups: the Technical Panel, the Community Council, the Education Council, the State Government Council, the eHealth Council, and the GIS Council.

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

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

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

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

NITC Overview

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

Mission

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

Vision, Goals

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

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

Core Values

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

Advisory Groups

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

- The **Technical Panel** provides analysis and recommendations to the NITC on technical issues.
- The **Community Council** is composed of representatives from business and economic development, work force development, public libraries and local government. It was formed to identify, prioritize, and coordinate user needs with respect to community information technology.
- The **Education Council** is a 16-member advisory committee composed of representatives from K-12 and postsecondary education. It identifies, prioritizes, and coordinates user needs with respect to educational information technology.
- The **eHealth Council** is composed of representatives from public health, consumers, state and federal government, employers, eHealth initiative groups, health care providers, and other resource providers. It was formed to identify, prioritize, and coordinate issues within the realm of healthcare and technology.
- The **GIS Council** is a 27 member council, composed of representatives from federal, state, local government, education and private individuals and associations. They coordinate statewide GIS initiatives.

Strategic Initiatives

In order to advance its vision and goals, the NITC, with input from its advisory groups and other stakeholders, has identified six key initiatives which promote the effective use of technology within the State of Nebraska, as well as education, economic development, local government, and health care. By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives.

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

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



A brief description of each strategic initiative follows:

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

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 6,000 HIE users and 7,000 Prescription Drug Monitoring Program users. NeHII includes data on millions of individuals.

State Government IT Strategy

Overview

Objective:

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

Description:

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

Top Priorities:

- Security
- Consolidation
- Availability

Strengths/Assets:

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

Challenges/Issues:

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

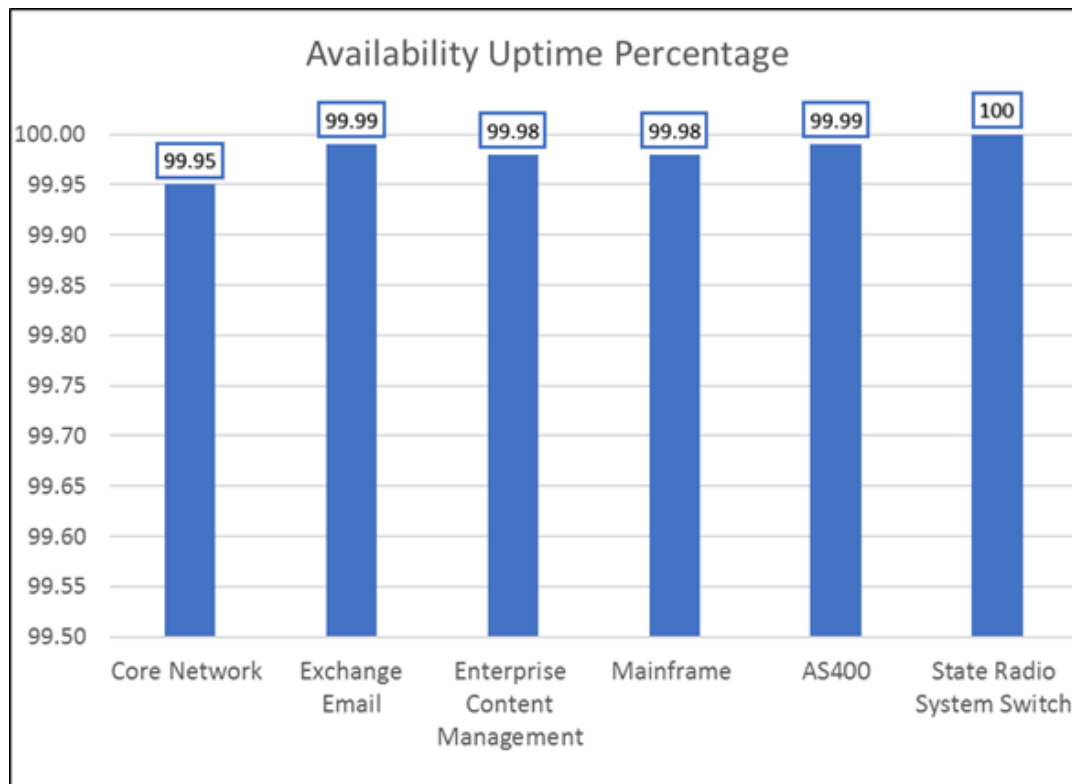
Collaborators:

- OCIO, Technical Panel, and State Agencies

Recent Accomplishments:

- Operationalized IT project governance.
- Completed migration to consolidated data centers.
- Completed migration to a new enterprise network.

Metrics



Action Items

1. Action: Same Sign-on

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2023

Funding: None

Targets/Deliverables:

1.1 Implement same sign-on for certain enterprise applications.

2. Action: IT Cost Efficiencies

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2023

Funding: None

Targets/Deliverables:

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

3. Action: Consolidate on STN Domain

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: December 2023

Funding: None

Targets/Deliverables:

3.1 Implement phased migration.

4. Action: Application Process Maturation (DevOps)

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: June 2023

Funding: None

Targets/Deliverables:

4.1 Create a DevOps team.

4.2 Consolidate DBA team.

5. Action: SharePoint/Teams (Cloud)

Lead: OCIO

Participating Entities: OCIO; State Agencies

Timeframe: June 2023

Funding: None

Targets/Deliverables:

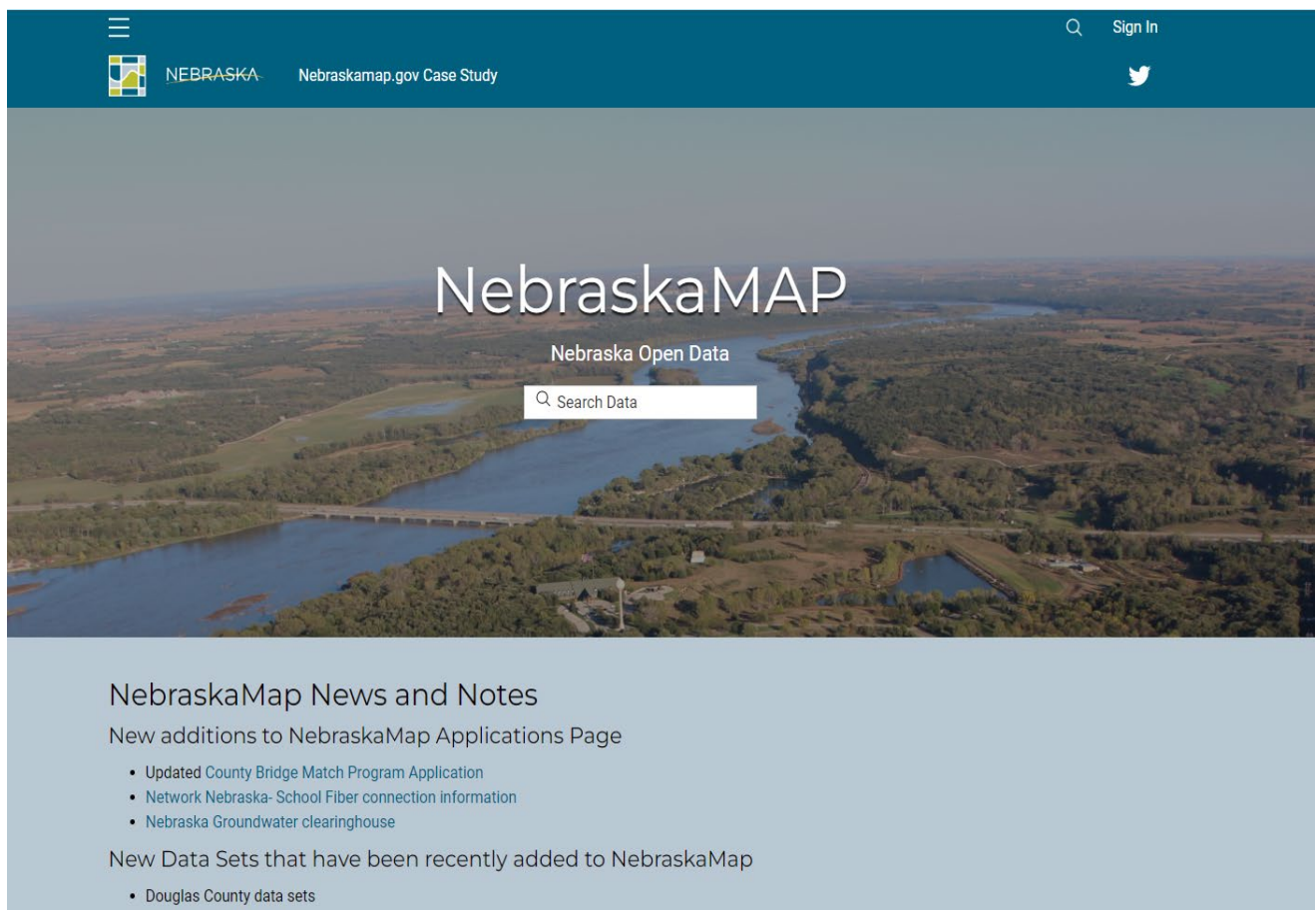
5.1 Complete pilot testing with agencies.

5.2 Complete enterprise deployment.

NebraskaMap- State Geospatial Clearinghouse

NebraskaMap is the official state Geospatial Clearinghouse and hosts authoritative spatial data. Since the roll out of the current version of NebraskaMAP in 2019, the site has increased the user-base by ~900%, from 200 views per day to 2,000 views per day. Data is easily searchable and can be downloaded in a variety of formats and web services.

Public facing GIS mapping applications from state agencies are available on NebraskaMap. This allows the user to search one place for data and applications instead of multiple sites.



Nebraska Spatial Data Infrastructure (NESDI)

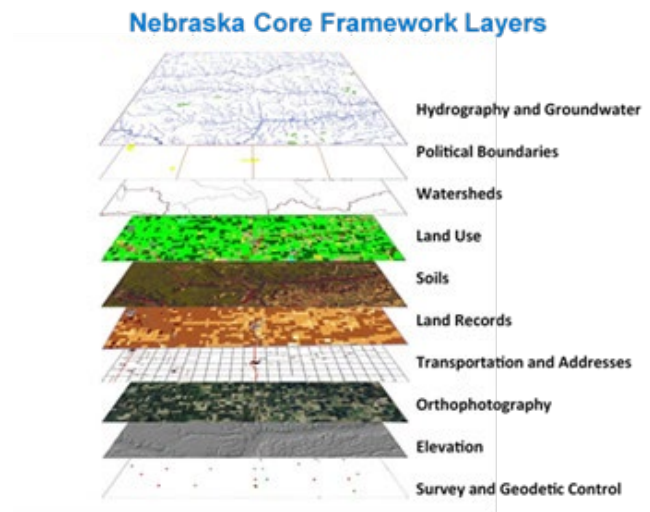
Overview

Objectives:

- To develop and foster an environment and infrastructure that optimizes the efficient use of geospatial technology, data, and services to address a wide variety of business and governmental challenges within the state. Geospatial technologies and data will be delivered in a way that supports policy and decision making at all levels of government to enhance the economy, safety, environment and quality of life for Nebraskans.
- Facilitate the creation, maintenance, analysis and publishing of quality and authoritative data and information systems. Priority layers include: imagery, elevation, street centerlines, point addressing, and land records.
- Formalize data stewardship and encourage data sharing and provide widespread access to data and services through NebraskaMAP.gov.
- Facilitate technical assistance and education outreach opportunities for furthering the adoption of the NESDI and geospatial applications.
- Achieve sustainable and efficient allocation of resources to support the implementation and wise governance of GIS services and geospatial data.

Collaborators:

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



Strengths/Assets:

- The GIS Council, established by Neb. Rev. Stat. § 86-572(2), provides an existing governance structure, representing a broad range of stakeholder interests.
- Standards which are foundational to the NESDI are in place and being reviewed as needed.
- Existing State GIS Coordinator and three GIS staff member in CIO GIS Shared Services Office.
- Several strong state agency and local county-based GIS programs.
- Several NESDI data layers and applications exist with coverage in priority areas or statewide.
- Strategic Plan completed in 2012 with stakeholder input from across the state. It serves as roadmap to setting statewide priorities and was used to develop the NESDI strategic initiative and action items. It was revisited in 2017/2018.
- Nebraska Enterprise Geographic Information Systems (NEGIS) Infrastructure. This is an enterprise platform for both hardware and data (vector and raster formats).
- NebraskaMap is the state geospatial clearinghouse.

Challenges/Issues:

- Insufficient legislative or executive sponsor to support GIS Council efforts.
- Original Strategic Plan is 10 years old and the revisit is approximately 5 years old.
- Resources are inadequate to develop and maintain all framework layers.
- Funding to make NEGIS sustainable.
- Getting agencies to utilize GIS or utilize it more effectively.
- Outreach and training needs of GIS and geospatial data use and applications are broad given the level of different users.
- Lack of understanding of standards and no authoritative enforcement to data stewards not following standards. Local counties do not see NITC standards as a requirement but a guideline.
- Future Datum change and its implications and educating the effects of the datum change on GIS users.

