

Strategic Plan *for*  
Information Technology  
**2009-2012**



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# UB's Strategic Plan for IT: *Developing THE PLAN*

## Introduction

This publication presents the University at Buffalo's Strategic Plan for IT for 2009-2012, outlining the strategic priorities that will guide IT investments in support of our campus UB 2020 plan to achieve academic excellence. Information Technology (IT) is an increasingly important element of teaching, learning, and discovery/research in higher education and students, faculty, and staff have increasingly high expectations for information technology and services.

In this time of increasing demand for IT services, the campus budget crisis places increased pressure on IT to reduce costs. One of the overarching principles of the IT Transformation has been to achieve efficiencies and savings for IT activities that do not differentiate UB from others, allowing IT to shift more of our investments from "utility" to "core" services that advance teaching, learning, and discovery/research. The IT Transformation has resulted in annual cost reductions of \$5M+.

Another principle in our strategic framework is to continually evaluate opportunities to partner with vendors to replace UB utility IT services with commercial services in order to reduce costs, provide enhanced, cutting-edge services, and meet the needs of the UB community. We are currently replacing our student email service with an enhanced communication and collaboration suite from Google.

## Developing the Plan

In 2008 the CIO was charged by campus leaders to develop a campus-wide strategic plan for IT, using the following goals and principles as a framework. In the past the CIO has developed plans for enterprise-wide technologies managed by the central IT organization, rather than a campus-wide plan for IT.

### Goals and Principles

- ▶ Leverage all IT resources across UB while reducing costs
- ▶ Strategically deploy IT to advance innovation in teaching/learning and research
- ▶ Reduce the administrative burden on faculty and staff
- ▶ Design a plan that supports innovation and diversity
- ▶ Ensure continued IT alignment with UB goals, priorities, and plans

### Campus Input To The Strategic Plan For IT

In the spring and summer of 2008, campus leaders, including deans and vice presidents, were interviewed to provide information on their key academic and business needs. Based on these interviews, a number of common critical needs and priorities emerged. The IT leadership group comprised of both central and distributed IT leaders, proposed strategic goals and initiatives to meet these critical needs and priorities. The Executive Technology Advisory Group and deans and vice presidents reviewed the list of common critical needs and priorities as well as the proposed

strategic goals and initiatives and provided feedback that informed the strategic plan.

## The Plan

Our major technology initiatives to support undergraduate and graduate teaching and learning, advance discovery and research, provide efficient administrative operations and basic enabling services, support UB's community service mission, ensure information security and privacy for the University community, and transform IT, are found in the following pages.

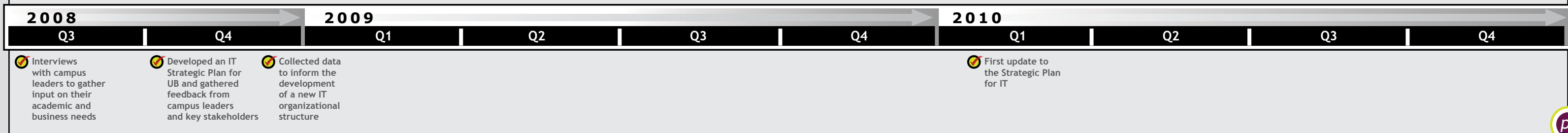
## Next Steps

In 2009 implementation plans will be developed for the strategic initiatives. In addition, a new campus-wide IT organizational structure will be proposed, informed by data collected on IT units and staffing in 2008-2009. We welcome your comments and feedback on the strategic plan for IT.

*Elias G. Eldayrie*



Elias G. Eldayrie  
CHIEF INFORMATION OFFICER



## Support for TEACHING and LEARNING



### CRITICAL ISSUES

The following issues emerged in our interviews with UB leaders about their academic and business needs

- ◇ Enhance support for local and global collaborations and communications
- ◇ Address the issue of insufficient physical lab and technology classroom spaces
- ◇ Enhance support for student clinical practice, including simulations, modeling, and assessment
- ◇ Provide more support for non-traditional and remotely-located students
- ◇ Enhance support for media-rich content delivery
- ◇ Meet the expectations of students for social networking/Web 2.0 applications
- ◇ Provide tools that enable units to provide Continuing Education, in-service training and other programs for alumni
- ◇ Improve support for mobile devices and emerging technologies

# STRATEGIC PLAN: *Support for TEACHING and LEARNING*

In order to address these critical issues, the following strategic initiatives are proposed to enhance support for teaching and learning. Some of these initiatives are underway.



