

NITC Strategic Initiatives

The NITC has identified eight strategic initiatives, which address the NITC's goals of supporting the development of a robust telecommunications infrastructure; supporting community and economic development; and promoting the efficient delivery of government and educational services. These initiatives would materially advance the vision and statewide goals as identified by the NITC. 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 eight strategic initiatives, listed as supporting the NITC goals, are:

Supporting the Development of a Robust Telecommunications Infrastructure

Nebraska Statewide Telehealth Network. The Nebraska Statewide Telehealth Network will improve access to health care, continuing medical education, and bioterrorism training and alerts by connecting all rural and critical access hospitals with regional hospitals, public health departments, state public health laboratories, and the State of Nebraska. By July 1, 2005, most of the telecommunications lines will be installed, completing phase one of network development. Phase two will address issues such as training, maintenance, scheduling, operations, and governance. The successful implementation of the Nebraska Statewide Telehealth Network may also help lay the foundation for the development of a statewide electronic health record system and the adoption of health information technology. The Nebraska Statewide Telehealth Network is a collaborative effort led by the Nebraska Hospital Association.

Network Nebraska. The primary objective of Network Nebraska is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the state of Nebraska. The Division of Communications and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney and North Platte to the Panhandle. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through aggregation. Potential 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, and better use of public investments.

Statewide Synchronous Video Network. The primary objective of this initiative is to establish an Internet Protocol-based network that will interconnect all existing and future distance learning and videoconferencing facilities in the State of Nebraska. The 400+ interactive video facilities in Nebraska currently utilize a variety of video standards and bandwidth speeds that prevent interconnection between sub-networks. The Statewide Synchronous Video Network, as envisioned, would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites simultaneously. Benefits include greater sharing of educational courses and resources; more efficient use of available resources; one-to-

many videoconferencing capabilities for alerts and emergency situations; and collaborative development across various service agencies.

Supporting Community and Economic Development

Community IT Planning and Development. The primary objective of this initiative is to foster community and economic development in Nebraska communities through the effective use of information technology. The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Technologies Across Nebraska is a partnership of over 40 organizations working to help communities utilize information technology to enhance development opportunities. Technologies Across Nebraska has helped 21 communities develop local plans to utilize technology to enhance development opportunities. Technologies Across Nebraska's quarterly newsletter, TANgents, reaches over 1,000 individuals with an interest in technology-related development. Technologies Across Nebraska, in partnership with the Rural Development Commission, has also examined e-commerce use by Nebraska businesses and e-commerce training in the state.

Promoting the Efficient Delivery of Government and Educational Services

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

State Government Efficiency. The State Government Council will address multiple items improving efficiency in state government, including: shared services; standards and guidelines; and the project review process. The council has identified and is working to implement seven "shared services" for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts. Finally, the council will review and recommend improvements to the IT project review process. Benefits of these activities include lower costs, easier interoperability among systems, greater data sharing, and improved services.

E-Government. Through the use of technology, state agencies can enhance information sharing, service delivery, and constituency and client participation. Benefits include improved services for citizens and businesses, and increased efficiency and effectiveness for agencies.

Security and Business Resumption. This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources. Benefits include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Each of these strategic initiatives are discussed in greater detail in the following section.

Strategic Initiative

Nebraska Statewide Telehealth Network

Objective

The Nebraska Statewide Telehealth Network will improve access to health care, continuing medical education, and bioterrorism training and alerts by connecting all rural and critical access hospitals with regional hospitals, public health departments, state public health laboratories, and the State of Nebraska.

Description

The Nebraska Statewide Telehealth Network is an interactive video and data network that provides integration among the hospitals, public health departments public health laboratories and other entities across the entire State of Nebraska. The major functions of the Network are to improve quality and access to care, particularly in rural Nebraska, to provide patient, provider and community education and to provide another communication source in the event of a natural, man-made or terrorist emergency.

The Nebraska Statewide Telehealth Network is a collaborative effort led by the Nebraska Hospital Association. Partners include:

- Nebraska Hospital Association
- Nebraska hospitals
- Nebraska Public Health Departments
- University of Nebraska Medical Ctr.
- Universal Service Administrative Company
- University of Nebraska System
- Nebraska Information Network
- Nebraska telecommunications
- Central Nebraska Area Health Education Center
- Northern Nebraska Area Health Education Center
- Nebraska Medical Association
- Nebraska State Government
 - Lt Governor's Office
 - Nebraska Public Service Commission
 - Nebraska Division of Communications
 - Nebraska Health and Human Services Section
 - Bioterrorism Preparedness and Response Section
 - Office of Rural Health
 - Nebraska Information Technology Commission
 - Nebraska Office of the Chief Information Officer
 - Nebraska Department of Education

By July 1, 2005, most of the telecommunications lines will be installed, completing phase one of network development. Phase two will address issues such as training, maintenance, scheduling, operations, and governance. A partnership with the Nebraska Medical Association has been formed to promote use of the network to

physicians. The Telehealth Network Education Subcommittee is working to create a listing of educational offerings provided over the network.

