



UNL INFORMATION TECHNOLOGY COST REDUCING TASK FORCE REPORT

UNIVERSITY OF NEBRASKA-LINCOLN
MAY 31, 2011

EXECUTIVE SUMMARY

In the State of the University address Chancellor Perlman indicated the need for all of us to find creative ways to advance the mission of the University with fewer resources, or to offer ideas for generating more revenue. IT is one broad category of spending at UNL that has historically been dispersed throughout the institution. It is also part of an industry that has seen rapid change and restructuring. It seemed reasonable that some in-depth analysis of IT expenses and campus needs might yield potential efficiencies.

UNL spends less on Information Technology than most of its peer institutions, especially in the CIC when adjusted for enrollment, number of faculty, or other appropriate metrics. This is largely due to the productivity of talented IT staff within all areas of UNL, and the campus expectation of providing high value with constrained resources.

However, even with relatively low resource allocations and ever increasing demand for IT services, there are still significant efficiency opportunities for cost reductions. These are possible through sharpened strategic investments, increased campus and peer collaborations, and economies of scale that will result both in increased productivity and savings.

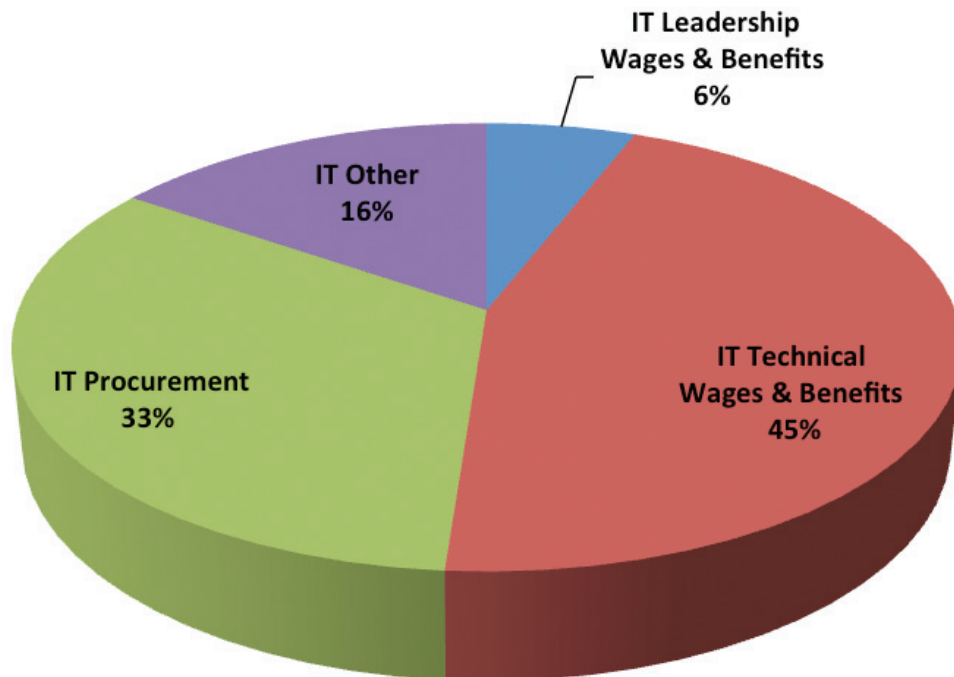
The cost reduction recommendations in this report are based on a broad range of research conducted by this committee including interviews with CIOs at peer institutions as well as survey and interview data from academic and administrative units on UNL's campus. The recommendations herein are focused on saving resources while also providing innovative and reliable IT services for faculty, staff, and students.

INTRODUCTION

The Information Technology Cost Reducing Task Force was formed in the fall of 2010. The University is currently spending approximately 42 million dollars on an annual basis for Information Technology related services (see Fig 1 below). This figure encompasses all sources of funding and includes expenditures for technical staff, management, procurement and maintenance, service contracts, student employees, and related administrative staff including those involved with processing user service fees.

The central goal of the Task Force is to identify reductions resulting in the highest campus benefit with the least campus impact. The specific charge is to identify a series of ongoing IT costs savings initiatives for the fiscal year beginning July 1, 2011, and additional recommendations starting July 1, 2012. The Task Force is also providing reallocation or restructuring recommendations that support increased efficiencies going forward that will improve support for the core mission of the University.