## Support Scholarly Communication and Collaboration

Link UB campuses/units/faculty/students to each other and to scholars around the world

- Enable pervasive access from desktops/laptops, classrooms and other spaces to web-, video-, and other real-time conferencing tools
- License and deploy a standard set of personal conferencing and collaboration tools for the campus; provide support services for the tools

## Provide Technology in All Teaching and Learning Spaces

Equip all instructional spaces with high quality instructional technology

- Work with the Provost's Classroom Committee to complete the technology classroom build-out
- Provide a base set of instructional technologies for teaching and learning
- Provide automatic content capture for lectures, pre-labs, seminars, and other instructional content

## Provide Distributed Learning Environments

Provide "virtual classroom" infrastructure to enable academic areas to extend academic and continuing education programs to distance learners

- Leverage technology to increase revenue from distance learning and continuing education programs

## Support Faculty Development of Instructional Content

- Deploy intuitive, self-supporting tools that do not require advanced technical expertise
- Create services which empower faculty in the use of technology with minimal IT staff assistance and support
- Make IT staff available to support the development of digital instructional content

## Develop Informal Learning Spaces and Support for Mobile Learning

Develop informal, technology-enabled learning spaces that provide wireless access to instructional and productivity software for collaborative and individual work

## Deploy, Develop, and Support Faculty use of Digital Media Services, including

- Simulation and clinical practice assessment tools for instruction
- Web 2.0 tools, including social networking applications and emerging technologies
- New media channels such as YouTube and iTunes U for instructional content delivery

2008

Q3

WebEx Web conferencing tool has been licensed for the campus

Q4

Consolidated file storage project initiated

2009

Q1

iTunes U production/roll-out

Project team charged to evaluate Web conferencing tools

Web cams and microphones included in UB 2020 hardware standards

Q2

Public labs software virtualization rollout

Roomview pilot (remote monitoring) completed in 10 classrooms

89% of centrally-scheduled classrooms are tech-enabled

Q3

3,072 UBlearns course sections in Fall 2009

Informal, collaborative learning spaces added in Knox, NSC, Diefendorf

Q4

Web Conferencing Task Force recommends licensing Elluminate for campus collaborations

WiFi buildout continues: 1,157 wireless access points installed

2010

Q1

Student laptop/netbook ownership: 91%

Student cell phone ownership: 98+%

Students using UBlearns in 1 or more classes: 91+%

Q2

Q3

Q4

## Strengthen IT RESEARCH SUPPORT



### CRITICAL ISSUES

The following issues emerged in conversations with deans and other campus leaders with respect to research and scholarship needs

- ◇ Provide support for multi-disciplinary, multi-institutional collaborations
  - ◇ Enhance collaborations and reduce meeting costs through the use of videoconferencing; Provide IM support
  - ◇ Develop campus standards and licensing agreements for collaboration tools
- ◇ Enhance support for grant administration activities, including the proposal, award, and expenditure reporting infrastructure
- ◇ Provide basic research infrastructure including large scale data and file storage infrastructure (digital repositories, data archiving and management services)
- ◇ Provide support for the digitization and management of medical health records and other protected health information (PHI)
- ◇ Address information security, privacy, and regulatory compliance issues
  - ◇ Protection of electronic health records and other PHI
  - ◇ Protection of other research data



# STRATEGIC PLAN: *Strengthen* IT RESEARCH SUPPORT

In order to address these critical issues, the following strategic initiatives are proposed to enhance support for researchers. Some of these initiatives are underway.



