STATE OF NEBRASKA
NEBRASKA INFORMATION TECHNOLOGY COMMISSION
AND OFFICE OF THE CIO

AGENCY INFORMATION TECHNOLOGY PLAN
FOR FY 2007-09 BIENNIAL BUDGET

Agency	University of Nebraska
Date	August 2006

AGENCY CONTACT INFORMATION

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Email Contact List

The Office of the CIO will be updating an email list of agency IT contacts. The list will be used to provide general IT related updates and information to agencies. Use the space below to list any individuals in your agency you would like included on the list:

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Preface

This document is submitted by the University of Nebraska to the Nebraska Information Technology Commission (NITC) for review by the State Chief Information Officer and pertinent state budget analysts. The University welcomes these biennial NITC reviews and exchanges, using them as an opportunity for resource coordination and further State/University partnership development.

If a comparison is made between the four NU campus' strategic initiatives for Information Technology (IT) and the NITC's eight strategic initiatives, a remarkable similarity is evident. The recent successful deployment of **Network Nebraska** further illustrates that the IT partnership between the State and the University was founded upon these similar missions, goals and objectives.

Readers should note that the majority of the information technology project expenditures throughout our system are accomplished with previously appropriated and/or non-state funds, and few IT-specific projects arise to the level of initiating requests for new state appropriations. This document's purpose is to alert reviewers to these few major new IT expenditure requests for planning and budgeting purposes. However, it may be equally important for reviewers to have access to NU's more extensive IT documents that are prepared by the four campuses and Central Administration. These existing documents include campus information technology plans, strategic goals and periodic reports of IT accomplishments to our campus Chancellors and University President. You may find these resources by linking to –

University of Nebraska at Kearney
IT Plan and Accomplishments: http://its.unk.edu/technologyplanning
IT Services: http://www.unk.edu/offices/its/

University of Nebraska at Lincoln
IT Plan: http://www.unl.edu/is/about/2005ISstratplan2.pdf
Report of IT Priorities: http://www.unl.edu/is/about/mission2006.shtml
IT Services: http://www.unl.edu/is/

University of Nebraska Medical Center
IT Plan: http://webmedia.unmc.edu/its/strohben/PLANS/ITSUNITPLAN.pdf
IT Accomplishments:
http://webmedia.unmc.edu/its/strohben/PLANS/Accomplishments_05-06.pdf

University of Nebraska at Omaha
IT Plan: http://its.unomaha.edu/reports.php
IT Services: http://its.unomaha.edu/index.php

University of Nebraska Central Administration
IT Plan: http://csn.nebraska.edu/it_reports/reports.shtml
NU Strategic Framework: http://www.nebraska.edu/news/strategicframework2005.pdf
IT Services: http://csn.nebraska.edu/index.shtml

Introduction

The University of Nebraska consistently strives for excellence in the implementation of technology programs, networks and services. Emerging technologies create new strategic opportunities. The University of Nebraska prides itself as an early adopter in embracing new trends and capabilities as these trends and new opportunities align with our strategic missions and priorities. The existence of constant change and renewal in our arena requires continuous priority discussions and effective decision making by the IT and institutional leadership.

The University has built and maintains an advanced technology environment that supports the university's academic, research and business operations efficiently and reliably. The campus IT organizations focus on ensuring that students, faculty and staff are provided with necessary tools, classrooms and network infrastructures to support successful learning and working experiences. The members of our University community work and study with the confidence that data is secured, that no business transactions fail, and that every digital exchange is successful.

At the University of Nebraska information is considered to be a strategic organizational asset and continuous investments must be planned for its care and management. The economic return on new investments has proven huge in the IT arena. Work place efficiencies, empowerment of individuals (elimination of 'back office' computing environs), and the deployment of totally new instructional tools (classrooms and at-a-distance) are but a few examples of the reinventing of higher education. Appropriators ask for specific purchase plans for 2008-2009, many guess, but in truth no one can say what will be available and necessary in light of the rapid changes that occur in the IT arena. We can, however, say with confidence that appropriators are on solid ground if they do plan for on-going investments in technologies. Our clientele expectations are high, the risks are low, and the rewards are many.

This document and the linked campus plans will introduce a wide variety of IT projects, each illustrating the significant differentiation among the missions of our four campuses, but with that said, there remains a solid foundation within the enterprise architecture (see figure 1) with three major areas for new investment requests. All require thoughtful consideration of their impact on the future of the University of Nebraska system. Each has become a critical area for investments via differing pathways. One is based on need and the expectations of future students and faculty; another because of aging facilities and infrastructure; and the last arises from clientele privacy expectations and unfunded federal mandates for security compliance.