Fig. 1 UNL Estimated IT Spend FY2010



IT Technical Staff Wages & Benefits	\$ 19,000,000
IT Procurement.	\$ 14,000,000
IT Other.	\$ 6,500,000
IT Leadership Wages & Benefits	\$ 2,500,000
Total.	\$ 42,000,000

METHODOLOGY

The Task Force engaged UNL executive leaders, faculty, staff, students, and central and decentralized IT managers. We also spoke with higher education peers and industry experts who have implemented significant cost reductions and efficiencies.

The resulting interviews and discussions provided insights into objectives, concerns, and definitions of success both on a campus-wide and organization specific basis. The lessons learned from peer institutions follow a broad pattern, as research universities have very similar IT opportunities and risks. External interviews were handled via teleconferencing as well as a review of institutional documents. It is worth noting that a number of the CIC institutions and other research universities are conducting similar assessments. Several of these studies are referenced in Appendix B.

Twenty-five UNL IT Managers were asked to complete surveys summarizing their respective IT services, related operating expenses, funding sources, and clients served. As a follow up to the survey, personal interviews were conducted by members of the Task Force as these IT leaders were asked for ideas and feedback related to additional core services that would be helpful, and also asked to outline planned cost reductions in their areas and for recommendations for university-wide savings.

This series of internal and external interviews and surveys helped inform our understanding of higher education IT best practices along with identifying specific challenges and opportunities at UNL. The Task Force held a series of meetings to discuss the current landscape of IT at UNL, and at peer institutions, and to deliberate on prioritization, mission, goals, and key findings throughout the process.

The resulting recommendations reflect cost reductions and efficiencies that will produce near term results while also better positioning UNL to meet increased research, instruction, and outreach activities in the years ahead.

KEY POINTS FROM UNL INTERVIEWS

1. Trust is a Major Issue

The question of whether services, systems, and infrastructure can really be improved while costs are being reduced came up in several areas. The assumption that this can in fact be accomplished requires an acceptance that the current IT model and implementation is not efficient. Significant transformation will require much greater cooperation based on a shared vision than has been demonstrated in the past.

There must be trust that the IS organization or other central organizations will provide quality services, and that they will listen to what the faculty and staff need in the colleges and departments.

2. “Good Enough” Commodity Services can Produce Savings for Strategic Needs

Cost savings will result in reduced services in some cases, but “good enough” support based on service level agreements is a reasonable goal. If the University is providing outstanding services for non-strategic issues we are likely overspending in those areas. The point is to reallocate those funds to be used more effectively for the core mission.

There is excess computing capacity in some areas where multiple IT organizations are investing in similar services and infrastructures without coordination. Identifying and addressing these inefficiencies will help demonstrate the value of a more standardized approach.

The Information Services department and other IT providers at UNL should focus first on the services they provide, rather than the underlying technology.

UNL does not necessarily need to be the provider of commodity IT services. There are cost effective Cloud services and other sourcing options for email, Web site hosting, and additional commodity services.

3. Focus on Strategic Needs and Leverage Collaboration

IT transformation and efficiencies should focus on where we want to be as an institution in the next three to five years, and not based on where we are now.

Implementing distributed computing can provide more effective value than simply moving within the centralization/decentralization continuum. A key advantage of distributed computing is that service resources are located in close proximity to the clients, and the model supports both greater standardization while also enabling staff in the distributed locations to gain local process knowledge.

We need to invest further in collaboration technologies and related training for our faculty. This will also strengthen our ability to develop partnerships on joint research projects across institutions including the CIC.

4. Communication is Essential in Working with the Campus

We need to outline any issues related to IT cost efficiencies in non-technical terms. And we need to communicate them constantly. And there needs to be a well understood plan.

It’s important that we collectively “make it easy for people to do the right thing”. If there are unnecessary barriers or complexities it will make transformative change even more difficult to achieve.

Reducing IT costs and improving efficiencies will be most successful if the process begins with the “low hanging fruit”. And it’s important to visibly and collaboratively celebrate successes. Don’t be humble.