## Scholarly Communication and Collaboration

Facilitate local and global research collaborations and communications

- Provide a continuum of video and other conferencing solutions to increase research collaborations and reduce travel
  - License and deploy a standard set of conferencing and collaboration tools. *Include desktop videoconferencing and web conferencing tools as well as document collaboration tools.*
  - Provide support for the tools deployed

## Research Administrative Systems

Minimize the administrative burden for researchers by providing improved administrative systems, tools, and information for proposal, award, and other grant administrative activities

- Continue to implement and “tweak” the Coeus Electronic Research Administration system
  - Coeus provides pre- and post-award information management tools for proposal development and awards
- Provide a set of regulatory compliance and reporting tools to aid researchers/ Principal Investigators (PIs)
- Provide technology transfer tools to support PI patent and licensing activities

- Provide tools to support the presentation of research findings

## Research Cyber Infrastructure

Provide and support the computational tools and resources UB researchers need. Develop an IT provisioning process to provide:

- Large scale data and file storage infrastructure
- Data management services to
  - Support data sharing, reuse, archiving
  - Provide institutional repositories to preserve faculty works
  - Provide secure, compliant mechanisms to transfer data sets
- Remote access by researchers to data and cyber infrastructure and the ability to share data with and transfer datasets to colleagues
- Advanced research network connectivity, enabling researchers to participate in NSF and other research initiatives
- High performance computing resources
  - Continue to invest in the Center for Computational Research
- Consulting, training, and support for the use of IT research tools and infrastructure

- Software engineering services, including applications development and porting, integration, database design and management

- Software licensing services to aggregate purchases and negotiate volume discounts with vendors for commonly-used research software

### UB’s Center for Computational Research (CCR)

provides cyber-infrastructure for UB researchers who need high performance computing, large-scale data storage and management, and scientific visualization services. CCR support staff include computational scientists, programmers, and database administrators.

A new energy-efficiency upgrade to the CCR, located in UB’s New York State Center of Excellence in Bioinformatics and Life Sciences, will enable the CCR to realize energy efficiency savings of approximately \$150,000 per year, while boosting the Center’s total capacity by more than 50% (from 13 Teraflops to 20 Teraflops). The upgrade was made possible by a \$300,000 contract from the New York State Energy Research and Development Authority (NYSERDA) and a \$150,000 investment by UB.

2008

Q3

✓ COEUS implemented

Q4

✓ WebEx licensed for campus collaborations

✓ Enterprise Research Computing provides wiki service for research teams

✓ High availability file storage solution: PIs receive 20GB of storage

✓ Project team charged to evaluate Web conferencing tools for the campus

2009

Q1

Q2

Q3

✓ UB’s NextGen initiative upgrades network backbone to 10Gbps

Q4

✓ I1 link upgraded to 1Gbps

✓ Web Conferencing Task Force recommends licensing Elluminate for campus

2010

Q1

Q2

Q3

Q4

# Improve IT INFRASTRUCTURE



## CRITICAL ISSUES

The following issues emerged in conversations with campus leaders with respect to basic enabling technology infrastructure

- ◇ Enterprise Administrative Systems and Services: Many campus leaders noted the need for better enterprise information systems in order to improve business processes and functionality at UB. Specific issues raised include the following:
  - ◇ University Business Systems in general: Widespread dissatisfaction with financial and other business systems information (accuracy and integrity) results in the development of shadow systems in departments
  - ◇ The need for better databases to facilitate activities in the units, including philanthropy/development programs, and student recruitment, and recruitment for continuing education offerings
  - ◇ Student Systems: The need for better student systems for advisement support and graduate student recruitment, admissions, and other services
  - ◇ Faculty Information: The need for faculty performance/evaluation support systems to collect and manage information about faculty academic activities
- ◇ UB Communications and Web presence: Needs included the following:
  - ◇ An enterprise-wide web content management system to make it easier to create and maintain web resources/information
  - ◇ University-branded tools, resources, templates to provide a consistent look and feel to communications
  - ◇ Web 2.0 communication tools, including social networking tools, to enable sharing of critical university information quickly and effectively
- ◇ Data Storage and Services: Increasing needs for large scale storage and archiving, backup, and data management services for students, faculty, and staff
- ◇ Mobile Device Support:
  - ◇ Support for mobile devices in general, as well as support for these devices in accessing new administrative systems
  - ◇ Network connectivity issues - accessing hospitals and clinical practice plans

# STRATEGIC PLAN: *Improve IT INFRASTRUCTURE*

In order to address these critical issues, the following strategic initiatives are proposed. Many of these initiatives are underway.



## Improve Administrative Systems and Services

Replacement/modernization of our legacy administrative information systems:

- Student Systems ERP: Implementation underway
- Strategic Information Reporting Initiative (SIRI), the business intelligence and reporting system will become a single authoritative source for information and reporting.
- Please see the IT Transformation Projects Section on page 12 for information on these initiatives.

