Measuring
Information Technology Services
Provided by the Division of Information Technology
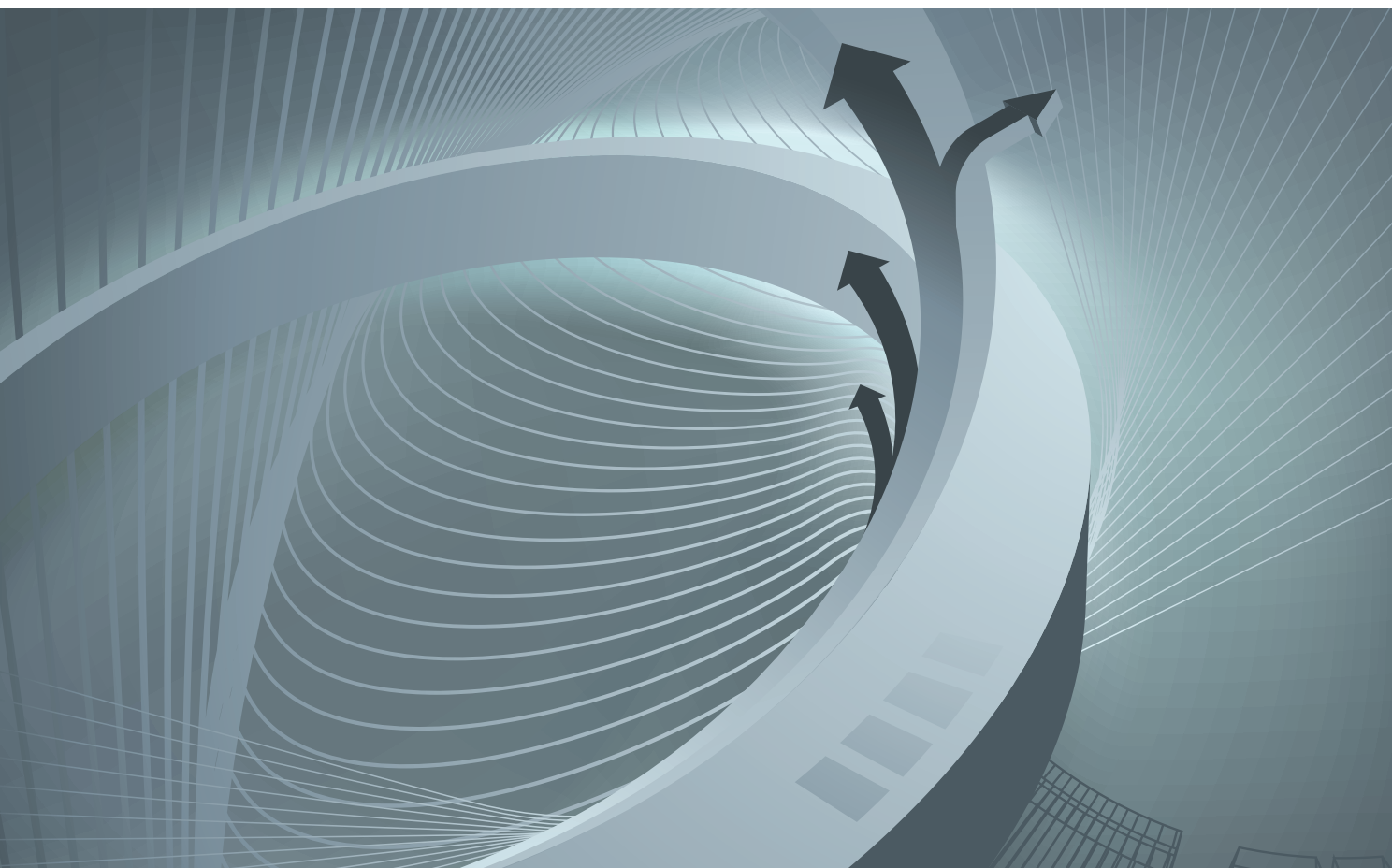
DoIT DIVISION OF
INFORMATION TECHNOLOGY
University of Wisconsin-Madison

Campus partners,

In 2009, Ron Kraemer, the Chief Information Officer (CIO) and Vice Provost for Information Technology created a new position of Chief Operating Officer (COO) to lead the Division of Information Technology (DoIT). In my capacity as COO, I not only manage the DoIT day-to-day operations of roughly $70 million budget and nearly 700 staff, but I also coordinate setting the strategic direction for DoIT.