Critical Areas Identified for Investments

- **Student Information Systems**
- **University-wide IT Infrastructure- continual technology refreshment of the classrooms and IT networks including connections to national lambda rail research communities**
- **Security and Privacy Assurance and Compliance**

Enterprise Architecture

Gartner defines Enterprise Architecture *as "Making independently designed application systems work together."*

Our University is an information intensive environment. Our faculties rely on access to current data, information, and knowledge daily for their scholarship, instruction and research. Students also consume information of all types – administrative (course schedules, financial aid, Blackboard), course information and assignments, and personal data such as that contained in e-mail and Blackboard work groups. Staff collects data and manages information for a wide range of business activities and decision making purposes. Various constituents use our systems to obtain data and information for decisions about admissions, registrations, room scheduling, the number of meals to prepare, which courses to take, what library material to access, and which faculty members will be awarded tenure, as examples.
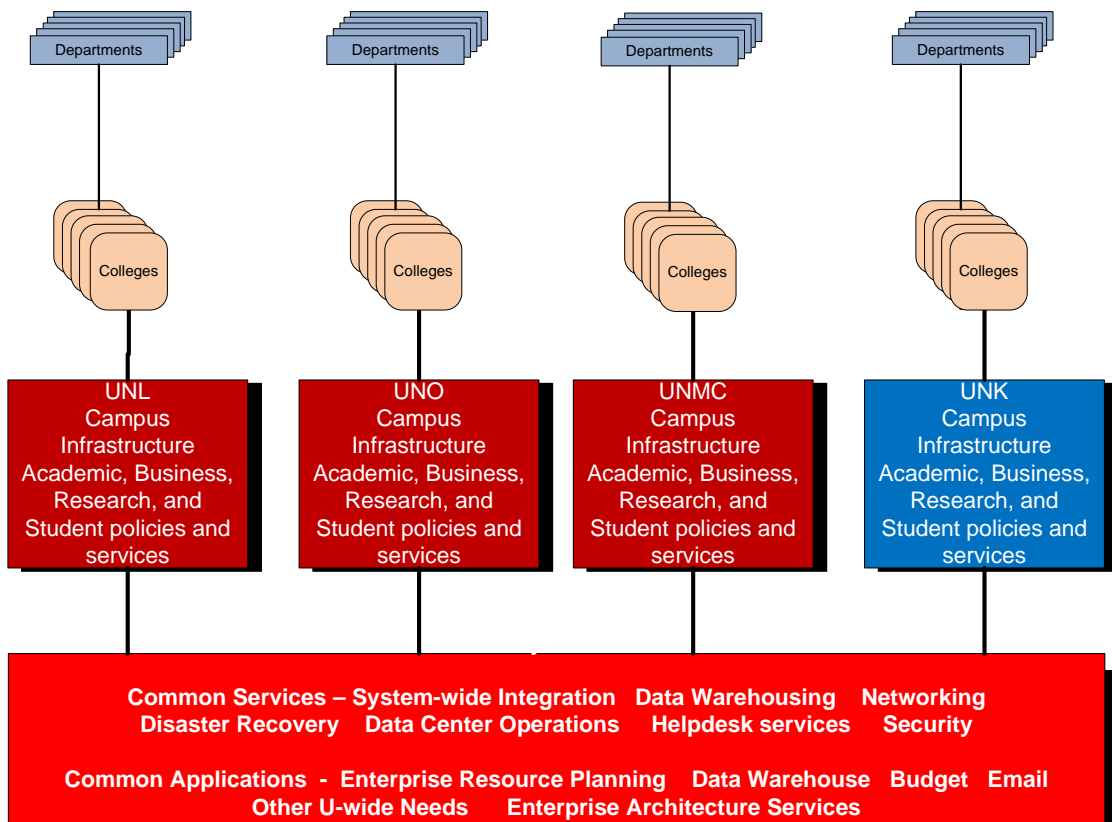
The campuses and the University of Nebraska Computing Services Network (CSN) work together in an attempt to balance the ability to scale solutions to a larger community of users while still preserving the uniqueness of each campus and its requirements and policy. An Enterprise Information Architecture is an attempt to favor those technologies and systems which can scale to large numbers of users while minimizing the overall cost. Enterprise Information Architecture is also an endeavor to balance the cost of developing or implementing more generalized solutions that cover a wider portion of a problem space and user community against the costs of building and using the more limited functionality.

Student Information Systems

The priority information systems project for the University during the FY 2007-09 Biennium is the selection and implementation of a new Student Information System.

The University of Nebraska Student Information Systems (SIS) at the UNL, UNK and UNO campuses were implemented in the 1980's using a product known as SCT's SIS Plus software. Over the last 20+ years, they have become, by necessity, a patchwork of logic changes and new services that were required to support the changing academic missions of the campuses. The old SIS continues to serve the university, yet it has reached the point of diminishing returns in terms of vanishing vendor support and the NU personnel and capital investments required to maintain the current system. In addition, this system is not structurally sophisticated enough to address changes and new services required to meet current needs, and future requirements of the University.

Replacement of these systems is also necessary in light of the vendor's decision to stop supporting the software in the 2009 timeframe. The university will be at significant risk if we do not replace this key piece of infrastructure that contains the policies and procedures for the campuses and the University.

The current SIS systems are built on COBOL, DB2 and mainframe technology. The ability to support this technology is diminishing as this workforce is retiring and there is very limited new workforce with this skill set to replace them. Moving to a new system will not only update the technology but it will make a whole new generation of technology tools available to the University of Nebraska.

Limitations of the current SIS include minimal capacity to implement seamless business processes required by the university, and outdated supporting technology. As a result, Colleges and functional areas may be adding their own technical staff to build and maintain "shadow" auxiliary student systems to meet their requirements, raising issues of consistency, liability, privacy and inconsistent service to our students.

