ABOUT THE OFFICE OF THE CIO

The Office of the CIO provides the vision and leadership in information technology necessary to advance the university’s mission and strategic plan. The mission of the CIO is to offer direction and support for the effective application and integration of information technology to improve the teaching, learning, research, and administrative environment of the university. The CIO reports to the university executive vice president and provost, and oversees the Information Security Office, Enterprise Information and Analytics, and University Information Technology Services.

cio.arizona.edu

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Information technology is a decisive enabling factor at the University of Arizona and allows us to engage, innovate, and partner with each other and our colleagues around the world. It is embedded in everything we do; the collection and analysis of research, how we communicate, the running of our foundational operations, and the transfer of knowledge to bright young minds. The differentiation comes with our ability to leverage technology in ways that are cutting edge and strategic.

We continually seek to strengthen our offerings to the university community through alignment of our products and services to support the teaching, learning, and research mission of the university. The story of this annual report reflects a high-quality, motivated, and dedicated community of IT professionals that delivered an outstanding year. These accomplishments were also made possible by working with our UA partners who collaborated with us, provided input and feedback, and helped make our IT initiatives the best solutions for our campus.

Fiscal Year 2013 marked the final year for the 2007-2013 IT Strategic Plan, and we achieved 100% results or greater in most of our focus areas. Many of the remaining objectives have evolved into new opportunities in areas such as mobile devices, digital content, and big data to name a few. Some of these technologies are simply ideas or in early development. Others are being further explored by the campus IT Projects group, a collaboration of IT representatives across campus facilitating collaboration among the various project stakeholders and promoting greater transparency on IT projects in progress.

In FY 2014, I will continue working with campus IT and administrative leaders to develop and finalize a new IT strategic plan that prepares the university to meet the demands of an evolving technology landscape while serving the needs of staff, faculty and students. Components of the plan include: leveraging technology into new uses; facilitating positive outcomes using technology; eliminating redundancy; finding cost effective solutions; and utilizing university IT resources more efficiently and collaboratively.

IT is a strategic asset with which we are transforming, enabling, and optimizing vital aspects of our education, research and operations at the University of Arizona. I look forward to working with our partners on campus to advance this important work in FY 2014, and provide the best solutions and resources for the university to achieve its education and research missions.
AFRICAN DNA

High Performance Computing resources provided the computing power and processing speed needed by Molecular and Cellular Biology researcher Dr. Ryan Gutenkunst and his team to model genetic changes in African tribes. Findings made by studying the genetic models over generations helped to identify genes that may be linked to current disorders.

LITHIUM-ION BATTERIES

Dr. Qing Hao of the Department of Aerospace and Mechanical Engineering studies the mechanics of dangerous lithium-ion battery explosions caused by heat accumulation. High performance computing resources were critical in Hao’s analyses of heat transfer data to improve the thermal property measurements in future Lithium-ion battery components.

EPILEPSY RESEARCH

Researchers in the lab of Michael Hammer, research scientist with Arizona Research Laboratories, analyzed genomic data to identify a possible genetic source for early-onset epilepsy. The lab used high performance computing resources to process several exome portions of DNA quickly and simultaneously. The sequenced DNA data is stored and analyzed to locate and identify mutations unique to the patient.
MOBILE MATTERS SYMPOSIUMS

The first Mobile Matters Symposium was held September 2012 to showcase new mobile app ideas and resources, and to create a stronger community for campus app developers. The UITS Web and Mobile Services team collaborated with units and individuals across campus to present a diverse program. A strong turn-out of staff, students, and faculty with experience ranging from novice to expert attended to learn about meeting the growing demand for innovative apps. Topics included design, development, and branding.

In March 2013, the second Mobile Matters Symposium brought additional sponsorship, demonstrations, and even more speakers describing their app projects and resources. Presentations from technical discussions to designing, marketing, and distributing apps provided options for attendees from every aspect of app development, as well as an opportunity for networking between developers and designers.

SMART PLANNER GO-LIVE

After a successful pilot in the College of Agricultural and Life Sciences, Degree Tracker was rebranded as Smart Planner and rolled out campus-wide over spring 2013. Smart Planner is an interactive online system that helps students navigate course planning and creates a more efficient and engaging academic advising experience. With it, students can plan their entire college career. Another feature is its ability to pre-schedule new students into required classes.