Thus it is critical that we work closely with our campus partners to determine which services should be provided as an enterprise by DoIT and which services should be distributed among campus departments. As this brochure illustrates, DoIT and our exemplary staff run many reliable and cost-effective services; essential services on which the campus depends. These services, as well as the software and equipment on which they run, are in most cases state of the art. In addition, our customers expect and almost always receive 24x7 up-time, with full technical support and training.

At DoIT we believe in accountability and transparency for the services we provide. The same is true for the funding we receive to run them. We maintain a portfolio of our IT services and measure the value that each service brings to the campus. It is our goal to always improve and advance our services, so we always welcome your feedback.

Please note that this report only documents and acknowledges those services hosted and run by DoIT for our customers.

We look forward to continuing to serve the campus as we support teaching, learning, research, outreach and administration at the UW-Madison.

John Krogman
Chief Operating Officer
Division of Information Technology
University of Wisconsin-Madison

BEHIND THE SCENES: I.T. INFRASTRUCTURE

BOREAS

The Broadband Optical Research, Education and Sciences Network is a collaboration of four major research institutions in the upper Midwest: Iowa State University, the University of Iowa, the University of Minnesota and the University of Wisconsin-Madison. This graph shows the amount of time the System operated within normal expectations, as a percentage of total time in the reporting period: **99.94% in 2009.**

99.94%
RELIABILTY (up time)
in 2009

For just $1/day*,
every instructor, researcher and administrative staff person receives:

High speed internet service
24 x 7 monitoring and support
Network service/device upgrades
Videoconferencing capability
Digital Academic Television Network (DATN)
Unique service needs (e.g., Hi-Energy Physics project)
IT Security through the Office of Campus Information Security (OCIS)
Cabling expenses
Internet and research network access
Ubiquitous wireless on campus
Internet and research network device sharing access

*Funding from other sources helped launch this service.

Campus Network cost per user

Every UW department pays a **$30 per month** fee per FTE to help cover the cost of the Campus Network. The network provides a uniform structure that is cooperatively managed and centrally coordinated. It also allows campus to gain access to a world-class network, both wired and wireless.

Voice Services

Monthly print bills eliminated: 100

Voice Services' telephone administration system enables telephone moves, adds and changes, inventory and costs to be managed at the department level. Over **900 people** have access to Telephone Activity Reports (TAR), compared to the **100 paper bills** previously distributed by departments. A web-based customer order form is coming soon. Voice Services also manages a voice-enabled directory assistance system for UW-Madison and Madison-based State agencies. The system is available 24x7 and routes over **75% of UW-Madison name searches** and over **72% of department searches**.

Data Hosting, Storage and Backup

More and more departments are relying on the **Campus Enterprise Data Center** to host and maintain their servers and mainframes, rather than incurring the building, equipment and staff expenses associated with setting up their own data platforms. In addition to having DoIT technicians on hand 24/7 to handle any unanticipated problems, the Data Center also offers a climate-controlled, physically secure environment with emergency power backup. DoIT continues to work to lower the per unit cost of both storage and system administration, while maintaining a high level of security and reliability.

In 2009 we added **149 virtual servers** of various flavors (Windows, Linux, lpar, and Solaris Zones) to the Data Center, and saw, with decommissions, a total net growth of **118 servers** overall. Storage consumption grew significantly on all three tiers (see graph).

Payroll and student records, My Web-Space content, backup files and other campus services all place increased storage demands on servers. In fact, campus storage needs are growing at five percent per month. When departments need extra disk space, have high-performance input/output needs, or wish to have synchronous copies of data offsite, they rely on the **Enterprise Storage Service**. This enterprise-class storage solution centrally manages disk space and provides three classes of storage to meet a variety of needs.