The University of Nebraska must plan the replacement of the current system immediately to be able to test and implement a new system while the current system still functions. Replacing the current SIS with a new vendor supported system would address these limitations and allow us to focus on providing service to the students and faculty of the University.

The current approach to funding this effort represents a first foray into including an Infrastructure Project as part of the Capital Construction Budget Request. This action will require discussion and coordination with the Legislative Fiscal Office, the Department of Administrative Services and the Coordinating Commission for Post-Secondary Education. It is intended to also work concurrently with the State College System, as they face similar problems with their SIS systems. Discussions will include compatibility of needs, operating systems and long-term goals.

This effort is in alignment with the NU President's 2005-2008 Strategic Planning Framework goals:

> **The University of Nebraska will provide the opportunity for Nebraskans to enjoy a better life through access to high quality, affordable undergraduate, graduate and professional education.**
> - The upgraded SIS will provide 24/7 access for undergraduate, graduate and professional students.
>
> **The University of Nebraska will be cost effective and accountable to the citizens of the state.**
> - The upgraded SIS will provide the technology needed for more accurate, timely, and comprehensive data in support of all NU students.

The replacement of this SIS system will, as a minimum:

- Include: admission, financial aid, registration, student records, degree audit, housing, and student billing.
- Support: curriculum planning, predictive modeling, reporting, and "what if" analysis of enrollment management.
- Provide: a 24/7 service-oriented student and faculty portal.
- Has the potential to: Meet Graduate Division and Summer Sessions/Extension student records needs.

University-wide IT Infrastructure for Teaching, Research & Outreach

Facility upgrades

Teaching and learning in the new digital landscape will seriously impact future technology budget considerations. The lofty expectations of the millennial generation of students and new faculty demand that the University of Nebraska continues its history of investments in the upgrading of research space, digital media production services, campus classrooms, distance education production facilities, and its growing wireless access infrastructure.

To facilitate adding new technology, each campus has implemented "smart classroom" programs and has redirected budget dollars towards the continuing process of renovating teaching space. Over the next few years, all University of Nebraska classrooms, labs and teaching spaces will need to be migrated from traditional lecture rooms to digitally enabled environments. These rooms contain the latest in audiovisual educational tools with several pieces of equipment for digital-aided instruction. Those items include digital projectors, visual presenters, computers linked to high speed networks, teaching workstations, wireless connectivity.

Network infrastructure

The University involvement in networking covers everything from the local campus improvements to National and International research network connections. Each campus is involved in the local implementation/evaluation of various levels of converged

networking (Voice, Video and Data), wireless networks, and infrastructure/fiber upgrades.

The University is also involved in all facets of state wide networking in Nebraska. This includes connectivity with all of the University Research Centers and many of the University County Extension Offices. The University played a critical role in the development of **Network Nebraska** and its on-going management. Network Nebraska includes a K-20 education network with hundreds of locations, thousands of users and enabled a nationally recognized telehealth network that provides over one hundred connections to hospitals and health departments across the State. The University will also play a major role in the implementation of **LB1208** which will replace the current K-12 distance education network with newer technologies based on high speed IP networking.

Fiber Optic networking infrastructure is a critical and core component of these network initiatives and is needed to support the applications of tomorrow, including supercomputing research, disaster recovery, bioinformatics, and high bandwidth applications such as video. Fiber cable improvements are needed on the campuses, across the state and out to the various national locations we do research with.

- **Fiber Connection to National Research Networks** - This investment initiative establishes a high-speed network connection between UNL and the Internet2 backbone network in Kansas City, Missouri to provide infrastructure for research growth. The University participates in several National/International research initiatives that require a high speed network infrastructure including participation in Internet 2, Abilene, National Lambda Rail, as well as several other major initiatives. The rest of the State education network may also be allowed to access some of the national networks as well.

- **University Network** - Lincoln to Omaha Network Upgrade - There are increasing needs to take the next step in improving the connections between the Lincoln and Omaha campuses. This includes research, voice over IP, disaster recovery, etc. These applications will drive the need for network speeds 100 times faster than we have today.

- **University Network** - Upgrade Network Connection to State – As we increase the amount of data traffic between the University and the State, we also need to upgrade this connection to the latest technology and speeds. This will become even more critical as we implement options to share computer room infrastructure for disaster recovery.   Additionally, this network improvement will provide greater support for the Disaster Recovery partnership between the university and the State.

Network infrastructure for new campus construction, including residence halls and numerous newly built or renovated teaching/research facilities- - New facilities will be opening on multiple NU campuses and at our off campus research centers over the next four years. The network infrastructure (wired and wireless) must be engineered, designed, purchased, installed and then maintained over the life of the facilities. Often, these IT costs, one time and on-going, are not charged to the new construction, but must come from other sources, including housing fees, computer connection fees and state appropriations including both current budgets and future capital construction requests.