5. Cost Savings Often Require Transition Investments

It often costs more in the beginning to implement new technologies and services. This implementation or migration expense needs to be accounted for in the planning process, as well as ensuring that there adequate funds to maintain or enhance new services going forward.

6. The Capability to Recognize and Respond to Change is Essential

Strategic Planning for IT needs to be highly flexible and measured in months, rather than years.

We need to leverage mobile IT resources that students bring to campus in order to make better use of university resources to ensure that learning, research, and the student experience are maximized.

KEY POINTS FROM EXTERNAL INTERVIEWS

1. IT Consolidation is a Pervasive and Effective Cost Reduction Strategy

IT consolidation to reduce costs and increase efficiencies is happening everywhere...within universities, K-12, and state and local governments according to external experts. It has already been done with proven results in corporations over the past decade.

2. Leveraging Sourcing Options is Essential

Software as a Service (hosted off site programs that are in use by many institutions) should be considered as the default solution rather than creating local University application programs in most cases.

Cloud computing is a sourcing option, rather than a strategy, according to IT thought leaders that we spoke with. It is not necessarily the best option, but one that is now viable in many cases. Both Cloud Computing, and Software as a Service, solutions offer the potential for significant cost savings.

Improved IT procurement is recommended as a top priority in practically every study of IT cost efficiencies. To implement best practices in strategic sourcing requires investing in dedicated staff. Peer universities have indicated that it will not happen with people taking this responsibility on in addition to their other job duties.

3. Communicating and Collaborating Effectively on Campus and with Peers is Essential

Peers and industry experts state there is value in communicating what you are doing to support colleges and departments with IT including the amount of resources that have been invested even if you do not charge for cost recovery (“showback” as opposed to “chargeback”).

It is by definition expensive to invent IT solutions for problems that have already been solved. We are all in the same industry of higher education. It is possible to collaboratively develop solutions across campuses and significantly reduce costs as a result. The community source work of the past decade is an example of IT cost efficiency on a large scale.

One of the key lessons learned from other universities is that “coalitions of the willing” within higher education are essential in implementing cultural and process change, including in the IT space.

4. Implementing IT Cost Efficiencies Continues to be Challenging

Cost reductions are never popular, and this includes IT related initiatives. Over communicating is a key success factor from the institutions we spoke with. Explaining the why and how of what you’re doing needs to be done repeatedly.

As one CIO stated, “it’s important that IT cost savings analyses not be structured as primarily an exercise to determine where to cut positions.” There are many additional cost savings areas to examine, and fear of layoffs can undermine the ability to make transformative changes.

Some pitfalls outlined in the interviews: too much focus on organizational change (that creates resistance that slows down transformation); lack of transparent governance; and institutional inability to take decisive action.

RECOMMENDATIONS FOR COST REDUCTIONS

Index	Recommended Actions	Major Objectives	Page
REDUCE CORE IT SERVICES COSTS			
A	Implement new core computing model for enterprise-wide services including desktop and mobile support, help center, physical and virtual systems administration, security, Web site hosting, data storage and backup services.	Decrease support costs for participating colleges and departments. Recent investments in updated technology and related best practices will scale up services and reduce resources required.	9
B	Consolidate and reduce UNL IT Leadership Costs.	Develop partnerships with departments with strong internal IT units. Create joint appointments between the unit and IS with leaders that are knowledgeable of both units and are able to bridge cultures, promote collaborations between the units, and thus contribute to the efficiency and effectiveness of both units.	9
C	Transform IT support practices in both general and college managed lab, classroom, and other instructional facilities.	Reduce ongoing operations costs through increased use of virtual technologies. Reduce procurement and vendor maintenance expenditures.	10
D	Leverage collaborative software applications from within the NU system, CIC, and elsewhere in higher education.	Reduce amount spent on creating unique UNL solutions for common university needs.	10
E	Migrate faculty and staff email, calendaring, and messaging software to the Cloud.	Improve functionality, reduce annual operating expenses.	11
F	Strengthen Content Management System (CMS) services as the default for creating and maintaining UNL related Web sites.	Implement standards and provide training so that subject matter experts can create and update content with reduced technical support.	11
REDUCE VENDOR PROCUREMENT AND MAINTENANCE CONTRACT COSTS			
G	Implement IT strategic sourcing and other procurement best practices.	Reduce procurement and vendor maintenance expenditures and software licensing expenses.	12
H	Implement university IT enterprise architecture and development standards.	Reduce application and database development costs. Also reduce maintenance and staff training costs.	12
I	Implement print management program.	Consolidate to more efficient networked printers to reduce printing costs.	12
TRANSFORM IT FUNDING STRATEGY			
J	Shift to hybrid model for funding 'common good' IT services.	Reduce resources dedicated to processing chargebacks. Eliminate efficiency disincentives such as current wireless charges to faculty and staff.	13
REDUCE IT RELATED ENERGY COSTS			
K	Further consolidate data centers on-premise and by using Cloud services.	Reduce energy and operational expenses. Make space available for reuse.	13

