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# Campus IT Action Plan

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**By: The University of Iowa IT Strategic Planning Group**

## Introduction

This report was developed and written under the guidance and input of the IT Strategic Planning Group at The University of Iowa. Members of the Planning Group include:

Steve Fleagle, Associate Vice President and Chief Information Officer, Chair

Kirk Corey, IT Director, College of Law

Tim Evans, CIO Office

Maggie Jesse, Manager of Instructional Services, ITS-Campus Technology Services

Molly Langstaff, Director of ITS- Campus Technology Services

Laura Reed, Senior Associate Director, Human Resources, Organizational Effectiveness

Tom Rocklin, Senior Associate Provost for Undergraduate Education

Joseph Wagner, Director, Administrative Applications, Healthcare Information Systems, University of Iowa Hospitals and Clinics

Phil Hill, HBO Systems, Facilitator ([www.hbosystems.com](http://www.hbosystems.com))

## Introduction

This document is based on the Campus IT Strategic Plan Final Report and should be viewed as complementary. Using this Action Plan as a foundation, many colleges and administrative units across campus have produced action plans specific to their area. Together, these plans outline the specific actions the campus will undertake to meet the goals set forth in the Strategic Plan.

The Campus IT Action Plan is a “work in progress.” We approached the process of producing the plan with the mindset that strategies and actions do not have to be the complete answer for attaining a goal; rather, they must move us *toward* our goals. Throughout the process of producing this plan, we iteratively published draft action plans to the campus community as a way of gathering input. This input influenced subsequent drafts of the campus action plan. We call this “progress over perfection.”

Furthermore, we will best serve the University’s IT needs through a combination of centralized IT services and local IT services. For this plan, that means that some actions will be taken by central units, for everyone; other actions will be taken locally by all IT service providers in a coordinated manner; still other actions will be specific to each unit based on that unit’s needs, as determined by the local IT provider. This combination of campus-wide actions and local actions reflects the successful, distributed nature of IT on our campus.

The University’s Chief Information Officer, with broad campus involvement, will lead the implementation of this Campus IT Action Plan as well as annual updates to it.

For further information about the Campus IT Strategic Plan and these action plans, as well as updates to and results based on our plans, point your browser to <http://cio.uiowa.edu/strategicplan/>.

## Goal 1: Support student success through IT systems and services.

Strategy 1: Promote students' and instructors' use of information technology to support student academic achievement.

Actions:

- 1) Identify and implement ways to increase efficiency and coordination of centrally and collegiate-managed instructional IT facilities, labs, and classrooms.
  - Work with the Classroom Advisory Committee and other relevant groups to identify redundancies in technology support of instructional IT facilities.
  - Create a community of those who provide IT support for central, collegiate and departmental instructional IT facilities to foster coordination and efficiency.
- 2) Explore ways to expand access to hardware and software to students on and off campus to meet their learning needs.
  - Investigate expanding current programs to make software readily available to students at reasonable cost.
  - Explore distance collaboration tools (like video conferencing) that serve both on and off campus learners.
  - Explore and expand virtual desktop services to provide students with access to more applications from remote locations
- 3) Integrate existing IT systems to enable seamless access and sharing of data among systems (e.g., ICON, ISIS, MAUI, Exchange, InfoHawk).
  - Implement integrations between ICON and: Exchange, Elluminate, Storage Services, Evaluation & Exam Services, Infohawk eReserves, Identity and Access Management (Enterprise Directory Services), and loan information.
  - Identify and implement collegiate driven integrations with centrally managed systems.
- 4) Explore IT approaches to meeting the needs of today's learners.
  - Explore "virtual communities of learning" — learning communities that connect students who have similar interests/courses and establish co-curricular groups.
  - Create and pilot test spaces that support collaborative learning.
  - Support selected faculty initiated projects to demonstrate the potential of mobile technologies to support learning.

- Sponsor a series of speakers and other events to help the campus understand better the characteristics of today's learners and the impact on teaching.
- 5) Improve processes, automating where appropriate, to increase administrative efficiency for faculty, students, advisors and other staff.
- Enhance self-service offerings (ISIS, OSIRIS, MAUI) for students, faculty, and staff.
  - Automate, through workflow and web enablement, key academic processes (e.g., course scheduling and approval, graduation application and clearance; ...).
  - Provide real-time degree audits for all academic objectives (majors, minors, certificates) so students can assess their academic progress.
  - Expand electronic student information available for central and collegiate academic advisors.
  - Continue to web-enable student financial aid application and award processes.
  - Augment the registration system to include automated wait listing, co and pre-requisite checking, and curricular planning.
  - Simplify student UBill presentation and payment options.
  - Implement a student relationship management system to centrally track and monitor interactions with student across all student service units.
  - Improve authoritative Institutional Data.
  - Leverage existing tools (like Ad Astra) to increase efficiency of classroom scheduling and promote their usage in managing departmental classroom resources.