SMART PLANNER USERS (June 30, 2013)
Advisors/Advising coordinators: 81
Students: 3,878

DEGREE SEARCH USAGE FY13
total page views: 990,557
unique visitors: 169,835
average page views per visit: 3.36
average time spent per page: 0:03:53

STUDENT SURVEY—”DEVICES IMPORTANT TO ACADEMIC SUCCESS”

91% Laptop
35% Desktop
33% Smartphone
25% Tablet
9% E-reader

data from 2013 ECAR Survey at UA
Educause Center for Analysis and Research
STUDENT READINESS

The goal of the Online Education Project (OEP) is to improve campus capacity for excellence in teaching and learning within fully online or hybrid course environments and to create additional content available to off-campus students. To date, the OEP generated 6 courses that became available in summer 2012, and 3 more were made available in the fall 2012 semester.

Additionally, a diagnostic tool measuring student readiness to learn in online courses was developed by OEP staff.

ONLINE LEARNING

Fall 2013:

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<td>Number of unique hybrid courses</td>
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CLASSROOM TECHNOLOGY UPGRADE PROGRAM CONTINUES WORK AND EXPANDS

This strategic 3-year project to replace and standardize the core technologies and infrastructure of many of our classrooms across campus attained several key milestones:

- The CTU campus executive steering committee was created and began prioritizing classrooms and technology upgrades for the life of the project.
- Planned $2.5M in classroom investment in FY13.
- A total of 33 centrally managed classrooms were upgraded to a standard technology configuration.

Additionally, the CTU Program scope was expanded to include technologies that will enhance distance learning and teaching pedagogies. A cross-institutional team was assembled to consider and make recommendations for meeting the lecture capture and streaming needs of campus as well as an emergency response system.

D2L ENHANCEMENTS

Desire2Learn (D2L), the centrally provided online course management system, realized a 7% increase in usage in FY2013—270,000 seats in 7,000 course sites.

Several improvements enhanced the system:

- A new development and test environment to augment the existing production and test environments and facilitate increased capacity to address service packs and other upgrades.
- Integration of Blackboard Collaborate within D2L.
- Refined the process that loads employees/students into D2L to ensure everyone is loaded.
- Various security, redundancy, and stability enhancements.
- Solutions with faculty for migrating responder data into D2L for student assessment activities.
- Core Site Request so instructors can request automatic setup of their class in D2L with one click.
STUDENT OUTREACH

The Office of the CIO continued its outreach and awareness campaign to students to let them know of the IT resources available on campus. UITS participated in campus, College of Law, and parent orientations to reach new students, and collaborated with Residence Life on information and promotion to residence hall move-ins.

Throughout the year, the campaign included posters in residence halls and computer labs, and table toppers in the student unions. The campaign, designed by a UITS student graphic designer, won the SIGUCCS (Special Interest Group on University and College Computing Services) Communications Award for Student-Created Promotional Materials. Student workers also launched and maintained social media campaigns to personalize central campus IT.

STUDENT SURVEY—“ONLINE LEARNING”

82% of students have taken at least 1 course that includes online components

69% of students say they learn most in blended learning environments

students who said they took a class completely online:

2011 32%; 2012 43%
The University signed a contract with Boingo in June for the installation of a new distributed antenna system (DAS) in the University of Arizona Stadium to improve cellular voice and data connectivity as part of the Strategic Network Master Plan. The upgrade will mean better reception, connectivity, and speed for fans generating high-peak usage during home games. It will also improve the capacity and security of campus cellular networks.

The Arizona Stadium installation includes the construction of a server room to manage cellular antenna traffic. Upon completion of the stadium installation, additional phases of DAS construction may include residence halls and additional buildings on campus which need improved connectivity. Additional installations will be able to take advantage of the new Stadium server room.

The UITS network team is converting the campus network to the more efficient Multiprotocol Label Switching (MPLS) infrastructure. The primary benefit of MPLS is to provide consistent security by utilizing central physical infrastructure, not additional security devices for each location. Networks are converted from a building-by-building basis to a departmental basis, allowing departments in different buildings to be on the same network.