Information Security and Personal Privacy

A priority for the University of Nebraska will be the development of a structured, yet practical, method for coordinating a comprehensive information security program across the University. NU is seeing increased clientele and staff expectations in the many areas of information security, and the arrival of numerous federal mandates (most of which are unfunded mandates) have resulted in a spiraling cost prediction for improved information security. In the 2003/2004 fiscal year, the University of Nebraska created a new Information Security Officer (ISO) position that is responsible for the development of a University-wide information security program. Working closely with the campuses, the ISO has assisted in improving the overall information security environment for the University of Nebraska.

As recommended by recent University administrative audits, the University will continue to focus on developing a proactive Information Security Program in five key areas:

- Information Security Governance
- Information Security Risk Management
- Secure Information Environment
- Secure Access and Identification
- Secure Applications

Specific mechanisms continue to be improved to ensure IT security and the protection of privacy at the University. Some details will depend in part upon the development of policy, but investments in security mechanisms are required for any policy to be effectively implemented. These include risk assessment, audit and audit controls to verify that policy is being followed.

In addition education and awareness must be constantly employed to ensure that parties are aware of their responsibilities and to help engage everyone involved in managing and using information and IT resources as part of the University's security plan.

A specific aspect of security and one that is being addressed is Identity Management. This project includes the continued deployment of a unique ID, mechanisms for authentication, authorization and access management for digital content.

An example of an unfunded mandate is the ordered compliance with CALEA, the Communications Assistance for Law Enforcement Act. The courts have ruled that the Internet shall be treated as the phone system always has been -- law enforcement shall have access to network use in attempts to thwart crimes. Compliance is required by May 2007, however specifications for compliance are not yet available and costs to the University are unknown. The level of compliance required by higher education will become clearer by the end of 2006.

These efforts are in alignment with the NU President's 2005-2008 Strategic Planning Framework goals:

> **The University of Nebraska will provide the opportunity for Nebraskans to enjoy a better life through access to high quality, affordable undergraduate, graduate and professional education.**
> - The facilities and networking upgrades will provide IT infrastructure improvements needed to support the growing service demands of our faculty, staff and students.
> - Disaster recovery and IT contingency planning will assist in reducing the cost and service disruption that could occur in the event of a major disaster.
>
> **The University of Nebraska will be cost effective and accountable to the citizens of the state.**
> - Security improvements and awareness will assist in providing improved privacy protection of sensitive data and systems.

1. Fiscal Year 2006-07 (Currently Budgeted)

1.1. Continuing Current Operations Levels

[This portion of the document describes the elements and associated costs that are associated with maintaining the agency's current Information Technology Operations level. This usually consists of the staff, technical training, hardware, and software necessary to continue providing the same IT services, at the same level, for the agency IT customers (internal and external). If an agency is large enough to have a dedicated IT staff, this section should include line item(s) identifying costs for administration and management of the agency's information technology organization.]

University IT Spending Categories - FY06-07

Item	Estimated Cost
Salary/Benefits	$20,597,298
Operating Expense/Services (UNL)	$3,365,795
Operating Supplies (UNL)	$1,744,687
Dues/Subscriptions/Memberships/Fees	$167,196
Contracted Services & Inter-departmental Charges	$78,340
Office Expenses	$79,041
Travel/Professional Development	$402,661
Computing Supplies/Equipment	$581,022
Equipment/Hardware	$1,828,982
Capital Outlay (UNL)	$1,536,406
Communications	$676,900
Software & Software Maintenance	$1,869,281
Hardware Maintenance	$1,022,250
Repair & Maintenance / Building Rental	$88,809
Printer Rental & Forms	$182,440
Service Reimbursements	$2,926
Campus Improvement Allocations	$1,122,585
GRAND TOTAL	**$35,346,620**

Notes:
(1) These costs are best-estimate budget figures of state-appropriated funds. They were developed prior to actual budget submission and may differ from actual budget submissions for the fiscal years represented in this document.
(2) These line item estimated costs include the central Information Technology offices at UNK, UNL, UNMC, UNO and UNCSN, and does not include IT costs that may be spent at the department or business unit levels.

1.2. Projects Currently Active

[This portion of the document describes the active IT projects that are currently being worked on. It usually contains a description of the project, the current project status, projected completion date and costs versus original planned dates and costs.]

Project Title	Current Status (status; completion date)	FY2006-07 Costs	Total Project Cost
General System wide Projects			
University network upgrades & enhancements Upgrades to several primary routers and switches throughout the University Network.			
Grand Island router	In-progress; June 2007	40,000	109,000
County Extension Offices	In-progress; June 2007	48,000	112,000
Mead Network Connection	In-progress; Sept 2007	30,000	40,000
T1 Network Upgrades	In-progress; Sept 2007	40,000	50,000
University network management upgrades Add network probes, upgrade network management software and implement.			
Add Network Probes	In-progress; June 2007	25,000	55,000
Implement New Network Mgmt	In-progress; June 2007	55,000	90,000
Upgrade Network Mgmt software	In-progress; June 2007	45,000	75,000
University server upgrades & enhancements Several application and business servers require replacement and upgrading due to equipment age.			
Upgrade Intel Servers	In-progress; June 2007	75,000	250,000
Implement Virtual Servers	In-progress; June 2007	50,000	90,000
University of Nebraska Identity Management Development and support of a system wide identity management system that includes a common NU-ID. IdM project objectives: • Replace SSN with unique university wide ID • Develop architecture for u-wide IdM • Assist the campuses NU-ID conversion and usage of the NU-ID. • Provide the process and methods to securely authenticate university users to resources and systems they are authorized to use.	In-progress; June 2007		150,000
Management software	In-progress; June 2007	25,000	
External consulting support	In-progress; June 2007	10,000	
Additional servers	In-progress; June 2007	20,000	
Security Hardware and software – the implementation of security hardware and software including virus protection software to protect university data and systems.	In-progress; June 2007.	N/A	N/A
Disaster Recovery Project – the installation and setup of primary email and DNS servers to provide backup to university email. This project also includes the planning of the Disaster Recovery partnership between the university and the state of Nebraska.			
Backup Email server	In-progress; Dec 2006	25,000	50,000
Backup DNS server	In-progress; Sept 2006	10,000	30,000