## Improve UB Communications and Web Presence

- Web Content Management Initiative - Project team charged to implement a solution to support the creation, management, delivery and sharing of Web content across the campus, while promoting compliance with organizational standards
- Provide support for emerging communication tools
- Provide support for videoconferencing tools

## Develop a Storage Strategy to Meet Campus Data Storage and Service Needs

- Increasing needs for large scale storage and archiving, backup, and data management services for students, faculty, and staff

## Support Mobile Computing (mUB)

- Expand secure wireless network to enable widespread mobile computing
- Expand support and applications/services for mobile devices

## Continue to Upgrade the Network Infrastructure

- UB10G - UB's next generation network backbone; a 10 Gigabit ethernet backbone in the core with 1 Gigabit ethernet dual attached links to every building. Now that 1GB is almost ubiquitously available at the network's edge, the current 1GB backbone is destined to become a bottleneck. The planned bandwidth upgrade represents a 10X capacity increase.

## Meet Data Center Needs

- Current central IT data center facilities are at or near capacity – Plan for a new, green data center. Data Centers with their concentration of servers with high-end power and cooling needs are among the largest consumers of electricity on campus. "Green Data Centers" are designed for maximum energy efficiency and minimum environmental impact.

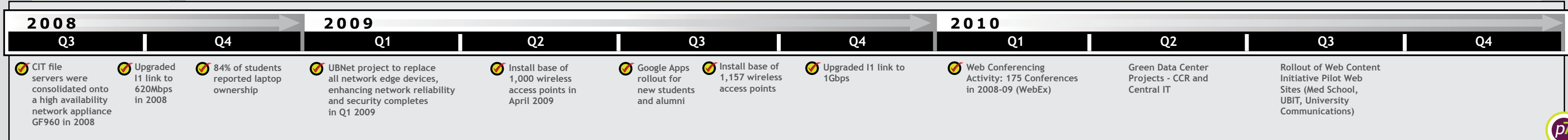
## Support Green IT Initiatives

Visit [www.cio.buffalo.edu/greencomputing.shtml](http://www.cio.buffalo.edu/greencomputing.shtml)  
Other Green IT initiatives include the following:

- Green Workstation Procurement Program—All UB 2020 workstations (laptops and desktops) purchased as part of the Workstation

Standardization initiative are Energy Star-qualified devices. In addition, UB 2020 devices are equipped with Web cams and microphones to make them videoconferencing-ready wherever possible.

- Virtual Meeting Tools—Video and Web conferencing facilities and software (WebEx) are available to enable members of the UB community to replace some travel and meetings with conferencing tools, as part of UB's sustainability plan.
- Server Consolidation and Virtualization-- UB 2020 IT Transformation service and server consolidation efforts have reduced the number of campus servers. We have also replaced end-of-life servers with more energy- and space-efficient servers.
- Replacing Public Computing Labs with Virtual Labs—Since 98% of students have their own computers and more than 80% have laptops and other mobile devices, UB can begin to replace student computing labs with virtual labs that provide the software tools students need on their mobile devices, making the tools available anytime, anywhere.
- Increase Recycling and the Proper Disposal of E-Waste--the UB 2020 workstation standardization initiative has a program in place with Dell for recycling of UB institutionally-purchased computers in compliance with EPA disposal guidelines ([Dell's Asset Recovery and Recycling Service - ARS](#)).



# INFORMATION SECURITY



## BACKGROUND

The basic goals of information security—confidentiality, integrity, compliance, and availability—are increasingly important as the dependence on information technology increases, regulation and threats increase, and the data we protect is of increasing interest from a financial value perspective and from an intellectual property perspective.

In May 2006, the University created the position of Information Security Officer (ISO) for the purpose of building an IT Security Program for the University. The ISO established a charter, policy, and governance structure, a legal request handling process, an Information Security Awareness Program, and a risk assessment to assess current information security efforts and identify immediate high risk areas.

External consultants reviewed our plans and provided an assessment. In October 2008, an additional external assessment of information security was conducted as part of the current ERP student systems replacement project.