Bucky Backup offers a convenient way for individuals, departmental local area networks and campus applications to protect their data and recover it if needed. It provides high-quality, industrial-strength insurance against the loss of irreplaceable data. UW-Extension, Bacteriology and many other units rely on this service to safeguard their data. Bucky Backup provides point-in-time backup so that if an individual deletes or corrupts a file, for example, the data can be recovered.

Enterprise Storage Use on Campus

= Tier 1
= Tier 2
= Tier 3

Growth in Bucky Backup

= Terabytes of Storage
= Cost Per Terabyte Per Month
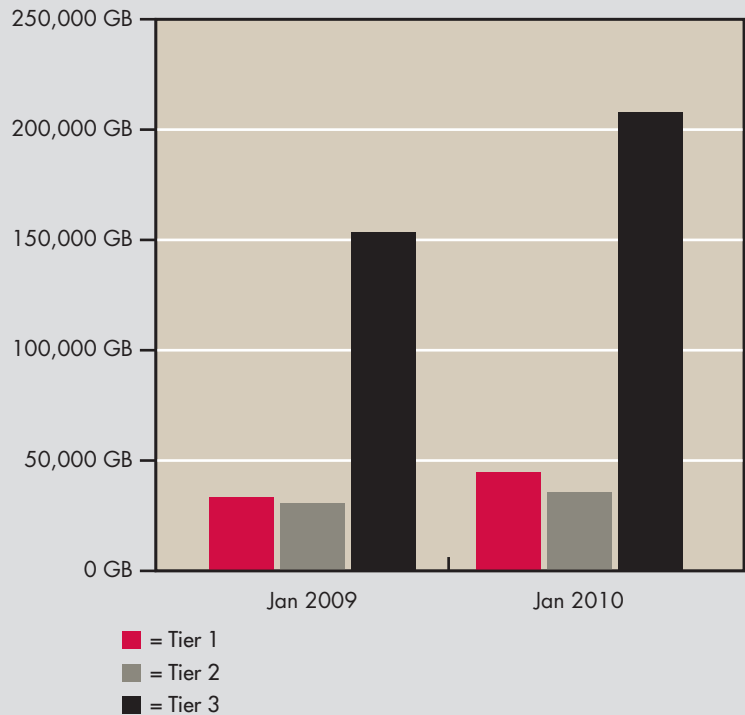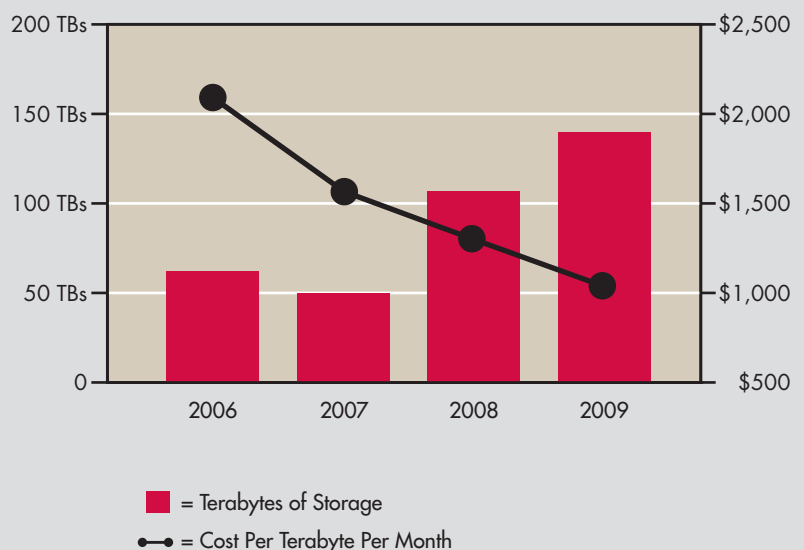
Find It
Delete It *(if you can)*
Protect It

2009 Security Facts

Accounts phished (disabled accounts)	**98**
Requested free copies of Identity Finder	**161**
Free copies of Full Disc Encryption in use	**726**
Number of PKI certificates issued (for email Encryption and digital signing)	**981**
Free copies of Anti Virus distributed to campus	**27,000**

What Is Restricted Data?