Project Title	Current Status (status; completion date)	FY2006-07 Costs	Total Project Cost
University Wide IT Infrastructure initiatives -	In-Progress		Approx $5,400.000 over five years
Research Fiber Networks - Upgrading all facilities and networks including connections to Internet 2 and the National Lamda Rail research communities is in progress. The University of Nebraska's future in high end research is dependent on the availability of this high speed fiber access.		$ 821,400	
Campus Digital Network Upgrades – Upgrade of campus digital networks to support greater research and academic initiatives		Est $350,000	
Security – Continued upgrade of campus security. Includes firewalls, wireless protection, staffing to support increased awareness.		Est $440,000	
General Purpose Classrooms – Upgrade campus classrooms with computer and projection equipment		Est $300,000	
SAP Wide Projects			
SAP Travel Management Roll out	In-progress; June 2007	50,000	55,000
SAP Business Portal Implementation	In-progress; June 2008	75,000	150,000
SAP Business Warehouse Implementation	In-progress; June 2009	75,000	150,000
SAP ESS Leave Enhancements	In-progress; Dec 2006	5,000	10,000
SAP ESS Time Entry	In-progress; July 2007	25,000	25,000
SAP Time Sheet & Time Mgt Implementation	In-progress; Aug 2006	4,000	5,000
SAP Help System – U-Perform upgrade	In-progress; Dec 2006	4,000	5,000
SAP Help System - SAPPHIRE Enhancements	In-progress; Dec 2006	1,500	3,000
Student System Wide Projects			
SIS: Common Admissions application	In-progress; Aug 2006	1,000	3,000
SIS: UNK Data Mart	In-progress; Sept 2006	1,000	2,000
SIS: UNL Data Mart	In-progress; Sept 2006	5,000	15,000
SIS: UNO Data Mart	In-progress; Sept 2006	2,000	5,000
SIS: U-wide course equivalencies application	In-progress; Aug 2006	1,000	4,500
SIS: U-wide IR Data Mart Interface Project	In-progress; Dec 2006	1,000	2,000

1.3. Projects Planned to be Started in FY2006-07

[This portion of the document describes the IT projects that are planned to start before the end of the current fiscal year. It usually will contain a description of the project, projected completion date and costs.]

Project Title	Current Status (status; completion date)	FY2006-07 Costs	Total Project Cost
General University wide Projects			
University Network - **Lincoln to Omaha Network Upgrade** - There are increasing needs to take the next step in improving the connections between the Lincoln and Omaha campuses. This includes research, voice over IP, disaster recovery, etc. These applications will drive the need for network speeds 100 times faster than we have today.	Proposed; June 2007	1,000,000	2,000,000
University Network Upgrades – general			
Upgrade Lincoln core routers	Planned; Dec 2007	250,000	300,000
Upgrade Varner Hall network	Planned; Jun 2007	80,000	80,000
Add Firewall at State/Varner	Planned; Jun 2007	75,000	125,000
Implement Codian Video switch	Planned; Jun 2007	100,000	100,000
Implement Codian IP VCR	Planned; Jun 2007	50,000	50,000
Upgrade Lincoln core switch	Planned; Jun 2007	48,000	48,000
Security Projects			
Implement Secure TN3270	Planned; Dec 2007	40,000	80,000
Implement Intrusion Projection System	Planned; Dec 2007	100,000	150,000
University Network - Upgrade Network Connection to State – As we increase the amount of data traffic between the University and the State, we also need to upgrade this connection to the latest technology and speeds. This will become even more critical as we implement options to share computer room infrastructure for disaster recovery.	Proposed; June 2007	N/A	N/A
Integrated Wireless Network – Instructional Television Fixed Service (ITFS) is an educational service that has generally been used for the transmission of instructional material to accredited educational institutions and non-educational institutions such as hospitals, nursing homes, training centers, and rehabilitation centers using high-powered systems. This technology has great potential for application throughout the state and this request will explore its use on a University-wide basis	Proposed; June 2007	N/A	N/A