PRINCIPLES

The task force has outlined the following guiding principles in reviewing IT investment and operations:

The highest priorities identified for the University continue to be undergraduate education and research. It is essential that IT infrastructure services be aligned with those priorities, and that they serve to provide highly effective and efficient support for these areas and also enable innovation opportunities.

IT infrastructure and services should enhance the classroom and learning environments, and include technologies that promote student and faculty collaboration, community, and inquiry.

Support for the student experience is essential. This requires ongoing assessment and implementation of changes to meet student needs related to collaborative learning spaces, connectivity, and systems.

There is continued need for distributed IT resources throughout the University. This organizational model is most effective in supporting the strategic and specific missions of the respective colleges and other units.

There is significant value in the higher education movement to drive down the cost of core enterprise systems and services in order to make more resources available for instruction, research, and outreach.

IT COST REDUCING TASK FORCE

Membership consisted of faculty, staff and student representation from academic and administrative units to provide a campus-wide perspective:

DeeAnn Allison	<i>Professor & Director, University Libraries</i>
Mark Askren	<i>IT Task Force Co-chair, Chief Information Officer</i>
David DeFruiter	<i>Director, College of Business Administration</i>
Elbert Dickey	<i>IT Task Force Co-chair, Dean, Cooperative Extension Division</i>
Gary Kebbel	<i>IT Task Force Co-chair, Dean, College of Journalism & Mass Communications</i>
Meg Lauerman	<i>Director, Office of University Communications</i>
Deborah Minter	<i>Associate Professor, Department of English</i>
Brian Moore	<i>Associate Professor, School of Music</i>
Craig Munier	<i>Director, Scholarship & Financial Aid</i>
Reanna Nichol森	<i>Student Representative</i>
Kim Phelps	<i>Associate Vice Chancellor Business & Finance</i>
David Swanson	<i>Research Associate Professor, Computer Science & Engineering</i>
Will Thomas	<i>Chairperson, Department of History</i>

APPENDIX A - COST REDUCTION DESCRIPTIONS

RECOMMENDATION A

Implement new core computing model for enterprise-wide services including desktop and mobile support, help center, physical and virtual systems administration, security, Web site hosting, data storage and backup services.

Major Objectives:

Decrease support costs for participating colleges and departments. Recent investments in updated technology and related best practices will scale for increased services and reduce resources required.

Changes Required:

Staff reallocation and staff reductions over time in the core support areas. The intent is not to reduce the number of distributed IT organizations, but to instead focus those units on adding strategic value to their respective colleges and other units. This transformation will be largely accomplished by identifying core commodity IT services and providing a more cost efficient consolidated model. Retaining local expert resources can still result in significant cost reductions when combined with the recognition for the value in collaborating and centralizing on enterprise services that scale. Cloud and other third party services can also be used to reduce commodity IT costs.

Impact:

Moving to this model will result in a more consistent set of IT core services across UNL. In some cases it will result in a reduction of services, as the standard will most often be based on what is collaboratively negotiated as “good enough”. The strategy is to not overspend on basic services, and to instead reallocate funds to more strategic needs within colleges and departments.

Timeframe:

New or restructured core IT services will be available by July 1, 2011.

RECOMMENDATION B

Consolidate and reduce UNL IT Leadership Costs.