Social Security Numbers

Driver's License or State ID Numbers

Financial Account Numbers (debit/credit cards)

Protected Health Information

DNA Profiles

Unique Biometric Data

Safeguarding Users and Data

The Office of Campus Information Security (OCIS) works with campus data custodians and end users to evaluate security risks and put programs in place to properly protect their data. Factors such as data confidentiality, integrity, availability and auditability all need to be assessed to determine the potential liability that departments, and the University as a whole, face when handling restricted data. OCIS also responds to reported security breaches and provides a variety of software tools, training, support and best practices to help the hundreds of different computing environments on campus (i.e., departments, schools, business units, end user desktops) and their users stay secure.
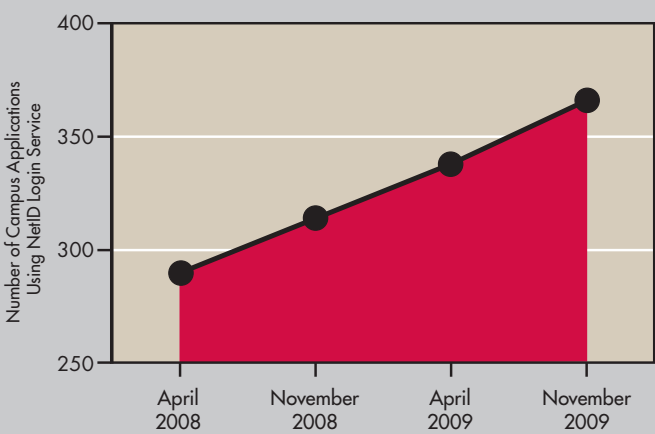
Policy:
to report loss of sensitive data
to encrypt sensitive data

Identity Management

The NetID Login Service was created to standardize how users authenticate (i.e., prove to a system they are who they say they are) to various campus applications. Instead of having identity information such as user names, passwords and other personal identifiers stored within hundreds of independent web applications across campus, the NetID service consolidates this information into a single, highly secure system.

This service averages roughly **200,000 logins per day,** and people are using more applications in a session, as shown in the graph.

Growth in Use of NetID Login Service

Number of Campus Applications Using NetID Login Service

April 2008	November 2008	April 2009	November 2009
~290	~315	~338	~365

(y-axis: 250, 300, 350, 400)

Enterprise Service Bus

The Enterprise Service Bus (ESB) enables applications to integrate and transport messages between systems event-driven and standards-based messaging-engine. The ESB went into production in December 2008 and is currently providing services to the Course Roster Information System and the Course Guide portal application.

During the month of December 2009, **508,013 requests** were processed across a cluster of three ESB servers. The average number of requests per day was **25,100**; the average response time was **39.33 milliseconds**.

RESEARCH AND INSTRUCTION

Instructional Technologies and Support

UW-Madison is brimming with technology resources that enable faculty to maximize their effectiveness. DoIT's Academic Technology department continually analyzes and explores the latest innovations in learning technologies. Its staff of professionals is available to meet with faculty one-on-one, provide technical expertise and conduct training on technologies for teaching, learning, and research. Academic Technology also fosters innovative uses of technology by providing funding and instructional tools through the Engage program. Campus support staff, including the 200 members of the Community of Educational Technology Support (ComETS), also provide hands-on support and training for a wide range of teaching tools to faculty and staff within their departments.