Project Title	Current Status (status; completion date)	FY2006-07 Costs	Total Project Cost
University Enterprise Server Upgrade – Based on documented growth requirements over the past five years, and specifically the last three years (see chart below), the current Enterprise server will require an upgrade in capacity in FY06-07. This growth is directly related to the continuing expansion of new services that are offered to the University's customer communities. Our recommended solution will be to increase speed of the processors available in the current Enterprise server.	Planned; June 2007	300,000	400,000
Upgrade Operations Center	Planned; Sep 2007	100,000	150,000
SAP Wide Projects			
SAP Budget System Implementation – Year 1	Proposed; June 2008.	unknown	unknown
SAP Recruitment	In-progress; June 2007	unknown	unknown
SAP 1099 Reporting on PCard Purchases	In-progress; Dec 2006	unknown	unknown
SAP Automated Travel Card	In-progress; June 2007	unknown	unknown
SAP Auto Fax option for faxing PO	In-progress; Dec 2006	unknown	unknown
SAP Develop process for recording Construction Work in Progress	In-progress; Dec 2006	unknown	unknown
SAP Employee Self Services enhancements	In-progress; Jan 2007	unknown	unknown
Student System Wide Projects			
Detailed Planning for a New Student Management System -Detailed planning is anticipated to begin during FY06-07 for the replacement of the university student information systems. This plan will include detailed timelines to move forward with this project, as well as cost options for additional hardware, software, personnel and office space needs directly related to the implementation of a new student management system. These needs and associated costs will depend on the implementation model and software chosen.	Proposed; Dec 2009	unknown	unknown

2. First Fiscal Year of the Biennium (FY2007-08)

2.1. Continuing Current Operations Levels

[This portion of the document describes the elements and associated costs that are associated with maintaining the agency's current Information Technology Operations level. This usually consists of the staff, technical training, hardware, and software necessary to continue providing the same IT services, at the same level, for the agency IT customers (internal and external). If an agency is large enough to have a dedicated IT staff, this section should include line item(s) identifying costs for administration and management of the agency's information technology organization.]

University IT Spending Categories - FY07-08

Item	Estimated Cost
Salary/Benefits	$21,308,959
Operating Expense/Services (UNL)	$3,365,795
Operating Supplies (UNL)	$1,744,687
Dues/Subscriptions/Memberships/Fees	$181,671
Contracted Services & Inter-departmental Charges	$93,840
Office Expenses	$79,041
Travel/Professional Development	$414,221
Computing Supplies/Equipment	$604,787
Equipment/Hardware	$1,291,902
Capital Outlay (UNL)	$1,536,406
Communications	$1,072,121
Software & Software Maintenance	$2,182,424
Hardware Maintenance	$1,178,106
Repair & Maintenance / Building Rental	$91,064
Printer Rental & Forms	$187,745
Service Reimbursements	$2,926
Campus Improvement Allocations	$1,122,585
GRAND TOTAL	**$36,458,281**

Notes:
(1) These costs are best-estimate budget figures of state-appropriated funds. They were developed prior to actual budget submission and may differ from actual budget submissions for the fiscal years represented in this document.
(2) These line item estimated costs include the central Information Technology offices at UNK, UNL, UNMC, UNO and UNCSN, and does not include IT costs that may be spent at the department or business unit levels.

2.2. Projects Planned to be Continued in FY2007-08

[This portion of the document describes the active IT projects that will be worked on in FY2007-08 which were started in a previous fiscal year. It usually will contain a description of the project, projected completion date and costs.]

Agency Narrative:

The following items are critical items that are identified as critical, high or medium priority needs for CSN and University-wide computing that will continue during the first year of the next biennium FY07-08:

Project Title	Current Status (status; completion date)	FY2007-08 Costs	Total Project Cost
General University wide Projects			
University Networking Upgrades			
Upgrade Lincoln Core routers	In-progress; Dec 2007	50,000	300,000
Fiber Network Lincoln/Omaha	In-progress; June 2008	1,000,000	2,000,000
Add Firewall at State/Varner	In-progress; June 2008	50,000	125,000
Security Projects			
Implement Secure TN3270	Planned; Dec 2007	50,000	80,000
Implement Intrusion detection System	Planned; Dec 2007	50,000	150,000
University of Nebraska Identity Management	In-progress; Jun 2008	25,000	150,000
Disaster Recovery Project	In-progress; Jun 2008	N/A	N/A
University Wide IT Infrastructure initiatives - **Research Fiber Networks** - Upgrading all facilities and networks including connections to Internet 2 and the National Lamda Rail research communities is in progress. The University of Nebraska's future in high end research is dependent on the availability of this high speed fiber access. **Campus Digital Network Upgrades** – Upgrade of campus digital networks to support greater research and academic initiatives **Security** – Continued upgrade of campus security. Includes firewalls, wireless protection, staffing to support increased awareness. **General Purpose Classrooms** – Upgrade campus classrooms with computer and projection equipment	In-Progress	$ 821,400 Est $350,000 Est $440,000 Est $300,000	Approx $5,400.000 over five years
SAP Projects			
SAP Budget System Implementation – Year 2	Proposed; June 2008	unknown	unknown
SAP Business Portal	Proposed; June 2008	unknown	unknown
SAP Business Warehouse	Proposed; June 2008	unknown	unknown
Student System Projects			
Implementation of New Student Information System – Continue implementation of a new Student Information System during FY07-08 for the replacement of the university student information systems.	Proposed; Dec 2009	unknown	unknown

2.3. Projects Planned to be Started in FY2007-08

[This portion of the document describes the IT projects that are planned to be started in FY2007-08. It usually will contain a description of the project, projected completion date and costs.]