Major Objectives:

Develop partnerships with departments with strong internal IT units. Create joint appointments between the unit and IS with leaders that are knowledgeable of both units and are able to bridge cultures, promote collaborations between the units, and thus contribute to the efficiency and effectiveness of both units.

Changes Required:

Convert two open IS Director positions to joint appointments with colleges or departments, assess additional distributed leadership opportunities with Deans, Directors and campus IT leaders. Salary adjustments will be needed in some cases due to increased UNL-wide responsibilities.

Impact:

The workload will increase for those IT leaders who have taken on more responsibility through joint appointments or other changes. There will also likely be increased career path opportunities for those individuals.

Timeframe:

The first round of consolidation involving the IS Director positions will be completed by July 1 of this year.

RECOMMENDATION C

Transform IT support practices in both general and college managed lab, classroom, and other instructional facilities.

Major Objectives:

Reduce ongoing operations costs through increased use of virtual technologies. Reduce procurement and vendor maintenance expenditures.

Changes Required:

Additional infrastructure investment will be needed to continue to transform these learning spaces to expanding our virtual and other large scale enterprise management tools. This recommendation also assumes that the trend of decreased demand for general computing lab capacity will continue.

Impact:

Decrease in general lab stations and support staff in the labs over time. More focus on creating collaborative learning spaces and wireless and cellular connectivity.

Timeframe:

Assess and standardize on successful practices from areas at UNL and our peer institutions this summer. Also collaborate with distributed college IT staff to implement technology and best practices over the next 12 months.

RECOMMENDATION D

Leverage collaborative software applications from within the NU system, CIC, and elsewhere within higher education.

Major Objectives:

Reduce amount spent on creating unique UNL solutions for common university needs.

Changes Required:

This is a largely a cultural issue. The strategy change is to focus local development on strategic differentiators related to research, instruction, and outreach. Open source, or higher education community solutions generally provide more cost effective solutions for the majority of core IT needs.

Impact:

Additional IT leadership and technical staff time will be needed to identify and assess collaborative solutions. This time investment will be more than offset by the reducing the time that is currently spent creating unique solutions at UNL for problems that have been solved effectively by other peer institutions.

Timeframe:

Implement a best practices standard by July 2011 for sponsoring offices and IT leaders to review similar software applications in use within our system, the CIC, or other peer higher ed institutions before creating a local application. This applies most specifically to areas that are not strategic or unique as related to the UNL research, instruction, and outreach mission and related practices.

RECOMMENDATION E

Migrate faculty and staff email, calendaring, and messaging software to the Cloud.

Major Objectives:

Improve functionality, reduce annual operating expenses.

Changes Required:

This recommendation is based on UNL's participation in the system-wide effort to identify and implement a replacement for Lotus Notes.

Impact:

There will be some time needed by faculty and staff to learn the new system. Local Help Center and other IT staff will also spend time learning the new programs and support process.

Timeframe:

A decision on this RFP is expected to be announced this month. IS staff time will likely be required to start planning migration off of Lotus Notes with extensive work needed throughout FY 2012.

RECOMMENDATION F

Strengthen Content Management System (CMS) services as the default for creating and maintaining UNL related Web sites.

Major Objectives:

Implement standards and provide training so that subject matter experts can create and update content with reduced technical support.

Changes Required:

Increase the priority on current joint effort that includes IS, University Communications, and other campus partners to implement the new CMS environment and provide training and support.

Impact:

The implementation of the CMS will require training of the subject matter experts on campus, and their involvement in using an online program for creating and updating the standard text of the documents for their areas. This is a significant cultural change, and provides real time direct access to non-technical subject matter experts for Web document creation.

Timeframe:

Convert initial sites to new CMS and related practices by September 2011. Implement additional migration phases through the academic year, and establish the CMS as the standard tool for the majority of Web sites at UNL by July 2012.

RECOMMENDATION G

Implement IT strategic sourcing and other procurement best practices.

Major Objectives:

Reduce procurement and vendor maintenance expenditures and software licensing expenses.