Course Sites* in Learn@UW
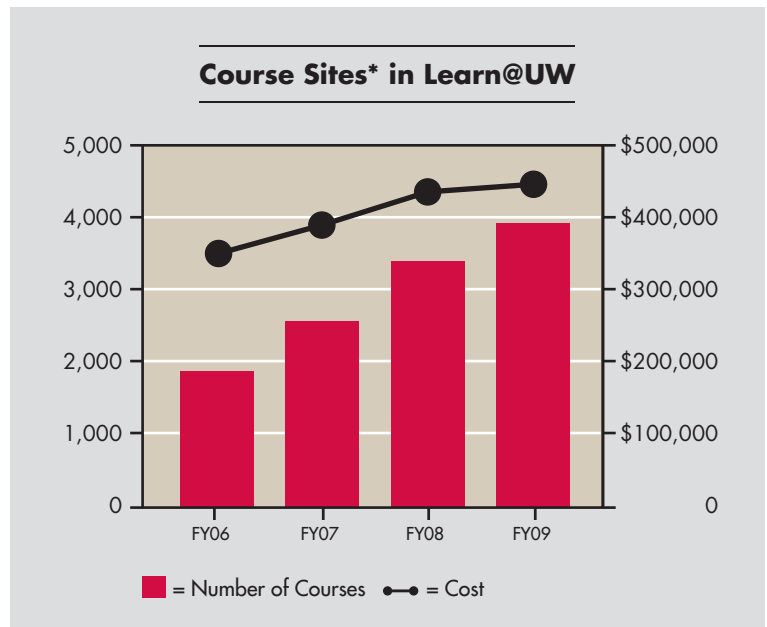
*The UW System-wide course management system, Learn@UW, continues to grow in use by both instructors and students.

Growth in My WebSpace Accounts
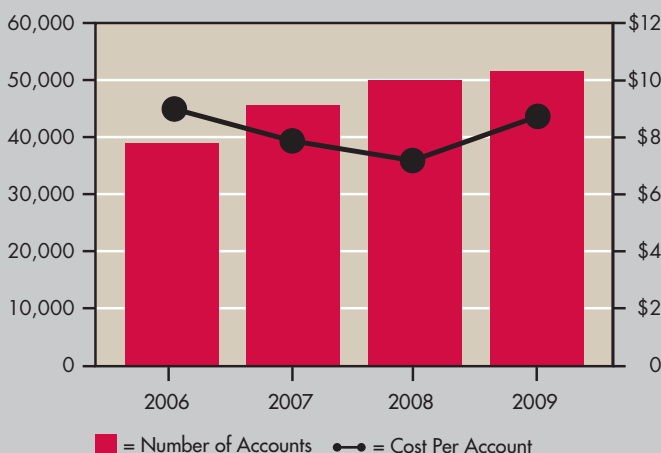
My WebSpace

The mobile lifestyle of our campus community demands that students, faculty and staff have quick access to information, when and where they need it. My WebSpace makes that kind of access possible by providing **1 GB of free web-accessible storage space,** allowing users to store files (e.g., presentations, notes, papers, dissertations, graphics) and share them with others if they choose. The files can be retrieved from any computer with Internet access. My WebSpace gives researchers the ability to do virtual collaboration by providing global access to shared files. Since it was introduced in 2004, My WebSpace has also become a popular way for users to back up important files.

My UW-Madison Portal

Today's students expect instant access to information and data; UW employees are no different. My UW-Madison, the gateway to campus resources, immediately connects students, potential students, instructors, advisors and staff to personalized course information, grades, payroll statements, library reserves, financial aid, and a host of other academic resources. Campus users log in to the portal nearly **1.6 million times** each month.

Budget and Average Monthly My UW Logins

■ = Average Monthly Logins   ●—● = Budget
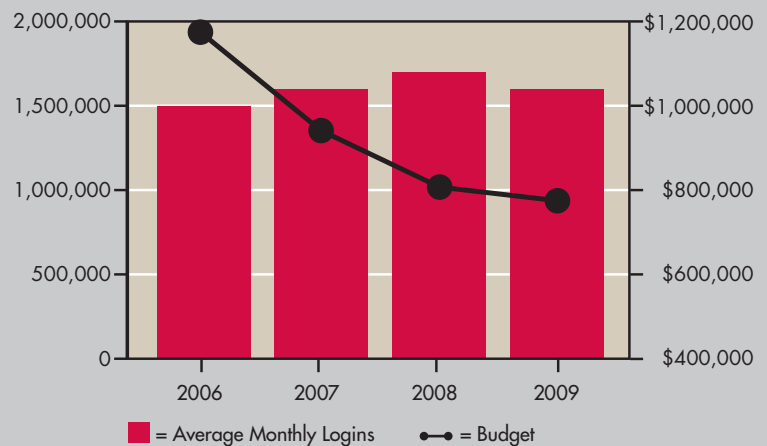
Building the Technical Capacity of Campus*