Project Title	Current Status (status; completion date)	FY2007-08 Costs	Total Project Cost
General University wide Projects			
Enterprise Server upgrade/replacement - The original Enterprise server replacement that was completed in FY05-06, and required upgrading in FY06-07. Based on current growth patterns, an additional upgrade will be needed in FY08-09. Options will be reviewed and recommended during this period to determine which will meet the growing capacity demands of the University.	Proposed	N/A	N/A
SAP Projects			
SAP Upgrade - A major SAP system upgrade is planned for FY08-09. This upgrade will provide additional functionality and enhanced technical support for web and enterprise portal applications. The project will require significant university resources for configuration, testing and validation of the new system.	Planned; May 2008	400,000	400,000

3. Second Fiscal Year of the Biennium (FY2008-09)

3.1. Continuing Current Operations Levels

[This portion of the document describes the elements and associated costs that are associated with maintaining the agency's current Information Technology Operations level. This usually consists of the staff, technical training, hardware, and software necessary to continue providing the same IT services, at the same level, for the agency IT customers (internal and external). If an agency is large enough to have a dedicated IT staff, this section should include line item(s) identifying costs for administration and management of the agency's information technology organization.]

University IT Spending Categories - FY08-09

Item	Estimated Cost
Salary/Benefits	$21,970,442
Operating Expense/Services (UNL)	$3,365,795
Operating Supplies (UNL)	$1,744,687
Dues/Subscriptions/Memberships/Fees	$181,671
Contracted Services & Inter-departmental Charges	$93,840
Office Expenses	$79,041
Travel/Professional Development	$402,661
Computing Supplies/Equipment	$604,787
Equipment/Hardware	$1,068,060
Capital Outlay (UNL)	$1,536,406
Communications	$1,072,121
Software & Software Maintenance	$2,198,081
Hardware Maintenance	$1,178,106
Repair & Maintenance / Building Rental	$88,809
Printer Rental & Forms	$187,745
Service Reimbursements	$2,926
Campus Improvement Allocations	$1,122,585
GRAND TOTAL	**$36,897,764**

Notes:
(1) These costs are best-estimate budget figures of state-appropriated funds. They were developed prior to actual budget submission and may differ from actual budget submissions for the fiscal years represented in this document.
(2) These line item estimated costs include the central Information Technology offices at UNK, UNL, UNMC, UNO and UNCSN, and does not include IT costs that may be spent at the department or business unit levels.

3.2. Projects Planned to be Continued in FY2008-09

[This portion of the document describes the active IT projects that will be worked on in FY2008-09 which were started in a previous fiscal year. It usually will contain a description of the project, projected completion date and costs.]

Project Title	Current Status (status; completion date)	FY2008-09 Costs	Total Project Cost
University Networking Upgrades	In-Progress; June 2008	**N/A**	**N/A**
University of Nebraska Identity Management	In-Progress; June 2008	50,000	N/A
University Wide IT Infrastructure initiatives - **Research Fiber Networks** - Upgrading all facilities and networks including connections to Internet 2 and the National Lamda Rail research communities is in progress. The University of Nebraska's future in high end research is dependent on the availability of this high speed fiber access. **Campus Digital Network Upgrades** – Upgrade of campus digital networks to support greater research and academic initiatives **Security** – Continued upgrade of campus security. Includes firewalls, wireless protection, staffing to support increased awareness. **General Purpose Classrooms** – Upgrade campus classrooms with computer and projection equipment	In-Progress	$ 821,400 Est $350,000 Est $440,000 Est $300,000	Approx $5,400.000 over five years
Student System Projects			
Implementation of New Student Information System – Continue implementation of a new Student Information System during FY08-09 for the replacement of the university student information systems.	Proposed; Dec 2009	unknown	unknown

3.3. Projects Planned to be Started in FY2008-09

[This portion of the document describes the IT projects that are planned to be started in FY2008-09. It usually will contain a description of the project, projected completion date and costs.]

None reported at this time with known or estimated cost projections.

4. Long-Term Plans and Other Information

4.1. Long-Term Plans (beyond the FY2007-09 Biennium)

[This portion of the document describes any long range planning for IT projects that are to be started after the FY2007-09 biennium. It usually will contain a description of the project, projected completion date and costs.]

Agency Narrative:

The University of Nebraska today is witnessing very exciting times, in large part driven by unprecedented technological progress in a wide range of areas. Increasingly powerful, portable, interconnected and ubiquitous computers coupled with incredible networks, such as Network Nebraska, are dramatically enhancing our citizen's capabilities in nearly every area of human endeavor. In the past decade technology has injected a whole host of new capabilities into our everyday life. Today we have:

- o Cell phones and camera phones at rates lower than traditional phones
- o Instant messaging and E-mail available everywhere
- o Multiple Web pages, Blogs and Wiki's
- o Incredible storage capabilities in devices known as DVD's, Flash Drives, and Ipods
- o High speed wireless access via WiFi and Wi-Max technology coupled with advanced laptops and PDAs such as BlackBerrys that we carry everywhere

We live in a new environment now where everyone keyboards, from the elderly to young children in grade school. Elementary students create PowerPoints like their parents once made posters. Wireless headsets and voice recognition systems make phone conversations more like telepathy. Students in school now rely heavily on the internet to conduct basic research in areas such as mathematics, biology and history. And these advances continue at an exponential rate.