Strategy 2: Provide methods and data for tracking student progress in integrated IT systems.

Actions:

- 1) Identify indicators of student success and develop methods to capture, monitor, and report these indicators in key IT systems such as ICON and MAUI.
  - Work with the University's Student Success Team to investigate methods for predicting student success.
  - Explore relevant models at peer institutions.
- 2) Identify IT solutions that help track student progress, build competencies, and assess program effectiveness.
  - Work with colleges and departments to develop electronic portfolio solutions for their students.

- Provide and support systems (databases) that collect and track indicators of student learning outcomes in order to support program evaluation goals.

Strategy 3: Expand training and support programs for campus e-learning systems and tools.

Actions:

- 1) Explore methods of assessing, and, as appropriate, improving students' and instructors' IT skills.
  - Investigate methods used at peer institutions.
  - Pilot selected methods at Iowa.
- 2) Communicate with and inform instructors and students about IT resources available to support teaching and learning.
  - Develop and pilot new techniques for reaching faculty, staff and students, including: screensaver messages in ITCs; posters in academic departments; flyer distributed to students at the bookstore checkout.
  - Explore award or recognition programs to honor excellence in teaching with IT.
  - Expand the annual "ICON Day" to include all aspects of instructional technology.
- 3) Expand current and explore and adopt new support models for faculty and students, including support in the classroom.
  - Investigate expanding the Student Instructional Technology Assistant program to serve more instructors.
  - Promote and expand the ITS Student Worker IT Training program to place trained student workers in areas of need.
  - Explore, define, and promote broader centralized managed desktop services such as Microsoft's Systems Management Service (SMS).
  - Identify campus needs for web site management, including content management and improved search capability, and pilot solutions, utilizing the CTS Web Services team as appropriate.
  - Identify appropriate areas to expand the use of centrally-provided, local support.
  - Develop self-service tools that allow customers to more easily manage the services they use
  - Expand and promote the use of IT support tools such as call tracking and knowledge management.

- 4) Provide multi-modal learning opportunities for instructors (one-on-one, small group, on-line) that address pedagogical design support, including discipline-specific design, with a significant focus on effective use of technology.
  - Work with the Center for Teaching to identify topics likely to have a high impact on student success.
  - Build learning opportunities for instructors around these topics.

Strategy 4: Explore, evaluate, and foster emerging technologies that enhance teaching and learning

Actions:

- 1) Support faculty in development and investigative projects to foster exploration of new technologies.
  - Explore emerging technologies, such as wikis, podcasting, social networking, and gaming and simulations, including pilot studies and projects.
  - Share lessons learned, at Iowa and on other campuses, broadly with the campus.
- 2) Create new faculty development and support programs that encourage and support faculty in adopting instructional technologies.
  - Evaluate programs at peer institutions and identify their potential applicability for Iowa.
  - Implement a faculty development program that includes participation from all colleges.

## Goal 2: Support the evolving research needs of the campus.

### Strategy 1: Cultivate an e-research community.

#### Actions:

- 1) Foster campus support for research computing efforts.
  - Establish a CITL (Campus IT Leaders) sub-group made up of members from both the IT and research community to focus on research support issues.
  - Partner with campus research centers to build resources such as central data management.
  - Engage constituencies across campus (Deans, Research Council, Research Deans, Sponsored Programs, individual researchers and research groups) in understanding researchers' needs and developing common solutions.
  - Share with the campus examples of how other campuses are supporting research and look for ways to adapt best practices for Iowa.
  - Establish a center for computational research that provides an identity for organizing multidisciplinary, compute-reliant research activities.
  - Collaborate with regional peer-institutions and corporations to help build large scale research-computing infrastructures and to foster opportunities.
  - Provide resources to leverage faculty- or student-developed technologies for use by other research groups on campus.
- 2) In concert with the CIO and the VPR, establish routine and transparent mechanisms for addressing campus-wide research computing issues.
- 3) Increase understanding and awareness of the financial processes (such as grant funding, facilities and administrative cost recoveries, and recharge models) that impact the development of research computing resources.
  - Develop materials to inform principal investigators about the IT resources available to them, including boilerplate language describing IT resources for inclusion in grant proposals.
  - Engage campus administrators and researchers in a dialog about the relationship between Facilities & Administrative (F&A) costs and IT infrastructures and explore opportunities to include IT costs in future F&A negotiations.
  - In concert with the Office of the Vice-President for Research and Sponsored Programs, work with funding agencies to better understand how we can partner with them to develop and sustain our campus researchers' IT needs.