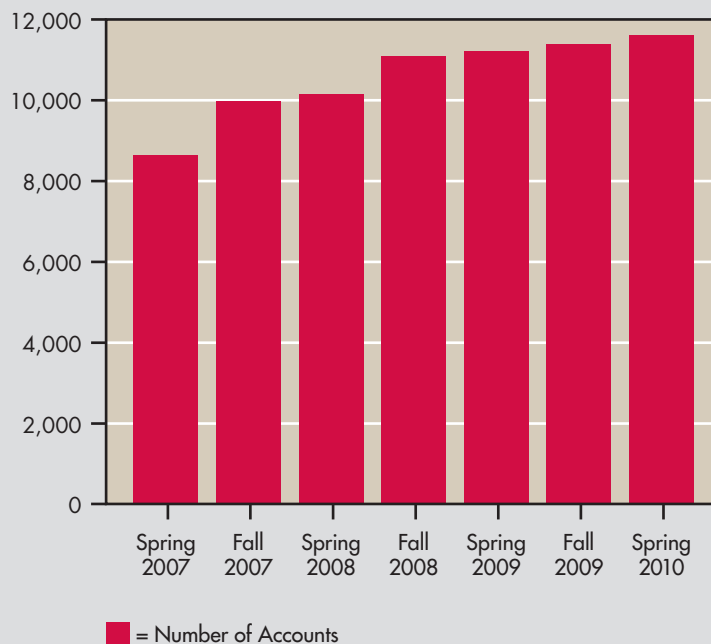| 1,597 Staff and IT Personnel Increased Administrative Abilities	**Professional Technical Education**
1,623 Faculty, Staff and Instructors Enhanced Teaching Skills	**Academic Technology**
125 Students Trained	**Student Technical Training**
5,800 Students Trained	**Software Training for Students**

*2009 figures.

Training

Without giving people the skills and ability to use campus technologies, we would not be able to conduct the business of the University. Technical training is an important aspect of IT service at UW-Madison. In an average year, **15–20 percent** of the campus population participates in technical training. Through free skills workshops and one-on-one consultations, faculty and instructors learn to use classroom technologies such as Learn@UW and PowerPoint. Administrative staff gain skills in campus and business applications such as My WebSpace, WiscCal and Excel. And more than **539 free software training classes** are offered to students, as well as more intensive IT training for those students who want it.

ADMINISTRATIVE TOOLS & SUPPORT

Updated Email

There are more than **85,000 Wisc-Mail/WiscMail Plus accounts** associated with UW-Madison students and personnel, generating an average of **2 million accepted emails** per day. The average Wisc-Mail account uses **88 megabytes of space**, the average WiscMail Plus account uses **240 megabytes of space**, and there are currently **13.5 terabytes** of mail in storage. Wisc-Mail has recently doubled its processing capability, has removed limits on the amount of storage available to customers, and introduced a new web mail client that greatly enhanced the online features available to customers. Wisc-Mail Plus continues to grow in popularity, providing departments a reliable, cost-effective alternative to running their own email systems. Most importantly, WiscMail/Wisc-Mail Plus provides the means for conducting the important business of the University—allowing research to be shared and furthering the Wisconsin Idea.

Calendaring

Every student, faculty and staff member affiliated with UW-Madison is automatically assigned an account in WiscCal, the free campus online calendaring system created in 2002. WiscCal enables users to schedule meetings directly with virtually any of the other nearly **70,000 campus constituents.** The more than **215 departments** that use WiscCal save thousands of dollars in licensing fees and service contracts, and they have immediate access to technical support and training. These departments have created over **1,500 resources** and over **500 role-based accounts** to manage such things as check-out of equipment, room reservations and access to specific WiscCal accounts.