Recent Accomplishments:

- Standards updated for elevation.
- Lidar collections (Quality Level (QL) 2) for entire state.
- NebraskaMap is consuming local authoritative data to help make it a true spatial data clearinghouse for Nebraska.
- State entered into an Enterprise License Agreement, as the next step of growth of Enterprise GIS in Nebraska State Government.

Recommendations:

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

Metrics

The metrics below are used to evaluate the State's status of the NESDI and overall GIS program.

Status of Nebraska Based on NSGIC Coordination Criteria

The National States Geographic Information Council (NSGIC) has published several geospatial maturity assessments. These are self-reported assessments from the state GIS Coordinators. They are done every other year since 2017. The most recent one is posted below. A more detailed information about state coordination and maturity can be found here: <https://www.nsgic.org/geospatial-maturity-assessment>



Action Items

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

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

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

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

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

Lead: State GIS Coordinator, GIS Council Representatives

Participating Entities: GIS Council, NESDI Data Stewards

Timeframe: Ongoing

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

Target/Deliverables:

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

2. Action: Geodetic and Survey Control Inventory and Assessment

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

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

to communicate and provide access to relevant data to users and stakeholders.

By 2025 there will be a new datum model to represent the shape of the earth. The GIS Council has been briefed by the Nebraska State Surveyor on the implications of the new datum. This endeavor was pushed out to 2025 at the federal level.

Lead: State GIS Coordinator, GIS Council Representatives

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

Timeframe: 2022-25

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

Target/Deliverables:

1. Prepare and Educate agencies and partners about the datum changes and its implications
2. Work with Professional Surveyors Group for training on implementing new datum

3. Action: Nebraska Statewide Elevation Program

Surface elevation databases are critically important for a wide range of GIS applications and as such have been determined to be a priority database for development by the GIS Council. Elevation databases have been determined by the Federal Geographic Data Committee (FGDC) to be a Framework Database because of their use by a wide cross-section of geospatial data users. LiDAR (Light Detection and Ranging) is a proven remote sensing technology that enables the efficient collection of highly accurate surface elevation data for large geographic areas. This dataset serves as a basis for other derived geospatial data products in its relationship to the overall NESDI. More importantly, this data set strengthens the geodetic control context for the development of other framework layers. Pursuant to the objectives outlined in the Strategic Plan, the GIS Council is responsible for identifying and coordinating the use of digital elevation LiDAR technologies to develop enhanced surface elevation data for Nebraska. This involves:

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

Lead: State GIS Coordinator, GIS Council Elevation Working Group

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

Timeframe: Data Collection is Ongoing, based on federal needs

Funding: Future funds are required for meeting objectives outlined in the business plan, such as cost sharing for state specific deliverables.

Target/Deliverables:

1. Update LiDAR Collection web map application once all QL2 data has been received.

4. Action: Nebraska Statewide Imagery Program

Imagery is a required spatial data framework layer needed for a multitude of mapping applications. It is important that imagery is accurate, current, and easily accessible to end users. This dataset serves as a basis for other derived geospatial data products in its relationship to the overall Nebraska Spatial Data Infrastructure (NESDI). The acquisition of updated, orthorectified (corrected for camera tilt and the slope of the earth's surface) imagery requires a significant public investment, but if done collaboratively, on a regular periodic basis, these costs can be minimized and shared across a broad user community. It is expected that this effort will be largely integrated into the larger Nebraska GIS Strategic Planning process. Efforts will be made to learn from, and build on, existing collaborative imagery acquisition efforts such as the Nebraska-Iowa Regional Orthoimagery Consortium (NIROC) and the USDA Farm Services Agency – National Aerial Imagery Program (NAIP). This initiative will:

- Research and develop recommendations for standards, policies, infrastructure, and funding to support collaborative efforts by state, local and federal agencies to periodically acquire updated orthoimagery.
- Identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.
- Research new cost models (subscription based) from various vendors in order to maximize the state's investment.

Lead: State GIS Coordinator, GIS Council Imagery Working Group

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

Timeframe: Ongoing

Funding: Future funds are required for meeting objectives outlined in the business plan and to look at alternatives because of the uncertainties beyond 2020 with the current NAIP program

Target/Deliverables:

1. Continue to work with federal partners to make sure NAIP program remains viable.
2. Identify partners and possible funding, to upgrade imagery collection or subscribe to an imagery collection subscription that has a higher resolution than the NAIP imagery should the NAIP program significantly change after 2020.

5. Action: Street Centerline-Address Database

This action item will:

- Develop and maintain a statewide seamless street centerline and address referencing system used for various transportation, public safety (ie, NexGEN 911), economic development and other related applications.
- Initiate assessment of current street centerline data.
- Implement a data model and workflow guidelines for QA/QC of existing and future maintenance of street centerline data.
- Develop data model for address points and use of data in relationship to street centerlines and other NESDI framework layers.
- Further develop partnership efforts that support NexGEN 911 or combinations thereof who needs to be involved in the process of using street centerline and address point data

- Research and develop recommendations for standards, policies, infrastructure, and funding to support collaborative efforts by state, local and federal agencies to periodically acquire updated a seamless street centerline-address database.
- Identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.

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

Participating Entities: GIS Council, State Government Council, Nebraska Department of Transportation, Public Service Commission, and the E 9-1-1 community

Timeframe: Ongoing

Funding: To be determined

Target/Deliverables:

1. Public Service Commission to continue to collect and develop a statewide Nebraska Street Centerline Database (NSCD) and Nebraska Address Database (NAD) datasets.
2. Continue to make Nebraska Street Centerline Database (NSCD) and Nebraska Address Database (NAD) datasets available in NebraskaMap in support of NG-911
3. Utilize Nebraska Street Centerline Database (NSCD) and Nebraska Address Database (NAD) datasets to make a statewide geolocator

6. Action: Statewide Land Record Information System

This action item will:

- Develop an integrated statewide land records system capable of providing reliable online access to this critical data, maintaining restricted privacy access as necessary, and supporting a variety of applications by multiple agencies.
- Develop guidelines for a common geodatabase model that can provide public data for use in a multitude of state government applications.
- Implement a geodatabase model to maintain baseline data.
- Work with local governments, state agencies, and the private sector to develop a collaborative plan, standards/guidelines, and the infrastructure necessary to encourage and facilitate the ongoing integration of separately-maintained state, city, and county land records.
- Develop data workflows with local county assessors to obtain parcel (spatial and attribute) data for use in various state government applications.
- Revise the current NITC Land Record Information and Mapping Standards that have been adopted with the goal of enabling the integration of local government land records into a statewide dataset.
- Identify methods and linkages through NebraskaMAP to communicate and provide access to relevant data to users and stakeholders.

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

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

Timeframe: Ongoing

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

Target/Deliverables:

1. Review the current NITC 3-202 Land Record and Information Mapping Standards for standard land record product(s) that will meet the majority of stakeholder requirements and expectations in a cost-effective manner.
2. Continue to work with Department of Revenue to create yearly Statewide Parcel Geodatabase feature class for internal state use.

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

This initiative will:

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

NebraskaMAP started as a metadata portal to inventory and provide linkages to several data sets. Enhancements will involve expanding services to upload, review and share NESDI data either through direct download, REST services, or accessing through web services. This system would also provide conduit to authoritative data sets, linked and shared base maps to reduce data storage costs, and a coordinated security system, including the possibility for limited data access and password protection for specific data sets. The State agencies are developing a statewide GIS Enterprise system in order to conduct daily business operations. This system will also coincide with the interoperability, data sharing, and workflows planned for NebraskaMAP.

Lead: State GIS Coordinator, GIS Council NebraskaMAP Working Group

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

Timeframe: Ongoing

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

Target/Deliverables:

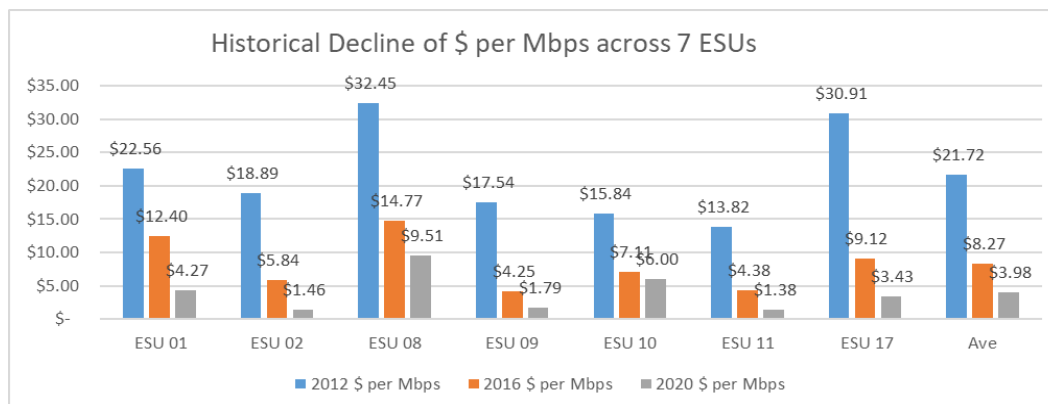
1. Continue to build current NebraskaMAP into a more robust statewide data clearinghouse enterprise platform.

Network Nebraska Aims to Increase Bandwidth and Lower Costs

Network Nebraska began as a statewide network in 2007 with 88 educational entities and has grown to 293 participants in 2022. Over the course of its history, the State Purchasing Bureau has conducted over 20 RFPs for internet and fiber Ethernet circuits, with the objective to “aggregate demand and reduce costs whenever feasible” (N.R.S. 86-5,100). By synchronizing the service term and expirations of state contracts, it means that a “mega-RFP” occurs every four years. Next year, 2023, will be one of those years, with over 250 fiber circuits out for bid.

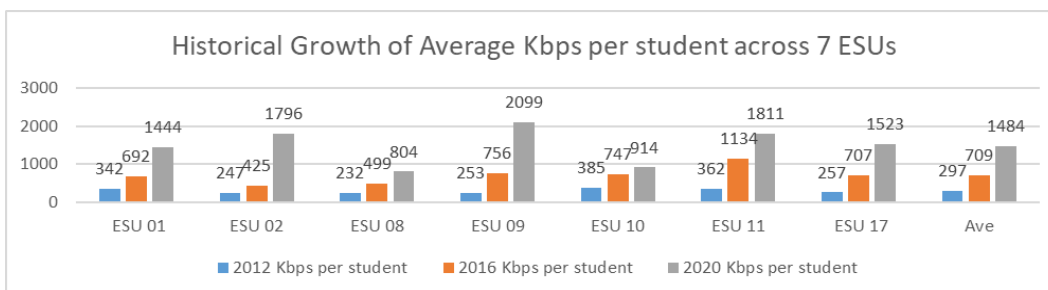
The historic trend lines of Dollars per Megabit (\$ per Mbps) are presented below with a sampling of historical cost data from school districts within Educational Service Units 01 (Wakefield), 02 (Fremont), 08 (Neligh), 09 (Hastings), 10 (Kearney), 11 (Holdrege), and 17 (Ainsworth).

In general, when two or more companies compete for a circuit, the cost decreases dramatically. If more



than one company is required (last mile + middle mile carrier) to connect the school district to Network Nebraska, then the cost is generally higher. As the level of bandwidth increases, the cost per Mbps generally decreases.

As the number of computing devices increases, and as more and more content is digitized and moved to the cloud, the amount of bandwidth needed per student increases. Below is a chart of the historic trend lines related to Kbps per student across the same seven ESUs, showing a doubling or tripling every four years.



More detailed Network Nebraska circuit data from 2019-20 is available at [NebraskaMap](#).

Network Nebraska

Overview

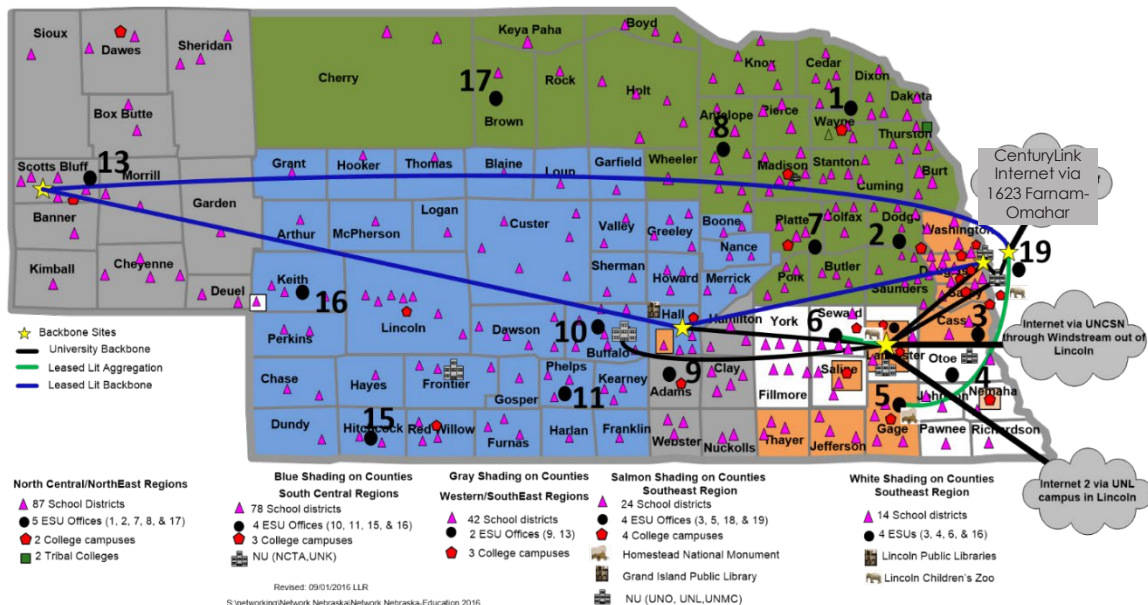
Objective:

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

Description:

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

Network Nebraska - Education 2022



Collaborators:

- Collaborative Aggregation Partnership: Office of the CIO, University of Nebraska, Nebraska Public Media, Public Service Commission, Nebraska Department of Education, Nebraska Information Technology Commission, Network Nebraska Advisory Group.