- 4) Identify funding sources to support campus research computing needs.
  - Seek external funding for infrastructure (e.g., shared instrumentation grants).
  - Identify ways to leverage resources in existing ITS services, collegiate IT groups, and faculty labs (e.g., CCAD, IIHR, and DNA core facility).
  - Work with researchers and central administrators to develop sustainable funding models, including the investigation of charge-back centers.

Strategy 2: Enhance existing basic IT services to better meet the needs of researchers.

Actions:

- 1) Expand efforts in application support and consulting.
  - Provide researchers access to a pool of staff and students who can serve as consultants to support research specific needs such as specialized data acquisition systems, scientific software needs, system administration and software development.
  - Provide support to help researchers access authentication infrastructures (e.g., HawkID).
  - Actively investigate, analyze, promote and pursue additional opportunities for campus software licensing and purchasing agreements.
- 2) Address the specialized training needs of researchers.
  - Building on UI Learning and Development's study, identify basic IT training needs for researchers and develop opportunities to address those needs.
  - Provide training opportunities in specialized research needs, e.g., High Performance Computing, Grid Computing, PACS, GIS, Digital humanities, and digital art.
  - Improve the utilization of current learning technology infrastructure (e.g., ICON, SkillSoft) in the training of researchers.

Strategy 3: Develop new cyberinfrastructure and services to address the unique needs of researchers.

Actions:

- 1) Provide networking infrastructure to support needs of researchers.
  - Provide resources and information to enable researchers to take advantage of our external network connection with the BOREAS regional optical network.

- Enhance the internal campus network so that it extends the performance of the BOREAS external network to campus desktops and servers.
  - Explore the creation of a highly secure network campus intranet used to access highly sensitive research data.
  - Extend the campus wireless infrastructure into research buildings.
- 2) Under the leadership of the OVPR identify unique aspects of Iowa's research portfolio and focus efforts and resources to build infrastructure to best enable emerging research programs (e.g., CTSA, Nano-science, Bioinformatics).
  - 3) Implement a multi-phased High Performance Computing program that creates a shared effort for managing clusters and establishes co-location and system administration services.
  - 4) Provide data center facilities to meet the needs of researchers.
    - Minimize costs of housing research computing systems by creating a central data center facility.
    - Continue efforts to build a new data center for the campus; include space in the new data center for research use.
    - Acquire new and improve existing data center space for short-term use until the new data center is ready.
  - 5) Develop data management services to meet research needs.
    - Help reduce “information anarchy” through coordinating (the mostly silo-ed) efforts to understand and manage data on campus (need list of examples).
    - Identify processes or develop services for reliable and secure storage, backup, access to and archiving of researchers’ data.
    - Address data sharing policies for federally funded research projects.
    - Address researchers’ concerns regarding data access and security (e.g., confidentiality, intellectual property issues).
  - 6) In concert with DSP and OVPR provide tools and resources to streamline the grant application process.
    - Create budget resource/template documents/applications to facilitate appropriate IT budgeting in grant proposals.
    - Support the Provost's Office in creating a campus-wide system for electronic Curriculum Vitae for faculty and staff that would allow easy retrieval of these documents for use in grant applications.
    - Support Research Information Systems in developing and supporting the UI transition to electronic research administration, including electronic proposal routing and federation of identity.

Strategy 4: Support technology that facilitates collaborative research.

Actions:

- 1) Support campus interfaces with the national cyberinfrastructure.
  - Using technologies such as grids, federated identities, Real Time Communications (RTC), and networks, create new and participate in existing virtual organizations.
- 2) Expand the current centrally supported collaboration services shaped by the needs of researchers.
- 3) Assess the information technology needs of multidisciplinary research centers.

Strategy 5: Facilitate the translation of the broad array of research activities into the curriculum.

Actions:

- 1) Align cyberinfrastructure development with educational priorities as defined in the Iowa Promise.
- 2) Continue to promote instructional technology innovations programs.
- 3) Partner with the Center for Teaching to define needs and implement programs.
- 4) Establish showcase classrooms to demonstrate and stimulate the use of cutting edge instructional technologies.