In September 2008, the ISO began developing a strategic plan for information security at UB, with the following principles:

- ◇ Planning and managing information security should be driven by risk assessment and gap analysis.
- ◇ Assessment Framework: Architecture, standards, and regulation are an essential part of sound information security management.
- ◇ Information security threats and practice are constantly evolving. This strategic plan is intended as a 3-year vision based on today's world.
- ◇ The regulation and standardization of information security will increase dramatically.
- ◇ Building UB's information security model and processes on national and international standards best positions UB to meet new demands.
- ◇ Strategic and tactical planning are essential.
- ◇ External reviews are valuable and strongly recommended.

# STRATEGIC PLAN: *Information Security*

UB's Information Security Plan includes the following strategic components.



## Perform Risk Assessment and Management

- Implement regulated private data controls
- Complete Initial Risk Assessment - Identify what we have and to what level it needs to be protected
- Identify our IT compliance burden and to what extent we meet it
- Create an improved process for on-going risk assessment for new and modified services, systems, and applications

## Improve Governance, Organization, and Process

- Perform an Information Security Governance and Policy structure review
- Review and restructure the Information Security organization
- Make Operational Process improvements (for example, incident response process)
- Develop plans to meet IT security compliance requirements identified in the Risk Assessment

## Improve Data Management, Access and Protection

- Continue to focus on strong Identity Management
- Revise the data access model and process
- Protect sensitive, regulated private data
- Improve employee/workforce and student information security awareness and training

## Improve Operational Protective Measures and Security Event Management

- Improve security monitoring and event response
- Improve standardization of system configurations
- Improve protective measures
- Perform periodic penetration testing of critical systems and infrastructure

## Improve Continuity of Operations Planning and Positioning

- Develop campus standards
- Complete unit IT service continuity planning within the overall unit emergency business continuity planning process
- Address critical facilities issues

2008

Q3

UB Regulated Private Data Policy and Standards approved

Q4

Information Security Awareness Tutorial available online for UB employees

2009

Q1

PCI Compliance Training available online for UB employees

FERPA Final Rules go into effect

Information Security Risk Assessment Survey begins collecting input from CFOs and IT staff

Q2

FTC Red Flags Rule Assessment survey begins collecting input from CFOs

Q3

Q4

Governor Patterson strengthens protections against identity theft, restricting SSN use

2010

Q1

IT Emergency/Business Continuity Plan Web site launched

Q2

FTC Red Flags Rule takes effect (Identity Theft protection)

Q3

Q4

## Public and Community SERVICE



### BACKGROUND

UB faculty collaborate with both public and private sector organizations in the Buffalo-Niagara region, working on educational, health-related, and economic development initiatives. UB students and staff enrich K-12 classrooms and volunteer in more than 1,400 locations across the region.

We continue to explore technology solutions that make the information, teaching, and learning resources of the University and the expertise of our faculty more accessible to the public. Our focus on providing communication and collaboration tools for faculty, students, and professional staff in this strategic plan will help us realize this goal.

An expanded reach is part of the University's continuing focus on improving the community where we live, work, and learn.

*"The University at Buffalo is committed to being an active and engaged partner in our community, a good neighbor, as well as a positive catalyst for change."*

Marsha S. Henderson  
Vice President for External Affairs

# STRATEGIC PLAN: *Public and Community* SERVICE



## Lighting Up the Region

The university has played a leadership role in the community by bringing together city, county, and state agencies in the development of a broadband fiber optic network that faculty, students, and professional staff use in collaborations with local higher education and K-12 institutions, health care institutions (hospitals and research institutions), and government organizations.

## Vital Health Care Connections

External funding is being used to facilitate the creation of a broadband network in the Buffalo Niagara region, connecting public and nonprofit health care providers in rural and urban locations.

The Rural Health Care Network Initiative will bring telemedicine services to local areas where the need for these services is most acute, enabling intensive-care doctors and nurses to monitor critically ill patients at multiple locations around the clock, enabling the delivery of continuing education to health care providers, and enhancing coordination of the health care community's rapid response in emergencies.



