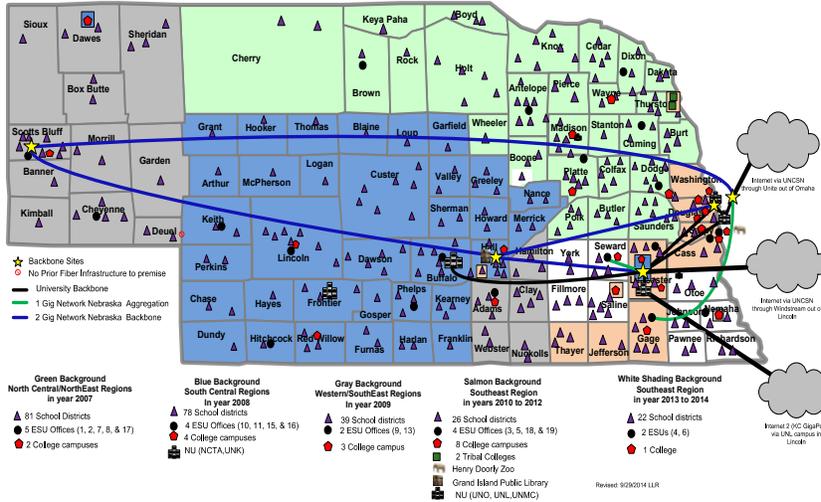


Network Nebraska Initiative

Education Council

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 disparate networks into a multipurpose core backbone extending from Omaha to Lincoln to Grand Island and Scottsbluff, with Ethernet clouds and aggregated Internet service extending out to the furthest corners of the state.



Collaborators:

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

Strengths/Assets

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

Challenges/Issues

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

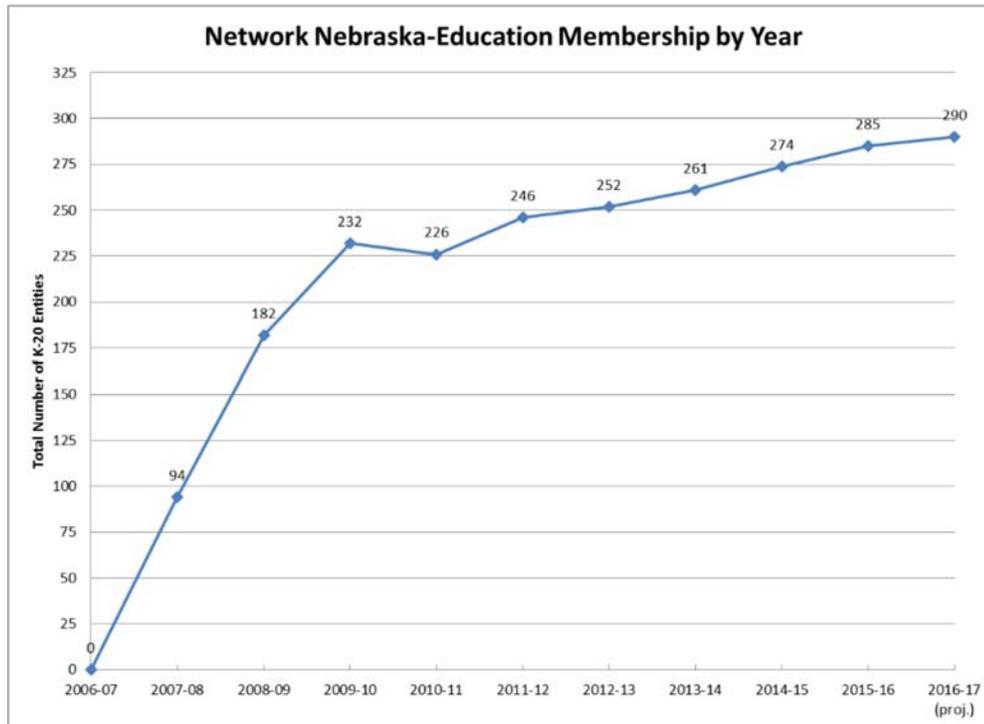
Recent Accomplishments:

- Increased public school district participation to 99.6% starting 7/1/2015
- Public higher education participation at 100% by 7/1/2012
- Achieved one of the lowest commodity Internet rates in the entire country, made possible through aggregation of demand and statewide bidding
- Achieved 100% retention of voluntary membership, now reaching 285 entities by 7/1/2015

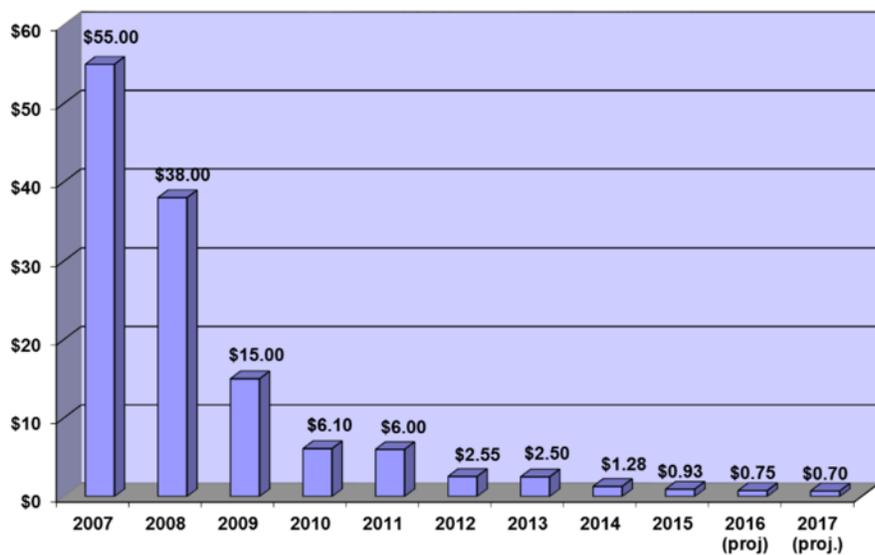
Recommendations:

- Continue this initiative
- Position Network Nebraska to provide services such as statewide identity management, learning management, content management for K-20 education entities

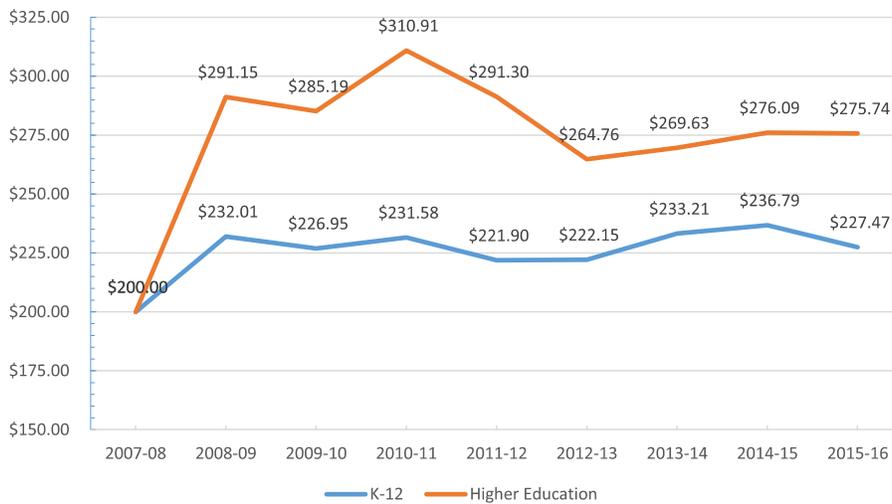
Metrics



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



Network Nebraska Monthly Costs per Entity



Network Nebraska Initiative—2015-17 Action Items

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

Lead: Education Council

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

Timeframe: 2015-17

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

Targets/Deliverables:

- 1.1. The NNAG Participant Criteria subcommittee will develop a strategy to accommodate community affiliate connections into Network Nebraska.
 - 1.2. The UNCSN team will use automated tools to monitor network utilization and uptime and develop a web-based graphic for real-time depiction of WAN circuits, backbone and Internet.
 - 1.3. UNCSN will implement incident management and change control frameworks appropriate to the staffing of Network Nebraska.
 - 1.4. NNAG and CAP will guide Office of the CIO (OCIO) decisions regarding network capacity, services, and reliability.
 - 1.5. Review and update existing security services and practices and develop a strategy for potential services.
2. **Action: The Education Council and NITC staff will serve as the communication hub for existing and potential new Network Nebraska Participants.**

Lead: Education Council/NITC Staff

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

Timeframe: 2015-17

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

NETWORK NEBRASKA--RECOMMENDED MEASURABLES:

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

Digital Education Initiative

Education Council

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

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

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

Collaborators:

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

Strengths/Assets

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

Challenges/Issues

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

Recent Accomplishments:

- Collaborators and stakeholders testified at the LB 1103 and LB 519 hearings
- ESU collaborators have developed BlendEd briefing materials
- The Nebraska Department of Education has made progress on the Digital Dashboard pilot project involving nine Nebraska school districts

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

Digital Education Initiative—2015-17 Action Items

1. **Action: Create Professional development opportunities for all Nebraska educators to maximize student success through the innovative uses of technology in teaching.**

Lead: Education Council

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

Timeframe: 2015-17

Funding: Additional funding may be required for this action item

Targets/Deliverables:

- 1.1 Partner with K-20 entities and organizations to establish communities of practice for curriculum development, effective pedagogical practices and shared experiences using multiple delivery modalities across all levels of education in Nebraska.

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

Lead: Education Council

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

Timeframe: 2015-17

Funding: Additional funding may be required for this action item

Targets/Deliverables:

- 2.1 Conduct a collaborative research project to identify existing infrastructure and pedagogical efforts in both secondary and post-secondary institutions.
- 2.2 Based on the results of the research project and other available resources, identify opportunities for collaboration to ease transition for students.
- 2.3 Identify key challenges for transitioning students and conduct an environmental scan to identify successful approaches to mitigate those challenges.
- 2.4 Create a guide for effective practices in the use of flexible learning technologies.
- 2.5 Develop a strategy to encourage vendors to implement data exchange standards in their products and services.

3. 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: 2015-17

Funding: Additional funding may be required for this action item

Targets/Deliverables:

- 3.1 Form a joint study group comprised of stakeholders from across the state to identify opportunities and actions to ensure equitable access for students.
- 3.2 Education Council will work in collaboration with other Nebraska stakeholders, such as the Community Council Broadband Initiative to find solutions for available, accessible, reliable, secure and affordable Internet access as related to academic success.
- 3.3 Identify and promote the use of accessible products and services in achieving equity of access.

DIGITAL EDUCATION--RECOMMENDED MEASURABLES:

- Number of professional development opportunities provided
- Number of educators impacted by professional development opportunities
- Published research regarding infrastructure, pedagogy, equity of access, and impact on learning.