## Goal 3: Secure our electronic information and IT systems.

Strategy 1: Develop tools and services to secure our information assets.

Actions:

- 1) Provide methods to encrypt sensitive electronic information on all systems and devices.
  - Develop a website resource with instructions for use of Microsoft and Apple encryption features.
  - Develop system administrator guidelines and training resources for support of encryption services to protect sensitive data.
  - Make and offer an encryption service centrally.
  - Assess central databases for sensitive Level III data and provide recommendations on encryption for data.
  - Convert to secure data transports centrally; set end of life for insecure file transfers to and from central systems.
- 2) Develop and implement two-factor authentication for core systems with level 3 sensitive information.
  - Evaluate current infrastructure and evaluate strong authentication technologies that would integrate into our enterprise authentication model.
  - Pilot one or more selected technologies, and develop a recommendation to purchase, integrate, and implement a two-factor authentication system.
  - Modify HawkID Login Tools enterprise authentication module to support two-factor authentications.
- 3) Ensure that all users have access to resources necessary to facilitate meeting baseline security standards.
  - Promote expanded use of self-service scanning tools, web application assessment tools, and self-service health check tools.
  - Make institutional data available via Enterprise Directory Services to enable local services.
  - Share port attributes from the TNSConnect application with the Security Office and other IT service providers.
  - Expand the web application vulnerability scanning services.

- 4) Complete the implementation of network firewalls around core administrative and healthcare systems and investigate network isolation strategies for other parts of campus.
  - Complete the implementation of firewalls in data center facilities.
  - Investigate IPV6 and service implementation using IPV6. The project should test basic service delivery using IPV6.
- 5) Implement public key infrastructure (PKI) systems and services.
  - Complete the implementation of the Microsoft PKI infrastructure.
- 6) Investigate options for secure email services.
  - Implement authenticated SMTP (simple mail transport protocol) service, and evaluate options for Microsoft Exchange/Outlook secure email.

Strategy 2: Appropriately manage all IT systems according to applicable policies and best practices.

Actions:

- 1) Form a group with broad representation to establish physical security standards.
  - Draft policy addressing appropriate roles and responsibilities for management and provision of Physical Access Control (PAC) systems, and criteria/requirements for PAC systems. Review existing security policy for gaps.
  - Identify physical security requirements for IT managed facilities across campus; propose appropriate new or updated policy/procedures.
  - Document access authorizations to critical physical IT assets (departmental grids).
- 2) Ensure that established physical security standards are implemented in all campus design and construction standards.
- 3) Develop and implement a plan to upgrade or relocate existing IT spaces to meet the minimum physical security standards.
  - Upgrade IT facilities to meet physical security policy as defined in Strategy 2, Action 1, and work with Facilities Management to re-key all telecom closets and implement card access.
- 4) Develop, implement and enforce policy requirements for a device to be connected to the campus network.
  - Implement a layered network defense model, using port level network policy. Use an opt-in strategy for limited communication capability, and default as status quo/open communications.
  - Pilot for a select number of network ports in one or more buildings, and determine requirements for broader implementation.

- Determine requirements to expand ResNet Quarantine system to campus buildings.
  - Implement client management technologies such as the Microsoft Systems Management Server on a majority of campus workstations.
    - Clearly define resources necessary to support migration and long-term management for 10-15,000 machines.
    - Develop a training program for department support personnel.
    - Form a steering committee to develop best practices, and to address needs for data backup, guest devices, and health check facilities.
- 5) Expand proactive efforts to identify security vulnerabilities, mitigate risks and prevent attacks as long as new efforts are returning more than their effort.
- Assess and then register or replace Wireless Access Points with an affordable campus standard wireless implementation.
  - Upgrade optical taps to match core network link speeds to facilitate troubleshooting, Intrusion Detection, and Net Flow collection/analysis

Strategy 3: Locate, protect, and track the use of sensitive information on campus systems.