- Network Nebraska Advisory Group: 8 K-12 members; 8 higher education members
- Educational Service Unit (ESU) Coordinating Council, ESU-Network Operations Committee, ESU-Distance Education Advisory Committee, higher education chief technology officers

Strengths/Assets:

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

Challenges/Issues:

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

Recent Accomplishments:

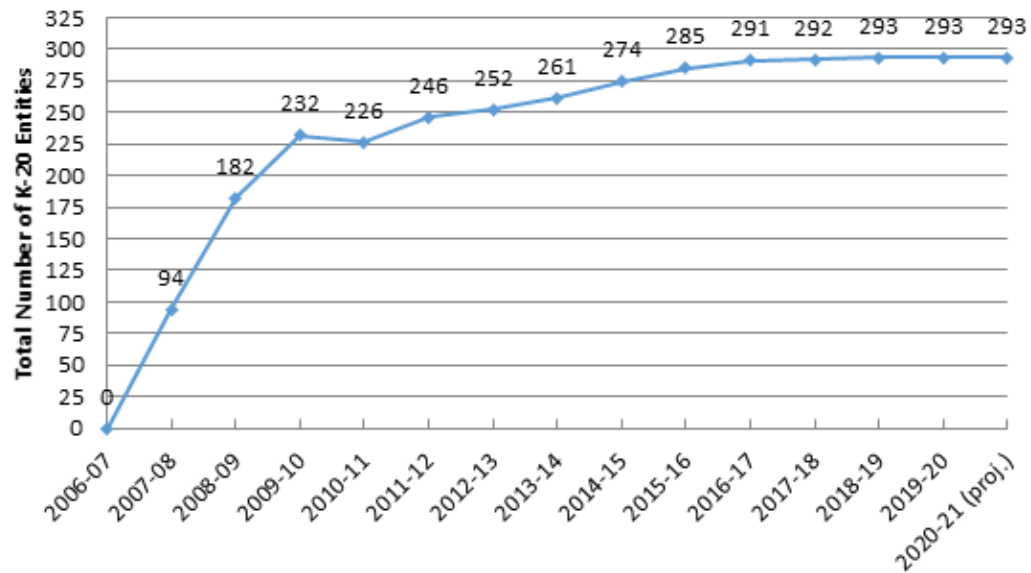
- Maintained public school district participation at 99.6%
- Achieved 100% membership among public and tribal colleges and universities
- Provisioned thousands of Zoom videoconferencing licenses to education entities in the midst of the COVID-19 pandemic response
- Achieved one of the lowest commodity Internet rates in the entire country, made possible through aggregation of demand and statewide bidding
- Achieved 100% retention of voluntary membership, now reaching 292 entities

Recommendations:

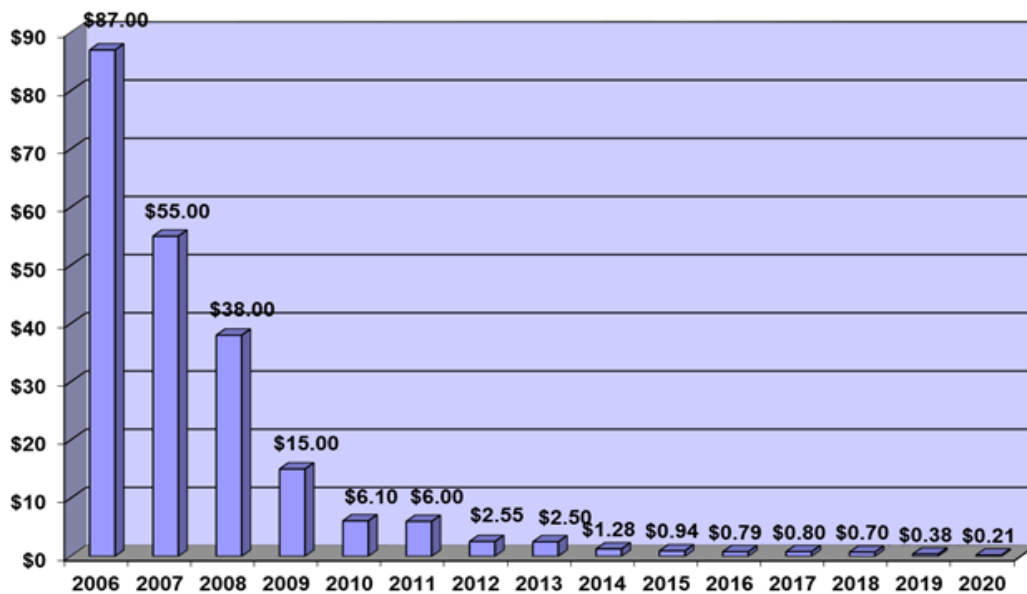
- Continue this initiative.
- Position Network Nebraska to provide services such as network monitoring and management, mitigation of Distributed Denial of Service (DDoS) attacks, statewide 24/7 helpdesk, aggregated invoicing, and coordinated E-rate filing

Metrics

Network Nebraska-Education Membership by Year



Network Nebraska Internet Access Cost (Average \$\$ per Mbps/month)



Action Items

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

Lead: Education Council

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

Timeframe: 2022-24

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

Targets/Deliverables:

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

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

1.2 Evaluate the effectiveness of the current Network Nebraska fee structures and address changes related to the associated business models as related to core functions and additional services.

1.2.1 Measurable: A) NNAG will convene a retreat and present suggested modifications to the Education Council's Network Nebraska task group and to the Chief Information Officer

2. **Action: The Education Council, OCIO/NITC staff, and Network Nebraska support staff will sufficiently and appropriately communicate to, and in support of, current and potential Network Nebraska Participants.**

Lead: Education Council; OCIONITC Staff, Network Nebraska support staff

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

Timeframe: 2022-24

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

Targets/Deliverables:

2.1 Develop and implement a communications strategy.

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

2.2 Conduct a periodic survey of Participants to guide direction and service development.

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

2.3 Develop, publish, and maintain a catalog of Network Nebraska services comprised of services offered directly by Network.

2.3.1 Measurable: Catalog of services is published and updated annually

2.4 Enhance communications regarding change control events affecting Network Nebraska membership.

2.4.1 Measurable: The Network Nebraska Support Team use AlertSense and NN_INFO listserv to communicate change control events to Network Nebraska members.

3. Action: Identify needs and deliver advanced services to Network Nebraska members, including security, cloud computing, and education infrastructure, to meet the growing needs of its membership.

Lead: Education Council; CAP; NNAG; NU-ITS Staff

Participating Entities: ESU-NOC; Higher Education CIOs

Timeframe: 2022-24

Funding: Additional funding and/or resources will be required for this action item out of the Network Nebraska Participation Fee, or from consumption-based billing.

Targets/Deliverables:

3.1 Develop applicable practices and strategies for advanced services to be delivered across Network Nebraska in educational environments and determine how to incorporate them into the Network Nebraska business model.

3.1.1 Measurable: A) Formulation of a Strategy document

3.2. Select and implement additional services for Network Nebraska members.

3.2.1 Measurable: A) Additional services added to Network Nebraska services list or provided by member "centers of excellence" throughout the Network Nebraska framework.

Other Recommended Measurables:

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

Nebraska Public Service Commission approves Special Construction Matching Funds for Libraries and Schools



Nebraska Public Service Commission public meeting

Long before the COVID-19 pandemic confined citizens to their homes for work, school, and telehealth, the Rural Broadband Task Force (RBTF) was hard at work deliberating and making recommendations to improve the broadband environment in rural Nebraska. Created by the Legislature in 2018 (N.R.S. 86-1102), the Nebraska RBTF presented its first seminal report to the Executive Board of the Legislative Council on November 1, 2019. (<https://ruralbroadband.nebraska.gov/reports/index.html>)

Chock full of data about Nebraska, and comparisons with neighboring states, over 20 recommendations were presented by the RBTF, including six that helped address the “Homework Gap” (defined as the inequitable opportunities afforded students with, and without, home internet). One of the six recommendations reads, “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.”

Public comment and RBTF discussions substantiated the role that rural public libraries play in student internet access when away from school. Many villages and towns in rural Nebraska lack advanced telecommunications services to public libraries, whereas nearly all public schools are connected by fiber to Network Nebraska.

The *Special Construction Matching Fund* program was created by the Federal Communications Commission (FCC), for states to incentivize new fiber construction by matching, dollar for dollar, an additional 10% E-rate discount for schools and libraries if a state funding source would contribute the additional 10%. For example, a public library with a 70% E-rate discount could receive an additional 20% in state and federal support, and only have to pay for 10% of the construction costs (instead of 30%) when installing new fiber. “Special

Construction” is defined by the FCC as including: A) Construction of network facilities; B) design and engineering; and C) project management. Nebraska will become the 26th state to be considered eligible for this program: <https://www.usac.org/e-rate/applicant-process/before-you-begin/fiber-summary-overview/additional-discount-to-match-state-tribal-funding-for-special-construction/>

Other states have used their community anchor institutions to act as anchor tenants for new fiber construction in rural areas, allowing telecommunications providers to pick up additional customers along the way.

The Nebraska Public Service Commission (PSC), chaired by Commissioner Mary Ridder, originated docket NUSF-117 to explore the matching fund program and solicit comments from interested stakeholders. The PSC issued the final order approving the program on May 19, 2020. The PSC will make available one million dollars to be allocated over the four years of the program to school and public library applicants approved by both the state and federal programs. Ridder said, “We encourage any libraries and schools that lack a fiber connection to consider participating in this effort as we work to provide broadband to the unserved and underserved in our state.” Applications must be submitted by mid-December, with the PSC issuing notices of approval by mid-January, 2021, and the first projects to be completed by July 1, 2021.

Rod Wagner, Director of the Nebraska Library Commission, stated, “We welcome this matching fund program as a way to improve the connectivity to our rural public libraries and we commend the PSC for creating and funding this program to the benefit of all Nebraskans.”

For more information about the Nebraska Special Construction Matching Fund program, contact Cullen Robbins, PSC Director of Telecommunications & NUSF, Cullen.robbins@nebraska.gov, or 402-471-3101.

Digital Education

Overview

Objective:

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

Description:

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

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

Collaborators:

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

Strengths/Assets:

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

Challenges/Issues:

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

Recent Accomplishments:

- ESU collaborators have developed BlendEd briefing materials and the TLT Learning Group.
- The Nebraska Department of Education has made progress on the Adviser project involving all but four Nebraska school districts.
- The Nebraska Department of Education's Future Ready Nebraska Digital Learning Plan was developed by a statewide committee and a Digital Profile is maintained on every school district.
- NITC Education Council and Community Council have collaborated on the design of several technology solutions that may reduce the Homework Gap and improve digital equity among economically challenged students.
- The Nebraska Library Commission, in partnership with the State Office of the CIO, has assisted the Nebraska Public Service Commission with the development of the Nebraska Special Construction Matching Fund grant program to incentivize new fiber construction for schools and libraries.
- The Nebraska Department of Education and ESU Teaching and Learning with Technology group have launched the Nebraska OER Hub with open education resources for teaching and learning.

Recommendations:

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

Action Items

1. Action: Help insure the success of Nebraska digital education.

Lead: Education Council

Participating Entities: K-12 and Higher Education professional and advisory groups , Nebraska Department of Education, and the Coordinating Commission for Postsecondary Education.

Timeframe: 2022-24

Funding: Additional funding may be required for this action item

Targets/Deliverables:

1.2 Inventory the use of learning technologies in Nebraska K-12 schools and promote the effective practices in the use of those technologies (e.g. flipped classroom, blended learning, learning management systems, OER, fully online instruction, etc....)

1.2.1 Measurable: Flexible learning technologies have been inventories and a report has been written and distributed.

1.3 Make efforts to connect constituencies to improve the state of digital education in Nebraska.

1.3.1 Measurable: Use conferences and other gatherings to encourage human networking.

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

Lead: Education Council

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

Timeframe: 2022-24

Funding: Additional funding may be required for this action item

Targets/Deliverables:

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

2.1.1 Measurable: NITC Education Council members meet regularly with Community Council Broadband Initiative members and other stakeholders.