Growth in WiscMail Plus accounts

■ = Number of Accounts

WiscCal Logins by Semester

■ = Faculty/Staff   ■ = Students   ●—● = Cost
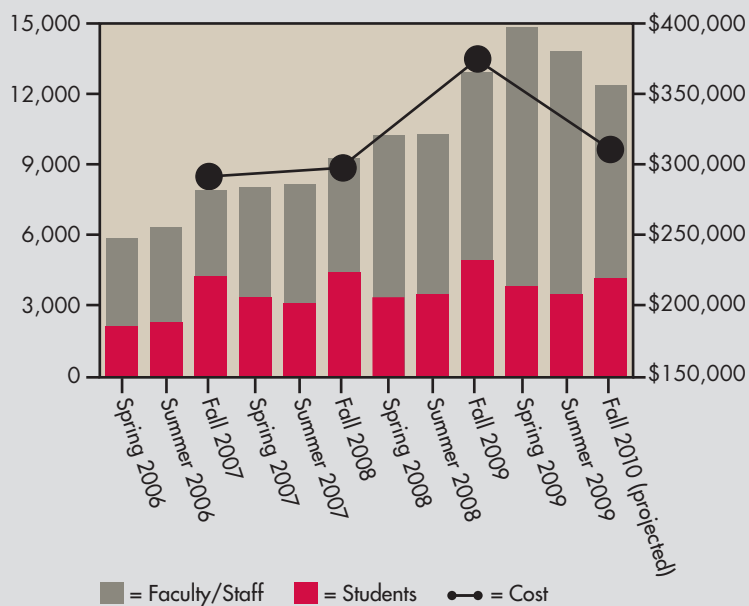
Strategic Administrative Projects

UW-Madison is currently engaged in building or purchasing several administrative systems that involve the Madison campus and many of our UW System partners. In some cases these are new enterprise systems; in others, they are replacing legacy systems or providing greater integration between systems. These projects are significant in scope, campus impact and strategic relevance. Much of the technical expertise to develop and implement them comes from DoIT and the sponsoring departments. They are guided through campus-wide advisory and oversight groups composed of functional and technical experts. They will improve access to scholarships and information on courses to all students, conform to state requirements for furloughs, and generally improve the administrative capacities and overall efficiency of the University.

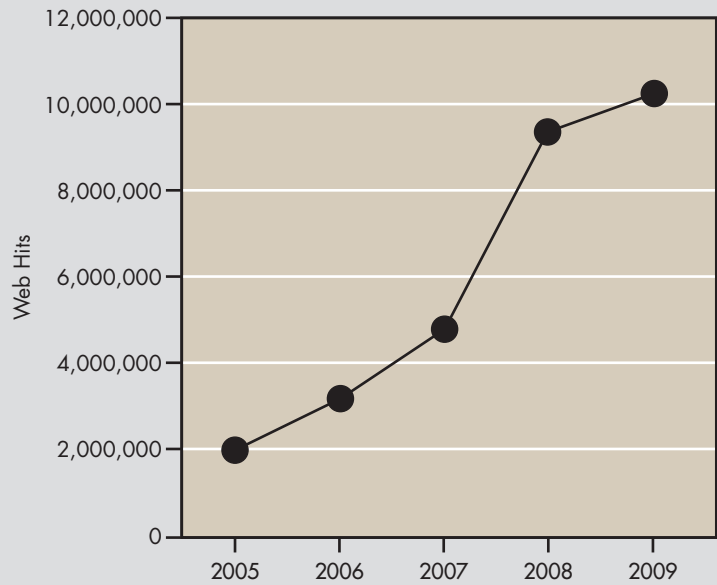| Project	Benefit	Estimated Completion*
Unclassified Leave Accounting	Improvements to employee leave balance reports and forms used to report leave activity, plus access to all reports on the My UW portal.	2008
IT Access for New UW-Madison Employees	A new process which replaces the Campus ID with a NetID activation key and enables employees to access applications secured by NetID by their first day of work.	2009
IT Access Termination for Exiting UW-Madison Employees	A new IT application that automatically notifies HR representatives to request IT access removal for their exiting employees.	2009
Course Guide	Course Guide provides a broad spectrum of course information in a consistent format, from a single location. New and enhanced features will be released throughout 2010.	2010
Scholarships@UW-Madison (Common Scholarship Application)	Showcases the range of scholarships available through the specific campus schools and colleges, providing a single application process. New and enhanced features will be released throughout 2010.	2010
Furlough	UW system-wide payroll application enhancements to implement state-mandated furlough requirements for fiscal years 2010 and 2011.	2011
PI Financials Project	Identifying needs and developing solutions to improve financial information used by Principal Investigators.	2012
SFS/HRS Project	Aligning SFS functions with the new HRS system.	2012
DOA Off Legacy	Updating the UW interface to the state financial system to eliminate the use of the mainframe.	2012