The successful implementation of the Nebraska Statewide Telehealth Network may also help lay the foundation for the development of a statewide electronic health record system and the adoption of health information technology. President Bush has made the adoption of health information technology including electronic health records a national priority.

Benefits

A telehealth network which connects all hospitals, providing access to consultations with medical specialists, continuing medical education, and bioterrorism training and alerts is critical to the provision of health care in rural areas of the state. There is a lack of specialist services in rural areas, particularly mental health services. Telemedicine has proven to be an effective way to provide consultations with specialists. Currently mental health consultations and teleradiology are the two most common types of specialist services provided via telemedicine. Rural health care providers also have fewer opportunities for continuing medical education in their community and must often drive several hours to attend training. Continuing medical education is currently being provided via telehealth in Nebraska and has proven to be an effective and efficient method of delivery. It is also critical that all hospitals are connected to a telehealth network in order to prepare health care providers to respond quickly to bioterrorism threats and other public health risks.

The widespread adoption of health information technology (including electronic health records) is expected to reduce health care costs for employers, reduce costs and increase efficiencies for third party payers, and to improve the quality of health care.

Strategic Initiative

Network Nebraska

Objective

The primary objective of this initiative is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska. The Division of Communications and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney, and North Platte to the Panhandle. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through local aggregation.

Description

The major components of this initiative include:

- Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e., local and state government, public and private K-12 and higher education, health care institutions) to purchase the amount of service that the entities need, when they need it, on an annual basis;
- Establishment of a catalog of value-added applications that enables eligible entities to pick and choose services that are pertinent to them (e.g., Internet1, Internet2, and videoconferencing);
- Implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;
- Establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts.

Benefits

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:

- Lower network costs;
- Greater efficiency for participating entities;
- Interoperability of systems providing video courses and conferencing;
- Increased collaboration among all K-20 educational entities;
- New educational opportunities;
- Competitiveness with surrounding states; and
- Better use of public investments.

Strategic Initiative

Statewide Synchronous Video Network

Objective

The primary objective of this initiative is to establish an Internet Protocol-based network that will interconnect all existing and future distance learning and videoconferencing facilities in the State of Nebraska. Nebraska currently has approximately 300 high school distance learning classrooms, 30 higher education distance learning classrooms, over 50 state agency videoconferencing rooms, and (soon-to-be) over 60 videoconferencing facilities for telehealth in local and regional hospitals. More growth and proliferation of distance learning and videoconferencing equipment and sites is expected in the near future. These 400+ interactive video facilities currently utilize a variety of video standards and bandwidth speeds that prevent interconnection between sub-networks. The Statewide Synchronous Video Network, as envisioned, would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites simultaneously.

Description

The major components of this initiative include:

- A single, interconnected synchronous video network with various levels of authorization and traffic prioritization;
- An event clearinghouse and scheduling system that would allow registration for interactive video events;
- Development of a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic.

Benefits

Interactive videoconferencing and distance learning developed rapidly across Nebraska in the 1990's. Prior to recognized video standards or a coordinating body, entities were free to adopt any equipment, standard, or system that met their needs. Little thought was paid to interconnectivity or compatibility. Consequently, Nebraska became a state of disparate, redundant systems that prevented multi-jurisdictional collaboration or maximization of educational opportunities outside of a particular geographic boundary or system.

The enterprise benefits of an interconnected video system include:

- Greater sharing of educational courses, events, and training across sub-network boundaries, irrespective of geography;

- More efficient use of available resources—more classrooms and sites are available within less distance of the user at more convenient times;
- One-to-many videoconferencing capabilities for news alerts, bioterrorism alerts, or other emergency uses;
- Collaborative development across various service agencies (i.e., medical services to schools, and adult and continuing education opportunities).

Strategic Initiative

Community IT Planning and Development

Objective

The primary objective of this initiative is to foster community and economic development in Nebraska communities through the effective use of information technology.

Description

The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Technologies Across Nebraska is a partnership of over 40 organizations working to help communities utilize information technology to enhance development opportunities. Technologies Across Nebraska facilitates technology-related development by building partnerships, leveraging resources, and strengthening community capacity.