2.2 Identify opportunities and actions to address equitable access for students when away from school or campus.

2.2.1 Measurables: A) Members of the NITC Education Council will work with the Nebraska Department of Education and the Nebraska Rural Broadband Task Force to explore telecommunications services and technologies to reach unserved and underserved students. B) The Nebraska Special Construction Matching Fund grant program will provide resources for affordable access through Nebraska public libraries.

Other Recommended Measurables:

- Number of K-12 students who have gained home Internet access through Digital Inclusion initiatives
- Number of public libraries that have gained faster Internet access by reaching Network Nebraska, either directly or indirectly

Rural Broadband and Community IT Development

Objective:

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

Description:

Broadband availability, widespread adoption of broadband technologies, and a skilled IT workforce have become requirements for communities wishing to grow their economies. The Covid-19 pandemic underscored the importance of broadband in enabling residents to work at home, participate in online learning and access health services via telehealth. Broadband is also becoming increasingly important for agriculture. Many farmers and ranchers in Nebraska do not have adequate upload speeds to transfer the immense amount of data generated to the cloud.

With federal funding available for broadband deployment and digital equity initiatives, the Community Council will support digital equity and broadband deployment planning efforts.

Strengths/Assets:

State Broadband Programs

- **Nebraska's Rural Broadband Task Force**, created by LB 994 in 2018, brought together stake- holders to learn more about rural broadband and to make recommendations. Those recommendations are providing a framework in which to address the challenges of improving rural broadband. More information on the task force and the 2021 report are available at <https://ruralbroadband.nebraska.gov>.
- **Remote Access Rural Broadband Grant Program**. Nebraska's first broadband grant program, the Remote Access Rural Broadband Grant Program, demonstrated the impact of state broadband grant programs on broadband deployment. The program, which was funded by the CARES Act and administered by the Nebraska Department of Economic Development, provided \$29.5 million in funding for 60 projects which brought broadband to 17,600 households.
- **Nebraska Broadband Bridge Grant Program**. With the support of Governor Ricketts, the Nebraska Legislature established the Nebraska Broadband Bridge grant program by enacting LB 388 in 2021 and appropriated \$20 million a year for two years for the program.

The Nebraska Public Service Commission awarded \$19.2 million in funding to 60 projects to connect 12,660 locations in January and February 2022.

- A second round of funding will be awarded in 2022. LB 1144 which was passed by the Legislature on April 13, 2022 and signed by Governor Ricketts on April 19, 2022, made several modifications to the grant program, including reducing the match requirement to 25% in high cost areas. The application deadline for the 2022 round is July 1, 2022.
- **NUSF.** The Nebraska Universal Service Program administered by the Nebraska Public Service Commission is an essential funding source for supporting broadband service and investments in new broadband infrastructure in rural areas. Broadband projects funded through the Nebraska Universal Service Fund have connected 19,583 households since 2019. The Public Service Commission is taking steps to initiate a reverse auction of \$13 million in NUSF support in 2022. Additionally, the Nebraska Public Service Commission established the E-Rate Special Construction Matching Program in 2020, providing matching funding for 6 public libraries and one public school in the first year of the program.
- The Nebraska Public Service Commission has taken steps to modernize the fund and to improve accountability. Remittances to the Nebraska Universal Service Fund increased from \$32.8 million in 2018 to \$46.8 million in 2020 due to reforms to the residential contribution method. LB 338 improved the accountability of the Nebraska Universal Service Fund by specifying build out requirements of 100 Mbps down and 100 Mbps up and by requiring recipients to conduct and submit speed tests.
- **CARES ACT Funding for Student Connectivity and Devices.** Governor Ricketts, the Nebraska Department of Education, Educational Service Units, and local school districts coordinated federal funding to purchase computing devices, hot spots, and internet enabled devices as well as implement connectivity projects through the Governor's Emergency Education Relief (GEER) and Elementary and Secondary School Emergency Relief (ESSER) fund as part of the CARES Act.

Federal Broadband Funding Opportunities

Funding for broadband projects will be available through several federal funding programs. The Connect Nebraska Working Group, comprised of staff members from the State Budget Office, Governor's Policy Research Office, Nebraska Public Service Commission, and the Nebraska Information Technology Commission/Office of the CIO is coordinating the following federally funded broadband programs

- **American Rescue Plan Act (ARPA) Capital Projects.** Nebraska has been allocated \$128,740,178 in funding for capital projects which directly enable work, education, and health monitoring and address critical needs, including broadband infrastructure projects, digital connectivity projects, and multi-purpose community facility projects. LB 1024 which was passed by the Legislature on April 12, 2022 and signed by Governor Ricketts on April 18, 2022 allocated funding by Congressional District. No more than \$35 million was allocated for multi-purpose community facilities projects in Congressional District 2 which includes Omaha. No less than \$40 million was allocated for projects in Congressional Districts 1 and 3. The Nebraska Department of Economic Development will administer the program, but intends to contract with the Nebraska Public Service Commission to distribute broadband deployment funding through the Nebraska Broadband Bridge Program.
- **Infrastructure Investment and Jobs Act (IIJA) Broadband Equity, Access and Deployment (BEAD) Program.** Nebraska has been allocated at least \$100 million in funding for broadband infrastructure projects. States must submit a 5-year action plan in order to receive implementation funding. The amount of funding allocated to each state will be determined using data from the second iteration of the FCC's new broadband map which will likely be available in the spring of 2023. States must submit a 5-year action plan in order to receive implementation funding.

- **Infrastructure Investment and Jobs Act (IIJA) State Digital Equity Capacity Grant Programs.** Nebraska has been allocated nearly \$600,000 in funding to develop a state digital equity plan. The development of a state digital equity plan is a requirement to receive funding to implement a state digital equity grant program with funding from the IIJA State Digital Equity Capacity Grant Program. Nebraska will be allocated a minimum of \$7.2 million over 5 years. The NITC/Office of the CIO will be administering the planning grant.

Challenges/Issues:

- Broadband is expensive to deploy in rural areas. Although programs such as Nebraska's Rural Broadband Remote Access grant program, the Nebraska Universal Service Fund and the FCC's Rural Digital Opportunity Fund are providing funding for broadband, funding remains a barrier to broadband deployment.
- Maps showing where broadband is not currently available can overstate coverage—especially in rural areas. This makes it more difficult to target funding to areas which are unserved or underserved. The FCC's new broadband map using a more precise data collection method is expected to be available in late 2022.
- Scaling up to manage an influx of federal funds will likely be challenging for state agencies as well as broadband providers.

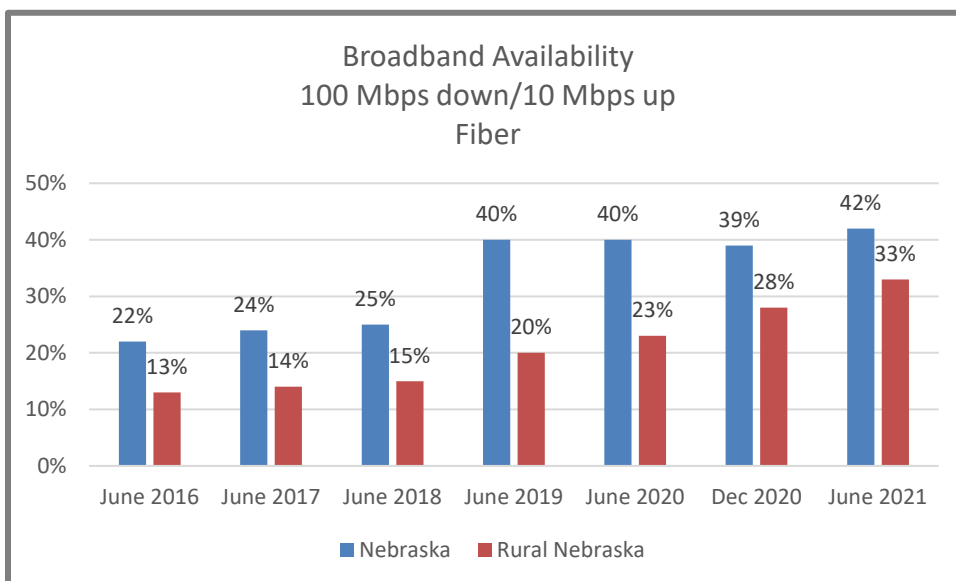
Collaborators:

- Connect Nebraska Working Group
- Nebraska Information Technology Commission
- Nebraska Public Service Commission
- Nebraska Library Commission
- Nebraska Regional Officials Council
- Other stakeholders

Recent Community Council Accomplishments Related to Broadband

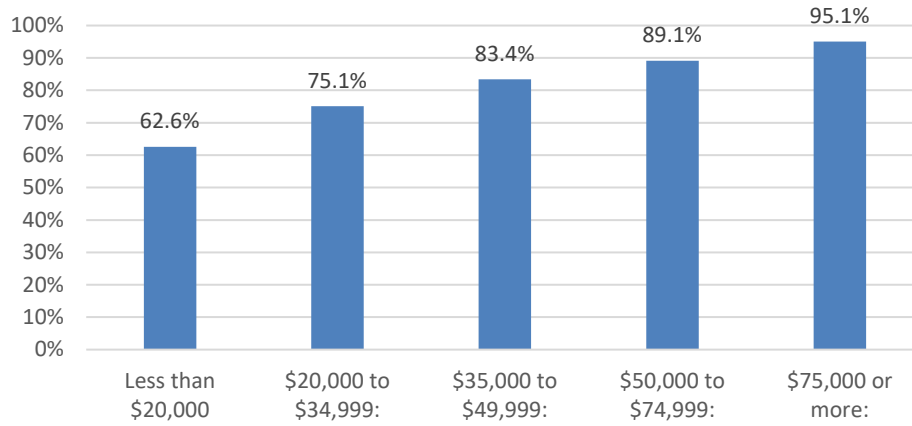
1. NITC staff together with staff from the Nebraska Public Service Commission provided support to the Rural Broadband Task Force.
2. The NITC Community Council completed a Digital Inclusion Planning Guide available at <https://ruralbroadband.nebraska.gov/resources/DigitalInclusionWorkbookFillable.pdf>

Metrics



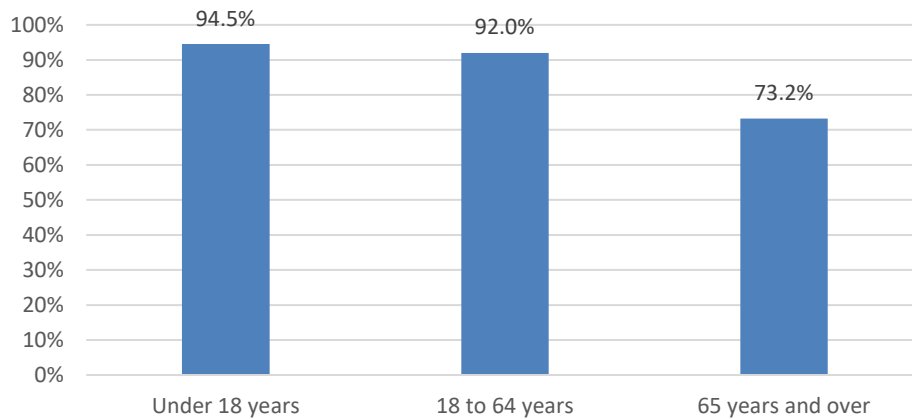
**% Neb Households with Broadband Subscription
By Household Income**

2020 ACS 5-Year



**Percent Broadband Internet Subscription
of Nebraskans by Age Group**

2020 ACS 5-Year



Action Items

1. Action: Support the implementation of the BEAD and State Digital Equity planning processes.

Lead: Anne Byers

Timeframe: October 2022- October 2023

Funding: \$600,000 State Digital Equity Planning Grant

Targets/Deliverables:

1. Webinars
2. Asset inventory
3. Listening sessions
4. Regional digital equity plans
5. State digital equity plan.

Who doesn't have a home broadband connection

Approximately 12% of Nebraskans or 215,000 individuals do not have a broadband subscription at home. This includes:

- 32,000 individuals under 18 years old
- 102,000 individuals between 18 and 64 years old
- 81,000 individuals 65 years old or older

While the plight of K-12 students struggling to participate in online learning received media attention during the pandemic, those under 18 are the most likely to have a home broadband connection. 93% of Nebraskans under 18 have a broadband connection at home compared to 70% of Nebraskans 65 years and older. Those with lower incomes and lower levels of education as well as minority populations are also less likely to have an internet subscription. (See Table 1 in the appendix for more information.)

The percent of residents with a broadband subscription varies by county from a high of 94.2% in Sarpy County to a low of 67.6% in Garfield County. Here are the 10 Nebraska counties with the highest broadband subscription rates:

County	% Population with Broadband Subscription	Margin of Error
Sarpy County	94.2	0.4
Thomas County	92.9	3.2
Lancaster County	91.5	0.6
Polk County	90.3	2.1
Wayne County	90.1	2.3
Washington County	89.8	1.6
Cass County	89.6	1.5
Hamilton County	89.6	2.3
Seward County	89.1	1.4
Douglas County	88.9	0.4

Here are the ten Nebraska counties with the lowest broadband subscription rates.