Actions:

- 1) Require that all servers connected to the campus network, or containing institutional data are inventoried, tracked and managed according to best practices.
  - Promote registration of servers, through responsibility and automation techniques such as the USR (Ulowa System Registry), and Campus IT Leaders being informed of or in a work flow path for hostmaster requests,
  - Utilize the HawkIRB system and IRB/Human Subjects Office processes and procedures to require registration of research computer systems.
- 2) Require that all applications used on the campus that access or store institutional data are inventoried, tracked and managed according to best practices.
  - Obtain resources necessary to implement security risk assessment of all devices with sensitive data, in conjunction with Goal 3, Strategy 3.
  - Perform an audit of all data linkages to and from central applications and systems (i.e., MARS, Peoplesoft, MAUI, ICON).
  - Complete SSN remediation activities.
- 3) Facilitate and control user access to critical online applications and resources while protecting confidential personal and business information from unauthorized users.

- Work with data stewards to perform periodic AIS system authorization audits.

Strategy 4: Increase awareness of each individual's role in IT security and privacy.

Actions:

- 1) Develop materials that can be used by departmental staff to raise awareness of the importance of individual action for IT security. These materials should address all security roles: executive leadership, business owner, data steward, and end-user.
  - Require all users (including existing employees) to attend or complete security awareness training, on a two year cycle, by a) require/insert a presentation for new faculty and staff at orientation or at first login to the Self Service application, b) make "canned" power point awareness presentations available for staff meetings, and for administrators, deans, and DEO's, and c) promote the ICON Security Awareness course, and d) assist data stewards by developing awareness of their role, their responsibility, and how to apply the institutional data access policy with respect to sensitive Level III data.
- 2) Provide appropriate training to all employees with responsibility for IT security.
  - Re-develop and subsequently promote the MIST (Modular Information Security Training) IT Security Training Course.
  - Increase promotion of and attendance at the monthly IT Security Office seminars.
  - Create "defensive programming" best practices for campus developer community, and provide training.
  - Implement software development tool to scan code for security/performance issues
  - Provide demonstrations to IT Staffs that promote understanding of security vulnerabilities
- 3) Annually notify all users of campus IT Policies.
  - Implement annual acknowledgement and acceptance of a data confidentiality statement via the Employee Self Service application, for all UI employees.
- 4) Develop methods to recognize and reward users and IT providers who exemplify good security practices.
  - Provide reports to university administration and deans regarding security awareness training attendance/completion.
- 5) Develop procedures that reinforce the personal accountability implied in each security role.

- Perform vulnerability testing for all systems.
- Renew IT staff Confidentiality Agreements annually.

## Goal 4: Increase the utilization and effectiveness of IT.

Strategy 1: Improve user knowledge, skills and abilities regarding available technologies, services and tools.

Actions:

- 1) Implement a user education program to facilitate the understanding of what technologies and IT services are available to each person and how they can best access them.
- 2) Establish appropriate IT literacy standards for faculty, staff and students.
- 3) Analyze currently available training to identify the necessary components of complementary modalities. Develop pilot offerings in several modalities (e.g., classroom setting, instructor-led online, etc.), evaluate for effectiveness, and convert to ongoing offerings.

Strategy 2: Improve efficient and effective access to electronic information.

Actions:

- 1) Assess and develop plans to address core administrative systems' ability to meet the needs of the campus community for accessing electronic information, in order to enable them to deliver data to the end user.
- 2) Enhance and expand support and services for the Web and application developer community.
- 3) Improve access to University data through tools such as content management, and facilitate interfacing to University data through web services to UI administrative systems, content management packages and database driven applications.

Strategy 3: Expand and improve end user support.

Actions:

- 1) Develop a mechanism (e.g., new component of Self Service portal) that will allow all members of the UI community to identify their primary provider of IT support, with links to additional information provided by their support group.
- 2) Develop templates and best practices for each IT support provider, to explain to users what kind of support is available, and let them know what they can expect.
- 3) Develop and foster a IT support community by designing and creating a system where local IT providers have higher-level support channels to central IT providers. Build a community to facilitate direct access from IT providers to appropriate internal staff.

- 4) Identify current enhanced support programs that are recognized as successful (e.g., the Student Instructional Technology Assistant program in ITS) and target them for expansion.

Strategy 4: Build and buy systems that are easy to use and understand.

Actions:

- 1) Include ease of use as a criterion in RFP and other evaluation processes.
- 2) Implement process improvements in conjunction with new system deployment.
- 3) Focus on accessibility and consistency in new system design.

Strategy 5: Include technology usage considerations in Process Improvement initiatives.

Actions:

- 1) Include IT services and technologies expertise on Organizational Effectiveness process improvement teams.
- 2) Incorporate business process analysis in major IT deployments and migrations, using key IT systems such as TNS Connect, ICON, MAUI.

Strategy 6: Provide tools and training for IT providers to better understand how end users are accessing campus data.