For the past three years, Technologies Across Nebraska has helped 21 communities develop local plans to utilize technology to enhance development opportunities through the IT Planning and Mini Grant program. Through the program, participating communities and regional groups receive a \$2,500 mini grant and assistance from the Nebraska Rural Initiative's Communities of the Future Team and the Nebraska Information Technology Commission. The Community Technology IT Assessment and Planning Workbook helps simplify the assessment and planning process for communities. The impact of the program has been significant. Last summer, Edgar, received a \$250,000 Community Development Block Grant to build a community center which will include a technology center. Crawford now has a community technology learning center and wireless broadband service thanks to a \$154,000 grant from the USDA Rural Utilities Service. In Keya Paha, Brown, and Rock Counties, the region now has more class offerings, two community Web sites, and a new technology retail store. In West Point a videoconferencing system has been installed for use by area businesses.

Technologies Across Nebraska's quarterly newsletter, TANgents, reaches over 1,000 individuals with an interest in technology-related development. Articles from TANgents have been reprinted by several organizations including the Government Technology Magazine. Readers find TANgents a valuable source of information. One reader commented, "TANgents plays an important role in keeping Nebraskans aware of development and new opportunities to improve IT options for rural citizens in the State. I hope you will continue to provide this service." A recent survey of readers found that 89% felt reading TANgents has helped them learn about available resources; 79% indicated that reading TANgents has helped them better understand the importance of IT-related community and economic development.; and 69% indicated that reading TANgents has helped them understand how to better incorporate information technology into my community's community and economic development processes.

Technologies Across Nebraska, in partnership with the Rural Development Commission, has also examined e-commerce use by Nebraska businesses and e-commerce training in the state. Nebraska firms appear to be adopting e-commerce at a slower rate than firms nationwide. A 2004 survey of Nebraska businesses found that only 31% of small businesses had a Web site. In comparison, 45% of small businesses nationwide had a Web site in 2001.

Benefits

The potential benefits of information technology to communities, businesses, health care, local government, education, and citizens are numerous:

- Communities can use the Internet to publicize community events, communicate with former residents, and advertise available commercial sites.
- Businesses can use information technology to decrease costs, increase sales, and provide better customer service.
- Local governments can use information technology to more efficiently deliver services and provide information to citizens.
- Students can take advanced placement courses or study a foreign language through distance learning.
- Through telemedicine, patients can receive medical care from specialists and doctors can participate in continuing medical education without leaving their rural communities.
- Citizens can easily access the minutes and agendas of local governments, update their skills through continuing education, and share photos with distant family members.

The effective use of information technology can improve a community's quality of life and can enhance economic development efforts.

Strategic Initiative

Digital Education

Objective

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 heretofore have either been developed mostly at the local level or have not been replicated statewide.

The initiative 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.

Description

The Digital Education Initiative will recognize that many standalone and disparate software applications are needing to undergo integration and convergence so that an instructor can: 1) research digital content, 2) construct a lesson or unit on a computer in a series of virtual or face-to-face or videoconferencing activities using rich multimedia, 3) assess the learners electronically, and then 4) move the student data to a database or data warehouse, 5) export relevant achievement and attendance data to a web-based student information system so parents, or the students themselves, can view it from home; 6) export data to a statewide student information system; and then finally 7) make “real-time” instructional decisions based upon the recently documented progress of the learners.

The primary components of the Digital Education Initiative would include:

1. A statewide telecommunications network capable of transporting voice, video, and data between and among all education entities [see Network Nebraska];
2. Ample bandwidth for local and regional transport to accommodate present and future education technology applications [see Statewide Synchronous Video Network];
3. Distance insensitive Internet pricing for all Nebraska education entities;
4. Development of a statewide eLearning environment so that every teacher and every learner has access to a web-based, digital curriculum;
5. 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;
6. Synchronous videoconferencing interconnections between all schools and colleges [see Statewide Synchronous Video Network];
7. The means to coordinate and facilitate essential education opportunities for all students through a statewide student information system; and

8. Regional PreK-20 education cooperatives that vertically articulate educational programs and opportunities.

Benefits

Establishing a Digital Education Initiative is critical to Nebraska's future. Internet has gone from a "nice to have" educational application of the 1990's to the "must have" mission critical application of the 2000's. So much of what teachers, students, and administrators do today is tied to Internet-based information and communication. Nebraska's ranking of 6.5 students per Internet-connected computer in the classroom seems to compare favorably with the U.S. average of 8.0 students per Internet-connected computer. (Technology Counts 2005 Report) However, it still makes it challenging for students to complete their digital assignments when they are expected to share six or seven students to a computer.