County	% Population with Broadband Subscription	Margin of Error
Deuel County	78.1	5.0
Hitchcock County	76.1	4.1
Loup County	75.4	9.2
Cuming County	75.3	3.3
Pawnee County	74.0	4.8
Sioux County	73.9	6.8
McPherson County	72.2	9.4
Thurston County	70.2	2.5
Hooker County	68.7	9.9
Garfield County	67.6	7.7

Source: 2019 ACS 5-year

eHealth

Overview

Objectives:

- *To support the adoption of telehealth and health information exchange technologies in Nebraska .*
- *To support the use of health IT to help patients access their health information and better manage their care.*

Description:

Health IT technologies have been making care more accessible, coordinating care and sharing patient information at the point of care, and facilitating public health reporting. Investments in health IT enabled health care providers and public health agencies to better respond to the COVID-19 pandemic.

Broadband is a Social Determinant of Health. Lack of broadband is associated with poorer health outcomes. [One study](#) found that not having internet access was associated with a higher death rates from COVID-19 in rural, urban and suburban communities.

Telehealth. Telehealth has been used for patient consultations especially in rural areas of the state to expand access to care. The COVID-19 pandemic increased the use of telehealth nationwide and in Nebraska as CMS and other insurers allowed greater flexibility for the use of telehealth. [One study](#) found that the number of Medicare fee-for-service (FFS) visits increased 63-fold from 2019 to 2020, from approximately 840,000 telehealth visits in 2019 to nearly 52.7 million in 2020. Beneficiaries in urban areas were more likely to use telehealth, with 5.7% of visits for beneficiaries in urban areas using telehealth in 2020, compared to 4.3% of visits for beneficiaries in rural areas. Overall, 6.5% of visits were conducted via telehealth in 2020, up from 0.1% in 2019. A state by state analysis showed that Nebraska had the second lowest rate of telehealth visits in 2020 with only 2.7% of visits in Nebraska done via telehealth. Factors such as beneficiaries not having broadband connections in their homes or providers not having the capacity to conduct telehealth consultations may have contributed to Nebraska's low use of telehealth.

Health Information Exchange. The use of health information exchange technologies 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. Health information exchange technologies also facilitate timely reporting of lab results, immunizations and syndromic surveillance information.

Patient Access. Health information technologies (i.e., patient portals, personal health records, and apps for smartphone and tablets) can also be used to help patients access their health information and better manage their care.

Strengths/Assets

- o **CyncHealth (formerly NEHII).** To help the state of Nebraska accurately track [COVID-19](#) cases and test results, the [Nebraska Health Information Initiative \(NEHII\)](#), in cooperation with the Nebraska Department of Health and Human Services, developed a COVID-19 dashboard which included real-time bed management, labs and patient tracking, and ventilator and PPE tracking information as well as forecasting of capacity and resource utilization. The dashboard went live in the spring of 2020.

In January 2021, the Nebraska Health Information Initiative (NEHII) and the Iowa Health Information Network approved forming a strategic partnership between the two organizations under the name CyncHealth. Under the arrangement, NEHII is continuing all services of IHIN as IHIN remains the state designated entity for purpose of administering and governing the statewide Iowa health information network. The partnership builds on collaborations between NEHII and IHN on community information exchanges, known as Unite Nebraska and Unite Iowa, that address social determinants of health issues. NEHII's President and CEO Jaime Bland explained, "This new Nebraska-Iowa affiliation will strengthen the region's core HIE services and bring needed innovation to help our healthcare communities."

LB 411, signed by Governor Pete Ricketts on May 24, 2021, requires most health care facilities to participate in CyncHealth. Healthcare facilities required to participate include ambulatory surgical centers, critical access hospitals, general acute hospitals, health clinics, hospitals, intermediate care facilities, long term care hospitals, mental health and substance use treatment centers, PACE (Program of All-Inclusive Care for the Elderly) Centers, pharmacies, psychiatric or mental hospitals, public health clinics, rehabilitation hospitals, diagnostic, laboratory, and imaging centers. Payers participating include insurers, health maintenance organizations, Medicare or Medicaid, a legal entity which is self-insured and provides health care benefits for its employees, or a person who is responsible for administering the payment of healthcare expenses for another person or entity. LB 411 excludes long-term care facilities, assisted living homes, skilled nursing facilities and any state-run health care facility (BSDC, regional centers, youth treatment facilities) from participation.

CyncHealth is continuing to work with the Nebraska Department of Health and Human Services to make enhancements to the Prescription Drug Monitoring Program, including improving the provisioning process, sharing data with 20 state, and integrating PDMP workflow integration into 36 hospitals and pharmacies.

CyncHealth is taking steps to improve the health data in Nebraska. Steps include:

Moving to full Certified Qualified Entity status to obtain Medicare claims data for public reporting

Recertifying National Committee for Quality Assurances (NCQA) Data Aggregator Validation (DAV) program and adding Federally Qualified Health Centers (FQHC's) to existing sites

Writing a second Social Determinants of Health (SDOH) measure and moving the existing Transportation Measure to next level review

Facilitating interoperability, Merit-based Incentive Payment System (MIPS), and regulatory reporting utilizing CyncHealth

CyncHealth is developing a patient portal which will include COVID-19 vaccination information, medication history, lab results and immunization records. The patient portal will be available in English and Spanish and will be available to those 18 and older. The portal will also include social and community resources and referrals.

- **Nebraska Department of Health and Human Services.** The Nebraska Department of Health and Human Services has been supportive of CyncHealth and the adoption of Health IT.
- **Federal Broadband Funding Opportunities.** Federal broadband funding opportunities will likely accelerate broadband deployment and advance digital equity efforts. See the Rural Broadband and Community IT action item for information on federal broadband funding opportunities.

Challenges/Issues:

- Broadband availability and subscription is a barrier to the use of telehealth, remote monitoring and technologies which enable patient access to health data and information.

Collaborators:

- TBD

Action Items

1. Action: Support the implementation of the BEAD and State Digital Equity planning processes.

Lead: Anne Byers

Timeframe: October 2022- October 2023

Funding: \$600,000 State Digital Equity Planning

Grant

Targets/Deliverables:

1. Webinars
2. Asset inventory
3. Listening sessions
4. Regional digital equity plans
5. State digital equity plan.

Community Council

Rural and Community IT Development

Jay Anderson, NebraskaLink

Rod Armstrong, Co-Chair, AIM Institute

Randy Bretz, EDxLincoln, Curator

Johnathan Hladik, Center for Rural Affairs

Rick Nelson, Custer Public Power District and Nebraska Rural Electric Association

Judy Petersen, Central Nebraska Economic Development District

Danny Rockhill, BankFirst

Jason Tuller, University of Nebraska Extension

Mehmet Can Vuran, University of Nebraska-Lincoln

Libraries and Local Government

Chris Anderson, City of Central City

Karen Connell, Columbus Public Library

Debora Robertson, Kilgore Public Library, York

Holly Woldt, Nebraska Library Commission

Resource Providers

Mary Ridder, Nebraska Public Service Commission (At Large)

Education Council

Post Secondary

Bret Blackman, University of Nebraska—Omaha

John Dunning, Wayne State College

Derek Bierman, Doane University

Greg Maschman, Nebraska Wesleyan University

Vacant, University of Nebraska

Tom Peters, Central Community College

Edward Koster, Southeast Community College

Dr. Paul Turman, Nebraska State College System

K-12

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

Matt Chrisman, Mitchell Secondary School

Dr. Ted DeTurk, Educational Service Unit 2

Stephen Hamersky, Daniel J. Gross Catholic High School

Dr. Dan Hoelsing, Schuyler Community Schools

Trent Kelly, Hastings Public Schools

Alan Moore, Educational Service Unit 3

Gary Needham, Co-Chair, Educational Service Unit 9

Non-Voting Liaisons

Dr. Mike Baumgartner, Coordinating Commission for Postsecondary Education

Vacant, Nebraska Department of Education

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

Ling Ling Sun, Nebraska Educational Telecommunications Commission

eHealth Council

The State of Nebraska

Linda Wittmuss, Division of Behavioral Health

Health Care Providers

Kevin Borchert, CyncHealth

Marty Fattig, Nemaha County Hospital

Cindy Kadavy, Nebraska Health Care Association

Brian Sterud, Faith Regional Health Services

Anna Turman, Catholic Health Initiatives

eHealth Initiatives

Robert Wagner, CyncHealth

Public Health

Kathy Cook, Lincoln-Lancaster County Public Health Department

Gary Cochran, UNMC

Dave Palm, UNMC

Ashley Newmyer, Department of Health and Human Services

Payers and Employers

Jan Evans, Blue Cross Blue Shield

Allison Wisco, Nebraska Department of Health and Human Services, Division of Medicaid and Long-Term Care

Consumers

Jina Ragland, AARP

Resource Providers, Experts, and Others

Liaquat Hossain, Ph.D., University of Nebraska at Kearney

GIS Council

Devarsi Majumder, Nebraska Game and Parks Commission

Ryan Werner, Department of Natural Resources

Vacant, Nebraska State Patrol

John Beran, State Surveyor's Office

Claire Inbody, Department of Transportation

Jennifer Parmeley, Department of Health and Human Services

Barbara Oswald, Department of Revenue

Tim Erickson, Legislative Research Office

Sue Krogman, Nebraska Emergency Management Agency

Christian Nielsen, Nebraska Public Service Commission

Shani Mach, Department of Environment and Energy

Dave Hattan, Office of the Chief Information Officer

Vacant, Governor's Policy Research Office

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

Eric Herbert, Omaha Metro Area -Sarpy County GIS

Neil Dominy, Federal Liaison USGS Nebraska Water Science Center

Jeff McReynolds, Lincoln Metro Area, City of Lincoln, Lancaster County, Nebraska

John McKee, Nebraska Association of County Officials - Jefferson-Saline County Emergency Manager

Nancy Salmon, Nebraska Association of County Officials - Hamilton County Commissioner

Bailey Gibson, Member at large, Hall County GIS Office

Lesli Rawlings, Nebraska Geospatial Professional Association

Michael Schonlau, Member at large Douglas County, City of Omaha

Matt Tinkham, Member at large - Professional Surveyors, Lamp Rynearson & Associates

Chuck Wingert, Nebraska Association of Resources Districts

Don Linquist, Member at large Precision Agriculture Industry, Mitchell Implements

Lash Chaffin, League of Nebraska Municipalities

Timothy Cielocha, Public Power Districts, Nebraska Public Power District



Technical Panel

Bret Blackman, University of Nebraska Computing Services Network

Kirk Langer, Chair, Lincoln Public Schools

Ling Ling Sun, Nebraska Educational Telecommunications Commission

Jeremy Sydik, Assistive Technology, University of Nebraska

Ed Toner, Nebraska Office of the Chief Information Officer

Attachment VI

TO: NITC Commissioners

MEETING DATE: November 10, 2022

SUBJECT: Approval of the Progress Report to the Governor and Legislature

RECOMMENDED ACTION: Approve the draft report.

BACKGROUND: Neb. Rev. Stat. § 86-518 provides, in pertinent part: “By November 15 of each even-numbered year, the Nebraska Information Technology Commission shall submit a progress report to the Governor and Legislature.”

Staff have prepared a draft report for the commission’s approval.

RECOMMENDED BY: Staff

November 15, 2022

Progress Report to the Governor and Legislature



Nebraska Information
Technology Commission



State of Nebraska
Nebraska Information Technology Commission
nitc.nebraska.gov
501 S. 14th Street
P.O. Box 95045
Lincoln, NE 68509-5045
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NITC Commissioners

Ed Toner, Chair	Chief Information Officer, State of Nebraska
Sen. Suzanne Geist	Nebraska Legislature (ex-officio)
Leah Barrett	President, Northeast Community College
Bret R. Blackman	Vice President for IT and CIO, University of Nebraska
James Ediger	General Counsel, Hamilton Telecommunications
Shane Greckel	Owner/Operator, Greckel Farms, LLC
Kirk Langer	Chief Technology Officer, Lincoln Public Schools
Zachary J. Mellender	Business Systems & Analytics Manager, Omaha Zoological Society
Daniel Spray	President, Precision Technology
Gary Warren	Senior Consultant, Hamilton Telecommunications

Staff

Ed Toner	Chief Information Officer
Rick Becker	Government Information Technology Manager
Anne Byers	eHealth and Community Information Technology Manager
Casey DunnGossin	State GIS Coordinator
Becca Kingery	Education Information Technology Manager
Lori Lopez Urdiales	Office Services Manager

Executive Summary

This progress report highlights many of the accomplishments of the Nebraska Information Technology Commission and fulfills the requirement of Section 86-518 to submit a progress report to the Governor and Legislature by November 15 of each even-numbered year.

Significant progress has been made on the following priority areas designated as strategic initiatives by the NITC.