The 80 column punched card is now considered a museum piece. In ten years time, the mouse and keyboard we associate so closely with our own high technology today will surely follow the 80 column card and the keypunch used with it into obsolescence. In their place will be new interfaces that streamline the interactions between people and the rapidly increasing network of computers that work for them. These new interfaces will redefine the relationship between people and the net, blurring the boundaries between devices, blurring the boundary between the real and the virtual.

In the face of this kind of change, we believe that technology can do more than just streamline what one used to call "back office" administrative processes. The changes in communications, and the capture, storage, retrieval, and presentation of information can now be used to enhance every student's academic experience while at the same time lowering costs and increasing the university's reach. We believe that present and future technology advances can help make the University of Nebraska — its resources, its discoveries, and its people — more accessible and of greater value to students, alumni, and the citizens of Nebraska. There is an expectation that the University of Nebraska will be a leader in the application of new and exciting technologies to the academic enterprise.

Many of the projects identified in this document would not have been identified as future priorities three years ago, and considering the growing number of regulations, the increase in complexity and the number of demands from both administrative and academic users, it is not a simple task to anticipate specific projects to begin in 2009 or later.

We know that our current students, members of the 'Net Generation or the Millennial Generation, have high expectations for technology, as do many of our faculty and staff. (Millennials may be described as those born between 1979 and 1994. They can, therefore, be students or employees of the University.) For them, technology is a part of learning and part of their social life including recreational activities. They are commonly referred to as "digital natives," in contrast to the Baby Boomers, who are "digital immigrants." They use technology for communication, collaboration, multi-tasking, and gaming. They want the mobility offered by wireless and laptops, and they expect communication and digital networked services to be available anytime and anywhere.

Several major construction projects are planned for the NU campuses, each heavily impacting the IT infrastructure. New residence halls will be built over the next few years with renovations to many existing on-campus living units. New research and teaching facilities are also in the planning stage among other potential projects. The network infrastructure and digitally enabled environment for these buildings is therefore as important as power and water supplies.

The wide-spread availability of wireless and the increase in ownership of mobile devices may reduce the need for some computer labs, but the use of specialized software by specific departments will still require a continued investment in these labs.

Equipment in *Smart Classrooms*, including computers, projectors, and digital presenters, will continue to require maintenance and replacement. Other technology, such as wireless networking and video and audio recording and editing capabilities, must be added as faculty and students need new functionalities.

Software licensing needs for the campus will expand, and the cost of the licenses will increase commensurately.

Infrastructure needs, including physical cabling, network equipment, environmental controls, and network management, will continue to grow. The wireless network will expand in physical coverage and will support more applications. The demand for disk storage capacity will also increase dramatically.

Communication options are evolving and the future of telephony is heading toward Voice over IP (VoIP). This will require investment in routers, switches, servers and bandwidth as well as network management software and security tools.

Security and privacy requirements continue to increase faster than our budgets can fund them. Disaster Recovery and Business Continuity require on-going review of and continual updates to contingency plans for critical systems.

We can not yet predict the outcome of the "network neutrality" issue. We do not know if local governments and public utilities will be allowed to offer broadband services in Nebraska, where affordable broadband service is not available to many residents of the

state. We do not yet know the full impact of LB1208 on distance education in Nebraska, and its network demands.

We do know that IT will be a strategic business partner for academic and administrative issues. Consistent and reliable service, knowledge of business processes, and leadership in innovation will allow us to use technology in new, creative ways, offering value to our campuses and alignment with our academic missions.

4.2.   Other

[A general comment section where agencies can identify issues not captured in another section of the plan. This provides an opportunity to address issues which may, or may not, impact an agency IT budget; such things as known risks, trends, or issues for which there is not currently enough information to be included in the other sections.]

Agency Narrative:
Nothing is permanent. Everything seems to change. And nothing changes quite like technology and everything technology touches.

The University of Nebraska Information Technology departments are continually working to embrace the opportunity to leverage changes in IT and the advancement of the University of Nebraska educational mission by working in a wide range of areas related to information technology.

The University believes that Information technology (IT) can and does serve as a powerful tool for faculty, students and staff to increase teaching and learning effectiveness across the University, providing scholarly resources, improvement of relevant and responsive advising, and providing richer information for management decisions.

Of all the changes we have seen in technology, none is quite as dramatic as the overall increase in networking capability and its associated bandwidth. From the development of Network Nebraska, with the partnership of the State and the Nebraska Educational Telecommunications staff, to the breakthrough of Gigabit-per-second networks that now provide communications to the desktop and Mega-Gigabit networks links between buildings, campus networks and the world, this revolution in capability has been made possible with the deployment of fiber optics cables and optical dense-wave division multiplexing which will provide us with terabit-per-second networks very shortly. This technology issue alone will allow our faculty, staff and students, from their campus computer, to reach millions of people in hundreds of locations around the world together in ways we can only imagine or perhaps not imagine – yet.