Actions:

- 1) Encourage server-level tracking and reporting for service usage.
- 2) Encourage application-level tracking of usage and usability.
- 3) Identify and publicize existing solutions in a catalog of services.

## Goal 5: Provide IT services that meet the campus needs in a coordinated and efficient manner.

Strategy 1: Actively pursue understanding of campus IT needs and develop supported services to meet those needs.

Actions:

- 1) Coach IT providers on how they can develop better understanding of their users work requirements and identify IT services that could help the users be more successful or efficient.
- 2) Implement an annual process to engage IT users in all areas of The University to assess satisfaction with IT services provided and gather information about potential new services.
- 3) Annually review IT services delivered on campus to identify gaps.
- 4) Assess the instructional, research, administrative and clinical needs of the College of Medicine faculty, staff and students whose work requires them to be served by both ITS and HCIS, and jointly develop plans to meet those needs.

Strategy 2: Increase cost effectiveness of IT solutions on campus.

Actions:

- 1) Adopt a Life Cycle approach to IT services and solutions across campus that continually assesses benefits and cost.
- 2) Establish and report usage metrics for each IT service to be used for annual service reviews.
- 3) Annually review IT services delivered on campus to reduce unnecessary duplication and identify services that should be retired based on operating costs exceeding operating benefits. The review will include services offered by departmental, collegiate and the enterprise IT providers on campus.
- 4) Complete an analysis to determine the standardization opportunities that will bring the greatest benefit to the University.
- 5) Determine the minimum number of standard configurations of software images and printers that meet campus needs.
- 6) Reduce the need for parallel systems by developing new or modifying existing systems in order to improve effectiveness of faculty, staff, and students.

Strategy 3: Build a new campus data center and data management infrastructure as a part of an overall strategy to centrally provide core IT infrastructure that efficiently enables locally delivered services.

Actions:

- 1) HCIS and ITS will jointly develop and implement a comprehensive plan to meet the projected Data Center space needs for all University constituents, including plans for new facilities or upgrades, operational plans, and sustainable funding models.
- 2) Develop a data management infrastructure.
  - Define restoration requirements for critical services.
  - Update the ITS Disaster Recovery plan addressing all IT services.
  - Define and implement data storage and management services.
- 3) Provide core IT infrastructure.
  - Increase the availability of wireless access to the campus data network to include primary areas where students, faculty and staff work with laptops or other mobile network devices or there is no wired access alternative available.
  - Build a relationship with facilities so that buildings, IT and campus planning can be coordinated.
  - Evaluate authentication and directory services with goals of improving the end user experience and reducing support time for IT staff.

Strategy 4: Implement effective planning and governance for IT at organizational levels, and joint annual planning cycles for all IT groups on campus.

Actions:

- 1) Form a CIO Advisory Council to review and modify as needed the existing structure of IT advisory bodies and advise the CIO on strategic and policy issues.
- 2) Formalize the relationship between the CIO and all IT service providers to facilitate more effective coordination of IT related activities across the entire University.
- 3) Each IT unit on campus will prepare annual plans that are widely shared and coordinated with the IT Strategic Plan and other units plans.

Strategy 5: Improve IT processes to gain efficiencies and provide better services with available resources.

Actions:

- 1) Provide training to IT staff for using process improvement models, techniques and tools.

- 2) Implement a review cycle to identify the high impact IT processes and investigate them for improvement opportunities.
- 3) Identify best practices in IT service delivery, including the development of Service Level Agreements, and share those practices within the IT community.
- 4) Increase the use of tools such as system management services to allow more efficient management of desktop computers.
- 5) Increase the use of virtualization to more effectively use server resources.
- 6) Improve service provisioning and de-provisioning processes and tools.

Strategy 6: Build the IT community and increase collaboration opportunities.

Actions:

- 1) Strengthen the role of the CITL in campus-wide IT activities.
  - Form a CITL Executive Committee to assist the CIO in leading CITL.
  - Form a CITL Communication Subgroup to facilitate communication within CITL and with the campus.
  - Form a Campus IT Project and Service Portfolio Subgroup to develop a process for building and maintaining a Campus IT Project and Service Portfolio.
- 2) Use the Campus IT Leaders group as a catalyst to identify and develop additional IT community groups, as needed.
- 3) Increase participation of the broadest set of IT professionals in University IT related events.
- 4) Formalize an annual IT events calendar, like Tech Forum, Security Day, etc., to nurture the culture to expect these events.