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 has utilized a hybrid centralization model combining elements of both the centralized and decentralized IT management models. Enterprise technologies are centralized with agency-specific activities remaining with the agencies.

Nebraska Spatial Data Infrastructure. This initiative promotes coordination of geospatial data and GIS programs, guides policy, provides guidance on data accuracy requirements, coordinates dissemination of data through NebraskaMAP, and strengthens data sharing through partnerships to ensure access to quality geospatial datasets for governmental business needs and the public. The GIS Council continues to review Nebraska GIS standards due to the constant evolution of GIS technologies and applications. The OCIO GIO team upgraded the Statewide GIS Enterprise platform to a which improved application functionality. The OCIO GIO team deployed a new Portal environment to enable sharing sensitive information with local and other non-state partners, which requires a login using approved credentials. Nebraska agencies continue to develop innovative web mapping applications and dashboards to best serve their agency users and public constituents.

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. NITC staff assisted the Nebraska Department of Education as it developed the Hierarchy of Digital Learning Needs and CARES Act guidance for Nebraska school districts and private schools in an attempt to address the Homework Gap. NITC staff partnered with the Nebraska Library Commission and Public Service Commission as the NUSF-117 Nebraska Special Construction Matching Fund program was created to incentivize new fiber construction for public libraries in rural areas.

Network Nebraska. Network Nebraska has succeeded in lowering the unit cost of Internet service to participating entities through aggregated purchasing power. By combining Network Nebraska's K-20 Internet purchases and peering into five state contracts of over 100Gbps, the K-12 E-rate-eligible price has gone from \$.18/Mbps/month on July 1, 2020, down to \$.08/Mbps/month on July 1, 2022, a 55% decrease in unit cost.

This will benefit all current and future Network Nebraska schools, ESUs and colleges that purchase their Internet service from the statewide master contract. Benefits of Network Nebraska also include flexible bandwidth utilization, Intranet routing, lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, new student learning opportunities, enterprise network management software, and better use of public investments.

Rural Broadband and Community IT Development. The NITC Community Council and staff have supported rural broadband and community IT development in several ways. NITC staff has provided staff support to the state's Rural Broadband Task Force. NITC staff provided assistance in developing grant applications for federal broadband funding programs. Staff of the NITC/Office of the CIO are also participating in the Connect Nebraska Working Group, the interagency working group responsible for coordinating federal broadband funding. NITC/Office of the CIO staff will be administering the State Digital Equity Planning Grant which is expected to be awarded in October or November 2022.

eHealth. Nebraska continues to be a leader in health information exchange with near universal participation in the statewide health information exchange, CyncHealth. LB 411 which was signed by Governor Ricketts on May 24, 2021, mandated participation in the state health information exchange by ambulatory surgical centers, critical access hospitals, intermediate care facilities, long-term care hospitals, mental health substance use treatment centers, PACE centers, pharmacies, psychiatric or mental hospitals, public health clinics, and rehabilitation hospitals.

Other Progress and Priorities

- The NITC's vision is being realized and short-term and long-term strategies have been articulated and employed. The NITC has developed a vision statement, goals, and strategic initiatives to articulate its vision and to highlight technology projects which have strategic importance to the State of Nebraska.
- The Statewide Technology Plan has been an effective vehicle for identifying key projects, building stakeholder support, coordinating efforts, and communicating with policy makers.
- The NITC website serves as an information technology clearinghouse. Additional resources on broadband are currently available on the Rural Broadband Task Force website (<https://ruralbroadband.nebraska.gov>).
- In order to encourage interoperability and standardization, the NITC has adopted over 100 technical standards and guidelines.
- Recommendations made by the commission to the Governor and Legislature have assisted policy and funding decisions. The review process and prioritization of new

IT projects provides policy makers with information about the objectives, justification, technical impact, costs, and risks of proposed systems. Additionally, the NITC has provided staff assistance to the Rural Broadband Task Force. Several of the task force's recommendations have been implemented by the Legislature and Governor Ricketts. LB 388 which was enacted in 2021 created the Broadband Bridge Grant Program. \$20 million a year for two years was appropriated for the program.

- The NITC encourages and facilitates input and involvement of all interested parties by engaging in collaborative processes, involving four advisory councils, the Technical Panel, and numerous workgroups and subcommittees. Information is publicly distributed and public input is encouraged.
- The NITC is addressing long-term infrastructure innovation, improvement, and coordination through Network Nebraska, by supporting the Rural Broadband Task Force, and by participating in the interagency working group responsible for coordinating federal broadband programs.
- OCIO-GIO successfully completed collaboration pilots with two GIS organizations in NebraskaMAP in 2021 and 2022.

Introduction

The Nebraska Information Technology Commission (NITC) was established by the Legislature in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state. Chief Information Officer Ed Toner currently serves as the governor-designated chair of the NITC. Commissioners are appointed by the Governor, approved by the Legislature, and represent elementary and secondary education, postsecondary education, communities, the Governor, and the general public.

The NITC conducts most of its work through five advisory groups: the Community Council, Education Council, eHealth Council, Geographic Information Systems Council, and Technical Panel. Each council establishes ad hoc work groups to prepare recommendations on specific topics. The Office of the Chief Information Officer provides support for the NITC, its councils, the Technical Panel, and ad hoc groups.

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

Realization of Vision and Employment of Strategies

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

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

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

Goals. The NITC has established four goals:

1. Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable, and efficient;
2. Support the use of information technology to enhance community and economic development;
3. Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including homeland security;
4. Promote effective planning, management and accountability regarding the state's investments in information technology.

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

The current list of strategic initiatives includes:

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

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

State Government IT Strategy

This initiative focuses on the development and implementation of a comprehensive strategy for the use of information technology by Nebraska state government. The strategy has utilized a hybrid centralization model combining elements of both the centralized and decentralized IT management models. Enterprise technologies are centralized with agency-specific activities remaining with the agencies.

Top priorities include:

- Security
- Consolidation
- Availability

The following graphic lists the priorities of the OCIO:



Action items supporting this initiative include:

- Implement same sign-on for certain enterprise applications;
- IT cost efficiency projects;
- Consolidate on STN domain;
- Application process maturation (DevOps); and
- SharePoint/Teams (cloud migration).

Recent accomplishments include:

- Completed the data center consolidation for code agencies;
- Completed application portfolio management survey of code agencies;
- Completed upgrade of the enterprise content management application; and
- Completed implementation of the new and improved staff onboarding and offboarding process for 30 agencies, boards, and commissions.

Nebraska Spatial Data Infrastructure

Mapping and geospatial data support the economy, safety, environment and overall quality of life for Nebraskans. Coordination and management of these activities are essential to reduce duplication of efforts and provide cost savings to our taxpayers.

The GIS Council develops strategies, standards and policies related to the creation and use of geospatial data and geographic information system technologies for Nebraska. The council's interagency and intergovernmental coordination efforts focus on facilitating data sharing, coordinating joint database development, developing GIS enterprise services, data and system standards, and education. The council represents

GIS Council Mission

To encourage the appropriate utilization of GIS technology and to assist organizations to make public investments in GIS technology and geospatial data in an effective, efficient, and coordinated manner.

Nebraska Revised Statute - §86-569 through §86-573

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

state, local and federal government agencies and other stakeholders needing access to data. The council is affiliated with nationally coordinated efforts through the Federal Geographic Data Committee and the National States Geographic Information Council (NSGIC).

This initiative promotes coordination, guides policy, provides guidance on Nebraska Spatial Data Infrastructure (NESDI) data accuracy requirements, and strengthens data sharing through partnerships to ensure access to quality geospatial datasets for governmental business needs and the public.

The major components of this initiative include:

1. Facilitating the creation, maintenance, analysis and publishing of quality NESDI data and information systems.
2. Encouraging data sharing and provide widespread access to data and services through NebraskaMAP.gov.
3. Developing and implementing NESDI layer standards and guidelines.

4. Facilitating technical assistance and education outreach opportunities for furthering the adoption of the NESDI and geospatial applications.
5. Achieving sustainable and efficient allocation of resources to support the implementation and wise governance of GIS services and geospatial data.

The objective of the NESDI is:

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

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

NESDI Data Layers

- Survey and Geodetic control
- Transportation (roads, rail, air, etc.)
- Cadastre/parcels
- Elevation
- Aerial imagery
- Hydrography
- Political and administrative boundaries
- Addresses
- Soils
- Groundwater

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

The following are other accomplishments for the priority data layers.

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

A low-distortion projection (LDP) project is in progress under the direction of the State Surveyor’s office with assistance with other registered land surveyors of Nebraska. The LDP will create the best ground to grid solution with control established using recognized local control. This will lead to a better source data for all GIS horizontal calculations and will improve Nebraska geospatial data. Survey and geodetic control recommendations have been identified and included into ongoing data collection

projects. There is a federal goal for implementation of this project to coincide with the 2027 Federal Datum change.

The state has a signed MOU with the Bureau of Land Management to share data with control points for Federal and non-federal lands. The state surveyor's office is the steward of this data.

Elevation (LiDAR). This action item establishes the Nebraska Statewide Elevation Program. The Elevation Business Plan was approved by the GIS Council on March 26, 2015. The plan outlines the business case for LiDAR statewide. The plan takes a comprehensive approach and details the organizational needs, technology and human resource requirements, required product deliverables, funding requirements, legislative support, implementation plans, and a marketing and outreach strategy. The Elevation initiative has reached its defined milestone with complete coverage for Nebraska.

The LiDAR standard (3-203 LiDAR Standard) was updated in May 2022 to adopt by reference the most recent version of the LiDAR Base Specification standards released by the USGS for elevation acquisition using LiDAR.

Imagery. This action item establishes the Nebraska Statewide Imagery Program which sets out to coordinate the acquisition, delivery, and data sharing of imagery products and services. All government entities can participate with the program.

The core product is a statewide aerial ortho-image that meets the minimum horizontal accuracy requirements and a spatial resolution of 12 inch or better, preferably flown during the "leaf-off" period for trees. Obliques and other value-added products and services will also be included in the program.

Land Records. This action item enables the integration of different local government land records information into a statewide dataset.

A Nebraska Statewide Parcel Geodatabase Development and Implementation Plan was finalized in 2015 with input from several county assessors. The plan outlines expectations of the State's public records request and a timeline going forward to obtain core parcel data and GIS files on an annual basis. The state has developed statewide data aggregation workflows, a data schema/model, and appropriate map services to that provide data for business operations. All counties submit digitized and tabular parcel data to be aggregated into the statewide database. This effort has also leveraged a data sharing partnership effort to identify state level data that can be shared to counties to support their needs. This is an ongoing endeavor in cooperation with the Nebraska Department of Revenue - Property Assessment Division and County Assessors.

Light Detection and Ranging

LiDAR is a technology that is used in conjunction with GPS technology, an aerial collection platform, and a processing computer to collect data points that can be used to define the location of objects that reflect near infrared light, including the land surface, structures and vegetation.

Street Centerline Address Database. Nebraska Public Service Commission (PSC) continues to coordinate quality control and provisioning of various geospatial (GIS) data sets such as street centerlines and address points for use in emergency call routing services per NG-9-1-1 requirements. These datasets follow the NITC Standards 3-205 (Street Centerlines Standard), and 3-206 (Address Points Standard), these standards follow NENA (National Emergency Number Association, Inc) GIS standards and as of late 2022 will adopt the current NENA standards by reference. The datasets are also shared in the Nebraska GIS enterprise and NebraskaMAP and may be used to improve state operations various transportation, emergency management, public safety, or economic development related applications.

NebraskaMAP. NebraskaMAP (<http://www.NebraskaMAP.gov>) is the online gateway to access



Nebraska's authoritative geospatial data. The system integrates with the State's GIS Enterprise platform and has more than 158 data sets and over 133 web mapping applications. The site averages over 2,500 views per day.

State agencies that use geospatial data continue to work together to reduce duplicated datasets and streamline the data sharing process. This has been done by consolidating resources and the development and deployment of Nebraska Enterprise GIS platform (NEGIS). This allows users in state agencies to access data in one location for the most current information. The new system formalizes communication with all statewide data stewards, keeping data current while exercising the importance of authoritative and quality data for public consumption.

The Geographic Information office has successfully completed two pilots for linking other entity open data sites to NebraskaMAP. The next step is to partner with additional open data sites at the local level in Nebraska. The website may eventually include a component to provide an easier way to view and access available imagery, LiDAR and other raster and large file size datasets for Nebraska.

Network Nebraska

Participants in Network Nebraska are reducing costs and stimulating investment in Nebraska's telecommunications infrastructure. Network Nebraska is represented as a compilation of three major sub-networks: The University of Nebraska network, State and County Government network, and the K-20 Education network. Each network has its own management staff, but takes advantage of co-location facilities, Internet and telecommunications contracts, and shared infrastructure wherever possible.