Changes Required:

Strategic sourcing and procurement is universally recognized as one of the major components of IT best practices and successful cost savings efforts. This initiative will be based on a partnership with the UNL CIO working with Nebraska system-wide colleagues, and also in leading new initiatives with CIC CIO peers to significantly increase the number of IT related joint purchasing agreements. The increased focus on strategic sourcing will require an additional full-time IT procurement expert.

Impact:

Implementing a best practices strategic sourcing operation will require a culture change, specifically in focusing the majority of hardware and software purchases through a set of negotiated configurations and standards. Exceptions will be granted for specialized needs, especially in the areas of research and faculty instructional requirements.

Timeframe:

The search for additional strategic sourcing expertise and restructuring of UNL IT procurement practices will need to start as soon as possible. A first round of renegotiated contracts and IT commodity procurement practices should be in place by January 2012.

RECOMMENDATION H

Implement university IT enterprise architecture and development standards.

Major Objectives:

Establish best practices approach to setting standards for core sets of technologies to reduce procurement costs and improve efficiency. This initiative will also reduce maintenance and staff training costs.

Changes Required:

Establishing a set of enterprise architecture and related development standards for UNL will require strong collaboration by the UNL IT leaders as part of a cultural change to a best practices model.

Impact:

The positive result of working together in this area is a deeper investment in a common set of advanced technology tools. This requires the 25 plus IT leaders on campus to collaborate with the CIO on a common set of technology standards for most needs, which means less independence in selecting individual standards or practices.

Timeframe:

An enterprise architecture planning group would be formed this summer as a subset of the UNL IT Leadership group. The goal is for the first comprehensive set of standards and planning documents to be published by January 1, 2012.

RECOMMENDATION I

Implement print management program.

Major Objectives:

Consolidate to more efficient networked printers to reduce printing costs.

Changes Required:

The number of individual desktop printers would be reduced through increased use and deployment of network based printers.

Impact:

Many individuals on campus that currently have personal printers would need to transition to using locally shared departmental copiers/printers. The cost per page is typically cut by at least 50% by using the higher volume printers.

Timeframe:

This initiative would be done in partnership with the copier program managed by Business & Finance. That organization is currently doing a study to further identify and reduce current print costs. The results of this initial effort and similar efforts by peer organizations would be used in the planning for a broader implementation.

RECOMMENDATION J

Shift to hybrid model for funding 'common good' IT services.

Major Objectives:

Reduce resources dedicated to processing chargebacks. Eliminate efficiency disincentives such as current wireless charges to faculty and staff.

Having an efficient IT funding model is particularly important when resources are significantly constrained or even reduced. Fee based technology services provide value if they add greater efficiency in resource allocation by influencing consumption behaviors in a positive and efficient way. But the costs of administering user fees is non-trivial, and can provide barriers to innovation, or add expenses without value, when used for faculty or staff related services that are a standard cost of doing business. Many of our CIC peer institutions have realized significant efficiencies from moving toward a hybrid model of funding basic core services while continuing to charge user fees for additional features, or higher than base level services.

Changes Required:

The current culture of charging users for basic IT services would change to a larger portion being funded off the top. This will require a collaborative partnership between the Vice Chancellors, CIO, Deans, Directors, and Business & Finance managers to periodically review the funding model and quality and cost effectiveness of related services.

Impact:

There will be a positive impact for faculty and staff in areas in terms of technology adoption when 'common good' services such as network access are shifted off of the current chargeback model. This effort will also more closely align service funding with actual costs. As an example the network will directly require higher funding and the costs of providing land-line phone service for the campus will be adjusted downward as it would no longer be used to offset the network costs.

Timeframe:

This type of change to the network funding model is currently being discussed. Telecom related charges and additional IS services will be reviewed and possibly restructured over the next 12 months.

RECOMMENDATION K

Further consolidate data centers on-premise and by using Cloud services.

Major Objectives:

Reduce energy and operational expenses. Make space available for reuse.

Changes Required:

Analysis and continued consolidation of the majority of the twenty plus remaining decentralized data centers.

Impact:

Physical servers would be primarily located in Scott Engineering Center. The majority of systems administration and other maintenance activities can be handled remotely, or by IS staff on site. There will be some extra time required in terms of occasional travel to the consolidated data center for decentralized IT staff.