Hillary Rodham Clinton  
UNITED STATES SECRETARY OF STATE

James A. Willis Ph.D.  
EXECUTIVE VICE PRESIDENT  
for UNIVERSITY SUPPORT SERVICES



# STATUS REPORT *IT Transformation Projects*



## **BACKGROUND**

In 2005, University at Buffalo campus leaders charged the CIO to lead an IT Transformation initiative to:

- ◇ Develop campus IT priorities and strategies aligned with campus strategic goals and priorities
- ◇ Develop an integrated planning, budgeting and funding model
- ◇ Examine current IT organizational structures, processes and systems
- ◇ Develop a unified IT service delivery model

In 2006, the Executive Technology Advisory Group was formed and charged to provide advice and policy guidance on the full range of IT directions, strategies, plans, priorities, and needs; a new IT governance model was adopted; and project teams were formed to develop and deploy services using a unified IT service delivery model. By the end of 2008, UB had realized cost savings of more than \$5M from IT transformation project implementations.

In addition, rollout of the business intelligence and reporting system (SIRI) and implementation of the enterprise student system will continue to improve information, tools, and services for the campus. The current status of the projects at the end of Q1 2009 is listed on the following page.

Visit [www.buffalo.edu/ub2020/its/](http://www.buffalo.edu/ub2020/its/) for current information.

# IT Transformation: Q1 2009 UB 2020 PROJECT STATUS



## Workstation Standardization

The workstation standardization team created laptop, desktop, and software standards for the campus and aggressively negotiated volume discount purchase agreements with vendors. More than \$3M in hardware and software cost savings have been realized by the end of 2008, and technical support costs have been reduced as well. Finally, the campus has realized energy savings with the deployment of Energy Star-qualified devices and use of Dell Asset Recovery & Recycling Services has resulted in efficient and “green” equipment recycling and disposal.

## Consolidation of Campus Servers and Services

The goals of the server/service consolidation initiative are to: Turn off servers, recover machine room space, reduce software costs, reduce tech support for services, and enable distributed IT staff to focus on services that enhance the core mission of the University. With the rollout of the UB High Availability File Service, 50 campus file servers have been retired. Email, database, Citrix, and managed security (antivirus, patch management, system updates) consolidations are also contributing to efficiencies in providing services.

## Development and Implementation of Business Applications for the Campus

Among the projects fully completed or completed in part are: ePay (e-commerce), eReq (e-procurement), ePTF (electronic personnel transactions), Personnel Recruitment Management, and Coeus (Pre- and Post-award administrative software for research). UB has implemented the Coeus application for all four SUNY University Centers.

## New Student Systems ERP

The Discovery Phase of the project is complete: The team has transitioned to configuration of the new system and remodeling of processes in preparation for transition to the new system.

## VoIP Initiative—Convert and Consolidate Phone Systems, Reduce Costs, Improve Services

By the end of 2008, UB had converted ~22% of its 5,000 Centrix lines, resulting in cost savings to the University. In addition, 3,324 phones (of 8000 phone sets) were converted to VoIP, representing 40% of the overall goal in this multi-year initiative.

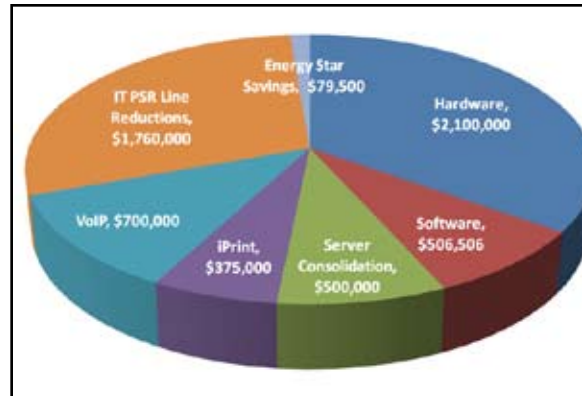
## Strategic Information Reporting Initiative (SIRI)

SIRI, UB's business intelligence and reporting system, now includes reports and dashboards for financial, human resource, procurement, and resource management analysis and reports.

## Campus IT Shared Service Desk

The IT Shared Service Desk (SSD) team selected CA's Unicenter Service Desk application for the project's implementation. The team is currently piloting the SSD with the central IT Help Desk and the Schools of Management and Social Work.