To develop a broadband, scalable telecommunications infrastructure that optimizes quality of service to public entities, the State of Nebraska and the University of Nebraska

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

Network Nebraska has succeeded in lowering the unit cost of Internet service to participating entities through aggregated purchasing power. By combining Network Nebraska’s K-20 Internet purchases and peering into five state contracts of over 100Gbps, the K-12 E-rate-eligible price has gone from \$.18/Mbps/month on July 1, 2020, down to \$.08/Mbps/month on July 1, 2022, a 55% decrease in unit cost. This will benefit all current and future Network Nebraska schools, ESUs and colleges that purchase their Internet service from the statewide master contract.

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

Network Nebraska has also stimulated investments and competition in telecommunications infrastructure. As the State bid connectivity to large regional areas of schools and colleges, the telecommunications companies responded with fiber Ethernet service pricing that greatly reduced the costs to educational entities.

The development of the K-20 education network has increased the number of distance education courses available to Nebraska students. Through Zoom interactive videoconferencing, Nebraska high schools and community colleges exchange over 275 courses per year (2022-23). Highest concentration of courses are in English, Foreign Language, and Mathematics, however, offerings also include Agriculture, Technology, and Industrial Technology. Virtual Field Trips are also available to Nebraska students with over 150 offerings.

Due to advances in WAN Ethernet technology, Network Nebraska-Education is now able to reach every education entity in the State through seven core aggregation points: Grand Island, Kearney, Lincoln, Norfolk, Scottsbluff, and two locations in Omaha.

The development of the K-20 Education network has increased the number of customers served by Network Nebraska. Data and Internet customers currently include the three state colleges, all six community colleges, two tribal colleges, the University of Nebraska system, over half of the private colleges, and nearly 100% of public school districts under 17 different educational service units. Likewise, non-public school district participation

has continued to expand. The Nebraska K-20 Education network is completely funded by Participation and Interregional Transport Fees from its 294 members.

Cybersecurity has been a priority area of the Education Council since the most recent update to the Statewide Technology Plan. The Education Council and Network Nebraska Advisory Group continue to promote and provide cybersecurity training experiences for Network Nebraska members.

Establishing a robust digital education environment is critical to Nebraska's future. So much of what teachers, students, and administrators do today is dependent upon Internet-based information and communication. To assist with facilitation of digital education, and in efforts to combat the 'homework gap,' in 2021 Nebraska was selected as one of only three initial states to pilot a K-12 global Wi-Fi program called eduroam.



eduroam is a service that allows students, researchers, teachers, and staff from participating universities, colleges, K-12 schools, libraries, and museums to obtain secure Internet connectivity when visiting other participating schools and partners by simply opening their computing device. ConnectEd Nebraska was

created through a collaborative effort between Network Nebraska, the Nebraska Department of Education, the University of Nebraska, and ESU leaders. The objective of ConnectEd Nebraska is to enable participating teachers, staff, and students in Nebraska to have anywhere, anytime wireless access at all educational sites in the state and in other eduroam-participating sites throughout the U.S. and other countries. eduroam is available to all Network Nebraska participants, and as of today over 60% of public school districts are enrolled in the eduroam program.

Student equity of access to the internet continues to be a high priority action item; the Office of the CIO partnered with the Nebraska Library Commission and Public Service Commission continue to promote the Nebraska Special Construction Matching E-Rate fund for schools and libraries. The matching funds from the FCC's E-Rate program and the Nebraska Universal Service Fund will increase the discount for special construction of fiber by as much as 20%, which could dramatically reduce costs and increase transport speeds for the participants.

Network Nebraska has been made possible through a cooperative effort of the Collaborative Aggregation Partnership (CAP). CAP is composed of several operational entities: Office of the CIO, University of Nebraska, and Nebraska Educational Telecommunications with policy assistance from the Nebraska Department of Education, Public Service Commission, and the NITC.

In 2009, the NITC Education Council chartered the Network Nebraska Advisory Group (NNAG). These 16 members, representing all the major K-12 and higher education

communities, have been instrumental in helping guide Office of the CIO decisions concerning network infrastructure, services, and fees.

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

Digital Education

The primary objective of the Digital Education Initiative is to promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

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

The primary components of the Digital Education Initiative include:

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

Rural Broadband and Community Development

The NITC Community Council and staff have addressed rural broadband and community IT development in several ways:

Rural Broadband Task Force. NITC staff has provided staff support to the state's Rural Broadband Task Force. The Rural Broadband Task Force was created by LB 994 in 2018 to "review issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska." The task force's second report was submitted to the Legislature in October 2021.

The 2021 report included findings and recommendations on the broadband needs of farmers and ranchers. The report found that farmers and ranchers need upload speeds of at least 30 Mbps to transfer large amounts of generated data to the cloud. In the future, even greater upload speeds may be required. Rural areas of most Nebraska counties—including many of Nebraska's top-producing agricultural counties—lack broadband with upload speeds of greater than 25 Mbps or fiber connectivity. Different methods of connectivity are required for agriculture, including:

- Low-bandwidth connectivity for devices like sensors or monitors often called internet of things (IoT) devices
- High speed, centralized broadband with upload speeds of at least 30 Mbps up for targeted agricultural operational headquarters such as a farm or ranch operations center
- High-speed decentralized coverage over large agricultural areas
- The report is available at: <https://ruralbroadband.nebraska.gov>.

Considerable progress made since the 2019 report, including the following:

- \$29.5 million in grants was awarded to 60 projects bringing broadband to 17,600 households through the Remote Access Rural Broadband Grant Program. The grant program was funded by the CARES Act and administered by the Nebraska Department of Economic Development.
 - LB 388 which was enacted in 2021 created the Broadband Bridge Grant Program. \$20 million a year for two years was appropriated for the program. The first round of grants were awarded in January and February 2022. Sixty-one grants were awarded totaling \$19.2 million to connect 12,640 locations. Awards for the second round will be announced in December 2022.
 - Broadband projects funded through the Nebraska Universal Service Fund have connected 19,583 households since 2019.
 - Remittances to the Nebraska Universal Service Fund increased from \$32.8 million in 2018 to \$46.8 million in 2020 due to reforms to the residential contribution method.
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-
- The Public Service Commission is taking steps to initiate a reverse auction of \$3 million in NUSF support.
 - LB 338 improved the accountability of the Nebraska Universal Service Fund by specifying build out requirements of 100 Mbps down and 100 Mbps up and by requiring recipients to conduct and submit speed tests.
 - The Nebraska Public Service Commission established the E-Rate Special Construction Matching Program in 2020, providing matching funding for 6 public libraries and one public school in the first year of the program.
 - Governor Ricketts, the Nebraska Department of Education, Educational Service Units, and local school districts coordinated federal funding to purchase computing devices, hot spots, and internet-enabled devices as well as implement connectivity projects.
 - LB 992, enacted in 2020, established a process to use private utility easements for communications and made the process of leasing dark fiber less burdensome.

Many of these developments have helped the State of Nebraska build the capacity to administer federal broadband funding made available through the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA).

Federal Broadband Funding. NITC staff provided assistance in developing grant applications for federal broadband funding programs. Staff of the NITC/Office of the CIO are also participating in the Connect Nebraska Working Group--interagency working group responsible for coordinating federal broadband funding.

- **Capital Projects.** On August 30, 2022, the U.S. Department of the Treasury approved an award of \$87.7 million to connect 21,000 homes and businesses to affordable, reliable high-speed internet services. The Nebraska Broadband Bridge Program, a competitive grant program, will award grants for broadband infrastructure. The program is designed to reach areas without access to reliable, affordable high-speed internet infrastructure, especially the state's rural areas. The press release is at <https://home.treasury.gov/news/press-releases/jy0931>. The Public Service Commission anticipates opening a round of the Broadband Bridge Grant Program in early 2023 to distribute the funding.
 - The State of Nebraska has also applied for funding from the **National Telecommunications and Information Administration Broadband Equity, Access and Deployment (BEAD) program**. Nebraska will receive at least \$100 million for broadband deployment projects through the BEAD program. The State of Nebraska expects to receive \$5 million in planning funds in November 2022 to develop a five-year broadband deployment plan. The Nebraska Public Service Commission will administer the BEAD funding.
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- Nebraska will receive \$600,000 to develop a state digital equity plan through the **State Digital Equity Planning Grant**. States which complete digital equity plans will be able to apply for a minimum of \$7.2 million over 5 years to set up a state digital equity grant program. Nebraska expects to receive this award in October or November. The Nebraska Information Technology Commission/Office of the CIO will administer the State Digital Equity Planning Grant.

eHealth

Nebraska continues to be a leader in health information exchange with near universal participation in the statewide health information exchange, CyncHealth. LB 411 which was signed by Governor Ricketts on May 24, 2021, mandated participation in the state health information exchange by ambulatory surgical centers, critical access hospitals, intermediate care facilities, long-term care hospitals, mental health substance use treatment centers, PACE centers, pharmacies, psychiatric or mental hospitals, public health clinics, and rehabilitation hospitals.

CyncHealth in partnership with the Nebraska Department of Health and Human Services serves as Nebraska's Prescription Drug Monitoring Program (PDMP). Nebraska's PDMP was the first PDMP to include all medications. CyncHealth has been working with health care facilities to make it easier for health care providers to access and use the PDMP.. 42 hospitals accounting for 59% of the state's hospital beds have implemented PDMP workflow integration.

CyncHealth also offers a solution to address social determinants of health (SDOH) and to help connect patients to resources including food, housing, transportation, mental health support, state benefits, and employment services.

CyncHealth continues to make investments in IT security and is completing HITRUST certification. CyncHealth expects to receive the certification by the end of November. The MyCyncHealth patient portal is available for Medicaid patients. The portal is at Mycynchealth.org.

Improved Coordination and Assistance to Policymakers

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

Statewide Technology Plan. The statewide technology plan has been an effective vehicle for identifying key projects, building stakeholder support, coordinating efforts, and communicating with policy makers.

The current plan was approved in 2022. The plan focuses on six strategic initiatives:

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

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

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

Rural Broadband Task Force. By providing staff support for Nebraska's Rural Broadband Task Force, the NITC has assisted policymakers by studying issues related to rural broadband availability and by making recommendations. The Rural Broadband Task Force was created by LB 994 in 2018 to "review issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska." LB 994 was introduced by Senator Curt Friesen, Chair of the Transportation and Telecommunications Committee.

The 14-member task force is chaired by Ed Toner, CIO for the State of Nebraska and Chair of the Nebraska Information Technology Commission. The task force's second

report was submitted to the Legislature in October 2022. The report included findings and recommendations on:

- Broadband availability;
- Broadband data and mapping;
- Alternative technologies and providers;
- Nebraska Universal Service Fund and reverse auction;
- Public-private partnerships and broadband planning;
- Digital inclusion, homework gap and leveraging E-Rate funding; and
- Broadband needs of farmers and ranchers

The report and supporting appendices is available at:

<https://ruralbroadband.nebraska.gov>.

Members of the task force include:

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

Senator Curt Friesen, Chair, Transportation and Telecommunications Committee, Nebraska Legislature

Senator Bruce Bostelman, Nebraska Legislature (selected by the Executive Board)

Mary Ridder, Commissioner, Nebraska Public Service Commission

Tony Goins, Director, Nebraska Department of Economic Development

Steve Wellman, Director, Nebraska Department of Agriculture

Zachary Hunnicutt, Farmer, Hunnicutt Farms, Representing Agribusiness Community

Vacant
Representing Nebraska Business Community

Tom Shoemaker, President, Pinpoint Communications, Representing Regulated Wireline Telecommunications Industry

Daniel Spray, Owner, Precision Technology, Inc., Representing Wireless Telecommunications Industry

Gwen A. Kautz, CEO/General Manager, Dawson Public Power District, Representing Public Power Industry

Andrew Whitney, Director of Virtual Platforms, Bryan Health & Teledyne, Representing Health Care Providers

Andrew Buker, Executive Director of Infrastructure Services, University of Nebraska, Representing Nebraska postsecondary educational institutions

Ron Cone, Director of Network Information Services, ESU 10, Representing Rural Schools Offering Kindergarten through Grade Twelve

Policy and Funding Recommendations

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

Section 86-516 (8) directs the NITC to “make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel,” as part of the biennial budget process. Technical reviews of information technology projects are conducted by a team of reviewers. Projects are then reviewed by the Technical Panel. Using information from the review process, the NITC makes recommendations to the Governor and the Legislature by November 15 of each even-numbered year. The review process and prioritization of new IT projects provides policy makers with information about the objectives, justification, technical impact, costs, and risks of proposed projects.

In 2022, four projects were reviewed as part of the biennial budget process. Recommendations on these requests were submitted to the Governor and the Legislature.

Policies, Standards, Guidelines, and Architectures

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

In order to encourage interoperability and standardization, over 100 standards and guidelines have been adopted by the commission. The development of standards and guidelines has helped the State of Nebraska achieve greater interoperability and efficiency. The process encourages public input from all involved constituents. Most standards are developed by a work group consisting of stakeholders from state government agencies and other interested entities. The Technical Panel recommends standards and guidelines to be considered for adoption by the NITC.