The benefits of the Digital Education Initiative would include:

- Greater technical capacity for schools and colleges to meet the increasing demands of a more diverse customer base;
- More equitable Internet access for Nebraska schools and colleges that is not dependent upon distance-sensitive pricing;
- A comprehensive web-based approach to curriculum mapping and organization and automation of student assessment data gathering and depiction;
- The availability of rich, digital media to the desktop that is indexed to Nebraska standards, catalogued, and searchable by the educator or student;
- A more systematic approach to synchronous video distance learning that enables Nebraska schools and colleges to exchange more courses, staff development and training, and ad hoc learning opportunities.

Each of the components of the Digital Education Initiative are vital to future student success in Nebraska. Components one through six are especially pertinent in that these applications and services provide the foundation for capacity building in our schools and colleges.

Strategic Initiative

State Government Efficiency

Objective

The State Government Council will address multiple items improving efficiency in state government, including: shared services; standards and guidelines; and the project review process. The council has identified and is working to implement seven “shared services” for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts. Finally, the council will review and recommend improvements to the IT project review process.

Description

The primary components of this initiative are:

1. **Shared Services.** The State Government Council has identified a number of potential shared services. The council chose seven shared services for further study and implementation at this time. Interested agencies are meeting to further develop these services.
 - Blackberry
 - Business Continuity / Disaster Recovery
 - Directory Services
 - E-mail
 - Enterprise Maintenance / Purchase Agreements
 - Field Support Services
 - SAN (Storage Area Network)
2. **Standards and Guidelines.** The State Government Council, working with the Technical Panel, will continue to develop standards and guidelines to better coordinate state agency technology efforts.
3. **IT Project Review Process.** The State Government Council and Technical Panel will review and recommend improvement to the IT project review process. This process is primarily used in the review of IT projects as part of the state budget process.

Benefits

This initiative will provide the following benefits:

- Lower costs;
- Easier interoperability among systems;
- Greater data sharing;
- Improved services.

Strategic Initiative

E-Government

Objective

The State Government Council has adopted and annually updated the *E-Government Strategic Plan for Nebraska State Government*. The principles guiding the plan are:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;
- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;
- Agencies have responsibility for performing statutory functions, which means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve the greatest benefit;
- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;
- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues; and
- E-government is defined as the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships.

Currently, the plan includes 26 specific actions and recommendations for implementing e-government. The plan will be revised and incorporated into this strategic initiative.

Description

The three goals for e-government are:

1. **Government-to-Citizen and Government-to-Business.** Anyone needing to do business with state government will be able to go to the state's Web site, easily find the information or service they need, and if they desire, complete all appropriate transactions electronically. The plan contains 17 action items in the following areas: citizen portal enhancement; business portal enhancements; education portal; and forms automation.
2. **Government-to-Government.** State agencies will improve services and increase the efficiency and effectiveness of government operations through

collaboration, communication, and data sharing between government agencies at all levels.

3. **Government-to-Employee and Internal Operations.** Agencies will examine internal operations to determine cost-effective e-government applications and solutions. The purpose of these efforts is to improve efficiency and effectiveness by replacing manual operations with automated techniques.

Benefits

The *E-Government Strategic Plan* includes a discussion of the benefits of e-government and a detailed list of actions and recommendations. The primary benefits are:

1. Improved services for citizens and businesses.
2. Increased efficiency and effectiveness for agencies.

Strategic Initiative

Security and Business Resumption

Objective

This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the state's information technology resources. Information security will serve statutory goals pertaining to government operations and public records. These include:

1. Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Nebraska Revised Statutes Sections 28-901 and 84-1201);
2. Protect safety and integrity of public records (Nebraska Revised Sections 28-911, 29-2391, and 84-1201);
3. Prevent unauthorized access to public records (Nebraska Revised Statutes Sections 29-319, 81-1117.02, and 84-712.02);
4. Insure proper use of communications facilities (Nebraska Revised Statutes Section 81-1117.02); and
5. Protect privacy of citizens (Nebraska Revised Statutes Section 84, Article 7).

Description

Major activities include:

1. Developing an overall security strategy, including policies, security awareness, and security infrastructure improvements;
2. Network security standards and guidelines;
3. Education and training;
4. Authentication (directory services project);
5. Disaster recovery for information technology systems (as part of a broader business continuity planning);
6. Compliance with federal privacy and security mandates;
7. Security assessments.

Benefits

Benefits will include:

- Lower costs by addressing security from an enterprise perspective;
- Cost avoidance;
- Protecting the public trust.