IT Transformation Annual Project Cost Reductions



2008

Q3

Q4

2009

Q1

Q2

Q3

Q4

2010

Q1

Q2

Q3

Q4

✓ The iPrint (print management system) produces annual savings of \$375K

✓ IT Shared Service Desk Pilot launched with Central IT, and the Schools of Management and Social Work

✓ Approximately 2,000 user departmental mailboxes and 4,100 VoIP mailboxes have been migrated to the Central Exchange Service

✓ VoIP Project is ~50% complete. Completion expected: Sept 2010  
Projected annual savings \$700K

✓ New student email outsourced to Google Apps for Ed

✓ Netbook added to Workstation Standards offerings

✓ Email Consolidation - Currently working on the last departmental migration to the central Exchange 2007 infrastructure

Shared Service Desk Pilot (Central IT, Schools of Management, Social Work) scheduled to complete

VoIP initiative scheduled to complete

# IT FACTS *and* FIGURES

## Support for Teaching, Learning and Research

### UB students are connected and “unplugged”: In 2008-09

- 84% own laptops; 98% have computers
- 80% + own MP3 players
- 98% have cell phones; the # of students with Internet-enabled phones increasing

## Technology in the Classroom

- All centrally-scheduled classrooms have Internet access
- 79% of classrooms are technology-enabled with computer projection and 2/3 of all classrooms have a strong wireless signal
- Audience response systems (Clickers) are available in many tech-enabled classrooms

## Student Computing Labs

- ~2400 workstations are available across the campuses in labs
- SoftGrid software virtualization rolled out for public labs

## Online Courses - Ublearns

- 5000 + courses had Ublearns (Blackboard) sites in 08-09
- Individuals accessing Ublearns:
  - > 24,530 student accounts
  - > 1983 faculty accounts

## Courses Using Digital Streaming Services

- Digital course captures:
  - > Video: 3190
  - > Audio: 2950
- Digital recording classrooms: 33

## Research Computing

- Advanced research network membership/ participation: Internet2, Northeast LambdaRail, NYSGrid, Open Science Grid
- Coeus implemented to automate grant proposal and administration processes
- Federated identity management: UB is a member of InCommon organization
- Negotiated volume discounts for software; partnered with academic areas
- Help Desk established in COE for Bioinformatics and Life Science
- Research File Storage: Highly robust and redundant storage, archive and backup services provided for researchers

## General Campus Computing Network Access and Quality

- Upgraded campus Gigabit backbone and completed Gigabit building links
- I1 link upgraded to 620 Mbps
- UBNet Initiative: All network switches have been replaced
- UB's next gen network backbone initiative will provide a 10 Gigabit Ethernet backbone

## Wireless Network

- Upgraded wireless access points and installed a centralized management system
- ~1000 wireless access points currently installed and maintained centrally

## Email

- UB is processing ~3.5M + central email messages daily (on average)
- Spam Management: In 2008 user level spam management capabilities were rolled out

## Help Desk

- Handles 25,000+ queries each semester
- Implemented a call-routing system to improve service, automate creation of service metrics
- Implemented weekly customer service satisfaction measurements
- Campus-wide IT Shared Service Desk piloted with Schools of Management and Social Work

## Printing

- iPrint Print Management System cut annual printing volume in half and improved turnaround time and customer satisfaction
- Central iPrint service made available to departments
- “Print Anywhere” rolled out to enable printing from laptops

## File Storage

- 70TB available

## Software

- Improved Web access to campus-licensed software

## Web Services

- 1,000,000+ web pages hosted on UB servers
- Single sign-on implemented for MyUB portal

## Voice over IP (VoIP) Project

- Wave of first VoIP (4000+) telephones installed

## Backup Services

- Increased capacity from 140TB to 400TB

## Administrative Computing Systems

- ePay: \$56M+ was accepted via online payments
- 115,519 grades were posted through online Web grading
- 252,000+ online registration transactions were completed

## Security

- Information Security Risk Assessment conducted
- Provided campus-wide Information Security training
- PCI Compliance training completed by employees handling/with access to credit card information
- Regulated private data policy and standards approved and promulgated

## Governance, Communication

- Executive Technology Advisory Group (ETAG) established IT governance principles
- First campus-wide IT strategic plan adopted
- Sponsored monthly IT Town Hall meetings, newsletter, and web sites for UB IT, CIO, and UB 2020 IT Transformation

## Public and Community Service

- Expanded regional fiber network
- Adopted and promulgated Green IT practices for sustainability
- Partnership: WNY Rural Health Initiative