A full listing of the NITC Standards and Guidelines are listed at this website:
<https://nitc.nebraska.gov/standards/index.html>

Information Technology Clearinghouse

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

The NITC's website (www.nitc.nebraska.gov) serves as an information technology clearinghouse, providing access to information including resources for communities, health care providers, and educational entities, the GIS community, and state government. The NITC website is the official repository for agenda, minutes, and documents for the NITC, its councils and their workgroups. The section on "Standards and Guidelines" provides access to all technical standards and guidelines adopted by the NITC or under development. The Community Council and its partners have developed resources to help Nebraska communities and regions improve their broadband service. Links to these resources are available from the websites of the NITC and the Rural Broadband Task Force (ruralbroadband.nebraska.gov). Network Nebraska has its own project website, with information designed for current and prospective participants (<http://www.networknebraska.net>). The NITC website also includes a link to NebraskaMAP (<http://www.NebraskaMAP.gov>) which provides public access to geospatial data in Nebraska. Additionally, NITC staff members handle requests for information on technology projects and development and facilitate the exchange of information.



NITC Commissioners hear reports from its advisory councils.

Input and Involvement of Interested Parties

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

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



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

- State Government Council—Security Architecture Work Group
- Technical Panel—Accessibility Work Group
- Technical Panel—Intergovernmental Data Communications Work Group
- GIS Council—Boundary Work Group
- Education Council—Network Nebraska Work Group
- Education Council—Digital Education Work Group
- Education Council—Network Nebraska Advisory Group

Additionally, the Rural Broadband Task Force has encouraged the input and involvement of interested parties through its subcommittees and by providing opportunities for public comment.

Infrastructure Innovation, Improvement and Coordination

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

The NITC is addressing long-term infrastructure innovation, improvement, and coordination through Network Nebraska, by supporting the Rural Broadband Task Force, and by participating in the State of Nebraska's interagency working group which is coordinating federal broadband funding..

Network Nebraska. Network Nebraska has aggregated statewide telecommunications to a common infrastructure, generated considerable cost savings to public entities, and decreased the unit cost of Internet service by leveraging the consolidated demand of all participating entities. Since September 2003, Network Nebraska has grown to serve the data and Internet service needs of all state agencies with outstate circuits, the University of Nebraska's four campuses, all six of the state's community colleges, all three state colleges, and all but one of the 244 school districts under 17 different educational service units. The number of customers is expected to continue growing due to the favorable Internet rates and the high quality of service offered by Network Nebraska. The Network Nebraska K-20 network is one possible alternative for them to interconnect with each other and purchase less expensive Internet.

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

The first phase of the State multipurpose backbone became operational in September 2003, serving Omaha, Lincoln, and Grand Island with the second phase following in February 2004, extending service to Norfolk, Kearney, North Platte, and the Panhandle. In July 2008, the Network Nebraska K-20 backbone interconnected Grand Island, Lincoln, and Omaha, and Scottsbluff was added in 2012. The University of Nebraska has multiple statewide Internet contracts for Network Nebraska that have dramatically reduced the unit cost of Internet access to Network Nebraska participants. By leveraging Internet2 and InterExchange Carrier peering relationships, an additional 40 Gbps of Internet egress has been made available at substantially lower costs than commodity Internet.

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

Rural Broadband Task Force. LB 994, which was introduced by Senator Curt Friesen, passed by the Legislature and signed into law by Governor Ricketts on April 17, 2018,

created the Rural Broadband Task Force. LB 994 charges the task force with reviewing “issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska.” Ed Toner, Chair of the NITC, serves as the chair of the Rural Broadband Task Force. The NITC is providing support to the Rural Broadband Task Force.

The Task Force submitted its second report to the Legislature and Governor Ricketts in October 2021. Since the first task force report was submitted in 2019, the State of Nebraska has implemented many of the task forces recommendations and has improved broadband availability and increased the accountability of telecommunications providers receiving state support. LB 388 which was enacted in 2021 established the Nebraska Broadband Bridge Grant Program. \$20 million a year for two years was appropriated for the program. The first round of grants were awarded in January and February 2022. Sixty-one grants were awarded totaling \$19.2 million to connect 12,640 locations. Awards for the second round will be announced in December 2022.

The establishment of a state broadband program has helped the State of Nebraska build the capacity to administer federal broadband funding made available through the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA).

Federal Broadband Funding. NITC staff provided assistance in developing grant applications for federal broadband funding programs. Staff of the NITC/Office of the CIO are also participating in the Connect Nebraska Working Group--interagency working group responsible for coordinating federal broadband funding.

- **Capital Projects.** On August 30, 2022, the U.S. Department of the Treasury approved an award of \$87.7 million to connect 21,000 homes and businesses to affordable, reliable high-speed internet services. The Nebraska Public Service Commission will administer the program and will distribute the funding through the Nebraska Broadband Bridge program. The Public Service Commission anticipates opening a round of the Broadband Bridge Grant Program in early 2023 to distribute the funding.
- The State of Nebraska has also applied for funding from the **National Telecommunications and Information Administration Broadband Equity, Access and Deployment (BEAD) program**. Nebraska will receive at least \$100 million for broadband deployment projects through the BEAD program. The State of Nebraska expects to receive \$5 million in planning funds in November 2022 to develop a five-year broadband deployment plan. The Nebraska Public Service Commission will administer the BEAD funding.
- Nebraska will receive \$600,000 to develop a state digital equity plan through the **State Digital Equity Planning Grant**. States which complete digital

equity plans will be able to apply for a minimum of \$7.2 million over 5 years to set up a state digital equity grant program. Nebraska expects to receive this award in October or November. The Nebraska Information Technology Commission/Office of the CIO will administer the State Digital Equity Planning Grant.



Cullen Robbins gives an overview of broadband terms to members of the Rural Broadband Task Force, Sept. 24, 2018.

Awards and Recognition



Nebraska received a grade of "B" on the 2022 Digital States Survey.



Nebraska received awards from the Center for Digital Government for Disaster Recovery and Continuity of Operations (DR/COO) in 2020 and for Continuous Innovation in 2022.



StateScoop named Ed Toner State Executive of the Year in 2022.



Nebraska received a grade of "B" from the National States Geographic Information Council's Geospatial Maturity Assessment in 2021.



The State of Nebraska received a \$600,000 State Digital Equity Planning Grant from the National Telecommunications and Information Administration. The NITC/OCIO will be administering the grant in partnership with the Connect Nebraska Working Group.

Nebraska Information Technology Facts



**90% of Nebraska households
have an internet subscription**

Source: ACS 2020 5-year estimates



**85% of Nebraska farms & ranches
have an internet subscription**

Source: 2021 Farm Computer Usage and Ownership.



51%



**of Nebraska
farmers and ranchers
use precision agriculture
practices to manage
crops or livestock**

Source: 2021 Farm Computer Usage and Ownership



**5 advisory groups
assist the NITC:**

- Community Council
- Education Council
- eHealth Council
- GIS Council
- Technical Panel



Since the State and University of Nebraska began cooperatively bidding for statewide internet in 2007, the unit rate has been reduced by **99%**.

Nebraska K-12 entities pay **\$.08** per Mbps per month for internet access after E-rate discounts are applied.



The Network Nebraska statewide consortium is comprised of **294** entities and serves over **425,000** students and staff with internet, distance learning, and other network management services.

13%

**of employed Nebraskans
work from home
up nearly 3X from 2019**



Source: U.S. Census, 2021 & 2019 ACS 1-year estimates



**Over 100 standards and guidelines
have been adopted by the NITC**

Advisory Group Members

Technical Panel

Kirk Langer, Chair, Lincoln Public Schools

Bret Blackman, University of Nebraska

Jeremy Sydik, University of Nebraska

Ed Toner, Office of the CIO

Ling Ling Sun, Nebraska Educational Telecommunications

Community Council

Rod Armstrong, Co-Chair, AIM, Lincoln

Chris Anderson, City of Central City

Jay Anderson, NebraskaLink

Randy Bretz, TEDxLincoln Curator

Karen Connell, Columbus Public Library

Johnathan Hladik, Center for Rural Affairs

Rick Nelson, Custer Public Power District and Nebraska Rural Electric Association

Judy Petersen, Central Nebraska Economic Development District

Mary Ridder, Nebraska Public Service Commission

Debora Robertson, Kilgore Public Library, York

Danny Rockhill, BankFirst

Jason Tuller, University of Nebraska-Lincoln Extension

Mehmet Can Vuran, University of Nebraska-Lincoln

Holly Woldt, Nebraska Library Commission

Education Council

Bret Blackman, University of Nebraska-Omaha

Dr. Mike Baumgartner, Coordinating Commission for Postsecondary Education

Burke Brown, District OR-1 Palmyra/Bennet

Matt Chrisman, Mitchell Public Schools

Chad Davis, Nebraska Educational Telecommunications Commission

Dr. Ted DeTurk, ESU 2-Fremont

John Dunning, Wayne State College

Stephen Hamersky, Daniel J. Gross Catholic High School

Dr. Dan Hoelsing, Schuyler Community Schools

Trent Kelly, Hastings Public Schools

Chuck Lenosky, Creighton University

Greg Maschman, Nebraska Wesleyan University

Alan Moore, ESU 3-LaVista

Gary Needham, ESU 9-Hastings

Mary Niemiec, University of Nebraska

Tom Peters, Central Community College

Carla Streff, Northeast Community College

Ling Ling Sun, Nebraska Educational Telecommunications Commission

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

Dr. Paul Turman, Nebraska State College System

SuAnn Witt, Nebraska Department of Education

eHealth Council

Kathy Cook, Co-chair, Lincoln-Lancaster County Public Health Department

Marty Fattig, Co-Chair, Nemaha County Hospital

Kevin Borchert, CynHealth

Gary Cochran, University of Nebraska Medical Center

Liaquat Hossain, Ph.D., University of Nebraska at Kearney

Cindy Kadavy, Nebraska Health Care Association

Jan Evans, Blue Cross Blue Shield of Nebraska (nominated)

Ashley Newmyer, Nebraska Department of Health and Human Services, Division of Public Health

Dave Palm, University of Nebraska Medical Center

Jina Ragland, AARP (nominated)

Brian Sterud, Faith Regional Health System

Anna Turman, Catholic Health Initiative

Allison Wisco, Nebraska Department of Health and Human Services, Division of Medicaid and Long-Term Care

Linda Wittmuss, Nebraska Department of Health and Human Services, Division of Behavioral Health

Robert Wagner, CyncHealth

GIS Council

Ryan Werner, Chair, Department of Natural Resources

Tim Erickson, Vice-Chair, Clerk of the Legislature

Timothy Cielocha, Nebraska Public Power District

Charlie Lucas, Nebraska State Patrol

Claire Inbody, Department of Transportation

Nathan Martinez, Nebraska Emergency Management Agency

Jennifer Parmeley, Department of Health and Human Services

Lash Chaffin, League of Nebraska Municipalities

Vacant, Governor's Policy Research Office

John Beran, State Surveyor

Eric Herbert, Omaha Metro Area Sarpy County GIS

Doug Hallum, Conservation and Survey Division – UNL

Nancy Salmon, Hamilton County Commissioner

Christian Nielsen, Public Service Commission

Neil Dominy, Federal Liaison

John McKee, Jefferson and Saline County Emergency Management

Jeff McReynolds, Lincoln Metro Area, SSP Innovations

Chuck Wingert, Nemaha Natural Resources District

Dave Hattan, Office of the CIO

Devars Majumder, Nebraska Game and Parks Commission

Lesli Rawlins, Nebraska Geospatial Professional Association

Mike Schonlau, Member at Large - Omaha/Douglas County

Barb Oswald, Department of Revenue

Shani Mach, Department of Environmental Quality

Matt Tinkham, Member at Large – Surveyors

Baily Gibson, Member at Large – Advanced Agrilytics

Don Linquist, Member at Large – Linquist Technologies

Appendix

Policy Objectives and Review Criteria

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

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

Policy Objectives

Section 86-524(1) provides: "... It shall be the policy of the state to: (a) Use information technology in education, communities, including health care and economic development, and every level of government service to improve economic opportunities and quality of life for all Nebraskans regardless of location or income; (b) Stimulate the demand to encourage and enable long-term infrastructure innovation and improvement; and (c) Organize technology planning in new ways to aggregate demand, reduce costs, and create support networks; encourage collaboration between communities of interest; and encourage competition among technology and service providers."

Review Criteria

Section 86-524(2) provides: "In the review, the committees shall determine the extent to which: (a) The vision has been realized and short-term and long-term strategies have been articulated and employed; (b) The statewide technology plan and other activities of the commission have improved coordination and assisted policymakers; (c) An information technology clearinghouse has been established, maintained, and utilized of Nebraska's information technology infrastructure and of activities taking place in the state involving information technology, and the information flow between and among individuals and organizations has been facilitated as a result of the information technology clearinghouse; (d) Policies, standards, guidelines, and architectures have been developed and observed; (e) Recommendations made by the commission to the Governor and Legislature have assisted policy and funding decisions; (f) Input and involvement of all interested parties has been encouraged and facilitated; and (g) Long-term infrastructure innovation, improvement, and coordination has been planned for, facilitated, and achieved with minimal barriers and impediments."