Timeframe:

Additional on-premise data center migrations would begin this summer and continue over the next 12-18 months. There is one significant Cloud services contract in place within the IS department, and it will be assessed in the fall of 2010 as a precursor to possibly moving additional data center services off-site.

APPENDIX B - INTERVIEWS AND RESOURCES

UNL Campus Leadership Interviews:

Harvey Perlman	<i>Chancellor</i>
Juan Franco	<i>Vice Chancellor Student Affairs</i>
Perm Paul	<i>Vice Chancellor for Research and Economic Development</i>
Christine Jackson	<i>Vice Chancellor Business & Finance</i>
Ellen Weissinger	<i>Senior Vice Chancellor for Academic Affairs</i>
Ronnie Green	<i>NU Vice President and IANR Harlan Vice Chancellor</i>
David Brooks	<i>Chair of Faculty Senate Computational Services and Facilities Committee</i>
Council of Deans	
Faculty Senate Executive Committee	
Faculty Senate Computational Services and Facilities Committee	
ASUN Academic Fees Committee	
College of Arts and Sciences Deans, Chairs, and Directors Meeting	
Hixson-Lied College of Fine and Performing Arts Deans Meeting	

UNL IT Leaders Participating in Task Force Survey:

Gary Aerts	<i>Information Services</i>
DeeAnn Allison	<i>University Libraries</i>
David Bagby	<i>Hixson-Lied College of Fine and Performing Arts</i>
Keith Bartels	<i>Extended Education & Outreach</i>
Bob Crisler	<i>University Communications</i>
David DeFruiter	<i>College of Business Administration</i>
Dan Floyd	<i>Athletics</i>
Gregg Frey	<i>College of Arts & Sciences</i>
Luther Hinrichs	<i>College of Journalism & Mass Communications</i>
Mark Hoistad	<i>College of Architecture</i>
Pam Holley-Wilcox	<i>Information Services</i>
Richard Leiter	<i>College of Law</i>
Paul Menter	<i>Housing</i>
James Nau	<i>College of Engineering</i>
Kathy Notter	<i>Shared Services</i>
Deanna Reynolds	<i>Admissions (Undergraduate)</i>
Ron Roeber	<i>Information Services</i>
Michael Rurhdanz	<i>Information Services</i>
Tim Savage	<i>Office of Research</i>
Al Steckelberg	<i>College of Education and Human Sciences</i>
David Swanson	<i>Holland Computing Center</i>
Roger Terry	<i>EdMedia</i>
Jim Yankech	<i>University Health Center</i>
Owen Yardley	<i>University Police</i>

University of Nebraska IT Cost Efficiency Group:

Mark Askren	<i>CIO, UNL</i>
Loren Blinde	<i>Director, Computing Services Network</i>
Bill Conley	<i>Vice Chancellor Business and Finance, UNO</i>
John Fiene	<i>CIO and Associate Vice Chancellor, UNO</i>
Yvette Holly	<i>CIO and Assistant Vice Chancellor, UNMC</i>
Deb Schroeder	<i>CIO and Assistant Vice Chancellor, UNK</i>
Walter Weir	<i>CIO, Computing Services Network and University of Nebraska System</i>

External Interviews Conducted:

Stephen Benedict	<i>IT Procurement Director, UC Office of the President</i>
Steve High	<i>Executive Partner, Gartner Education</i>
Sally Jackson	<i>CIO and Associate Provost, Illinois</i>
Mark Cianca	<i>IT Director, UC Santa Cruz</i>
Gerry McCartney	<i>Vice President for Information Technology, Purdue</i>

Peer Institution IT Efficiency Studies and Vision Documents:

Cornell University - www.cornell.edu/reimagining/docs/20100512_info_tech_vision.pdf
Purdue University - www.purdue.edu/sustaining/initiatives/infotech/finalCITPreport.pdf
University of California Santa Cruz - <http://its.ucsc.edu/transformation/>
University of Illinois - <http://www.uillinois.edu/arr/documents/ARR-IT-Final-06-14-2010.pdf>
University of Michigan- <http://nextgen.umich.edu/rationalization/its-recommendations.php>



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