*These initiatives do not represent all major administrative projects in progress, and some of the details (e.g., timeline, budget) are subject to change.
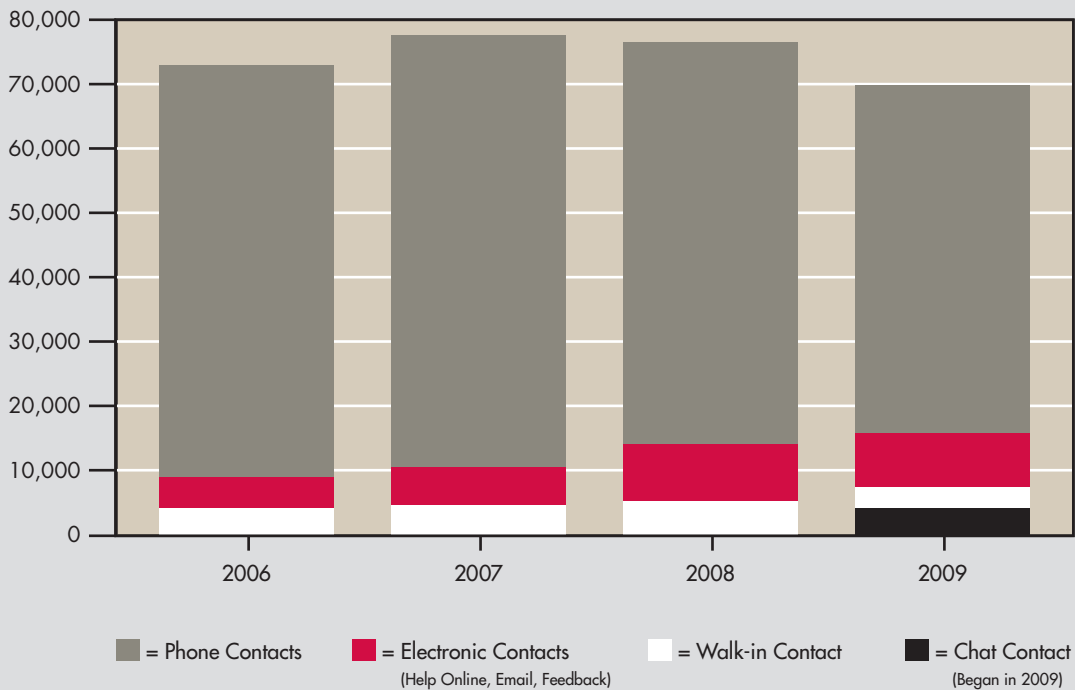
Technical Support

The Help Desk provides free technical support to UW faculty, staff, and students. Since 2007, Help Desk services have been continually adapted to meet the evolving needs of an increasingly tech-savvy campus user base. In addition to providing assistance over the phone, the Help Desk has expanded its Knowledge-Base, walk-in, and chat services.

The KnowledgeBase continues to grow, with more than **50 campus groups and departments** partnering to share technical information in a single location. There are now two walk-in Service Desks located across campus, one in the Computer Sciences building and one in the Memorial Union, to serve the IT support needs of campus. Traffic at both locations has increased significantly over the last two years. The Help Desk chat service was launched in the fall of 2007, and has proven to be extremely popular among students, faculty and staff. It's so popular that the Help Desk receives more support requests via chat than email.

Growth in Use of the Help Desk KnowledgeBase

Additional Help Desk Contacts (Electronic, Walk-in, Phone and Chat)

= Phone Contacts   = Electronic Contacts (Help Online, Email, Feedback)   = Walk-in Contact   = Chat Contact (Began in 2009)

As campus has become more computer-savvy, more people are using the Help Desk knowledgebase to solve their own technical problems, decreasing the need for more costly phone-based support.