FY13 saw progress on converting buildings to the centrally established MPLS structure and work will be continuing in FY14.
SITE IN A BOX SERVICE FOR EFFORTLESS WEB DEVELOPMENT

The university launched a new web development service, Site in a Box, in May 2013 to provide subscribers with pre-configured website design options and hosting. A variety of templates and customizable graphics, colors, and tools mean the sites can be designed to fit the customer’s needs. The service allows users to establish a website quickly and with few to no technical skills, while aligning campus websites with University branding and security standards.

Site in a Box uses the Drupal content management system for easy updating of content by non-technical users, while the standardized format makes updates easier for those who support the sites.

University Information Technology Services partnered with University Relations to develop the website service from planning to implementation.

FIRST ANNUAL UACCESS SYMPOSIUM

The first of a series of UAccess Symposia was held in April 2013 to showcase UAccess features in an effort to strengthen the campus user community, increase collaboration, and promote use of analytics. The Symposium consisted of a variety of informative speakers who presented the useful applications of UAccess as resources in improving workflow and decision-making among departments on campus.

INFORMATION SECURITY OFFICE

- Completed a campus-wide risk-assessment for the Arizona Board of Regents.
- Continued outreach, education, and awareness campaigns: Information security presentations in MIS and Library Science classes October (Security Awareness Month) outreach on the Mall

24/7 IT SUPPORT CENTER USAGE

- Calls
  - FY12: 54K
  - FY13: 59K
- Email/Online
  - FY12: 19K
  - FY13: 31K
- Walk-Ins
  - FY12: 11K
  - FY13: 12K

Totals: 83,880 to 101,556

Increase in online requests: 65%
Increase in all support requests: 21%
University Services and Support

amount of UAccess data stored in the Data Warehouse (in terabytes):

\[
\begin{array}{cc}
2012 & 2013 \\
1.44 & 2.54 \\
\end{array}
\]

+76%

number of people with access to UAccess Analytics:

FY 2012 4,355
FY 2013 5,162
an increase of 19%

number of people who participated in UAccess Analytics training:

\[
\begin{array}{cc}
2012 & 2013 \\
362 & 626 \\
\end{array}
\]

+73%

UA AS A MODEL FOR EDUCATIONAL ENTERPRISE SYSTEMS

The Mosaic Project was officially completed on June 30, 2013, after successfully transitioning numerous aging campus enterprise systems to updated versions that allow for greater interactivity and data use. The UAccess systems are maintained and upgraded by UITS Enterprise Applications Services. The business intelligence (BI) function, UAccess Analytics, is facilitated by Enterprise Information and Analytics.

The success of this system replacement and implementation and the use of BI have served as case studies for universities worldwide. Interest has focused on two aspects:

- Enterprise staff and campus partners were integral to the new systems’ design teams, so that business needs were met and IT staff were fully versed in the new systems for ongoing maintenance and upgrades.
- System data was designed to be shared between systems and available for analytics, spawning new BI possibilities.

These successes have inspired:

- Presentations to Educause and the Higher Education Data Warehouse Conference.
- A two-part interview in the Data Warehouse Institute newsletter.
- Visits from personnel from universities around the world to see how the UA enterprise system replacement was accomplished.
Looking Forward 2013–14

**IT SUMMIT**

The first annual IT Summit, a collaboration between CIO Michele Norin and departmental IT, will connect IT professionals across the university with the latest in campus technology. The event will strengthen collaboration and information sharing within the IT community.

**SUN CORRIDOR NETWORK**

University of Arizona, ASU, and NAU are collaborating to create the Sun Corridor Network, an Arizona high-speed regional network to strengthen research and education connections. The tri-university network will create direct connections with network partners, and connect to the national high-speed research networks.

**UNITY MIGRATION**

A new voicemail system through Cisco’s Unity Connection will replace the current system and allow users to access their desk phone’s voicemail messages and settings remotely. The campus-wide transition to the new voicemail system is expected to be complete by fall of 2014.

**GRAPHICS PROCESSING UNIT COMPUTER**

The installation of a new GPU-based computer will provide power needed to process and compute massive amounts of data collected by researchers. Funded by a $1.2 million grant to the Astronomy department, the GPU computer will be housed in the University Research Data Center.

**UA VITAE ONLINE FACULTY REPORTING SYSTEM**

The new UA Vitae online system will provide a central repository for faculty members to archive their achievements. The system will import information on courses taught and publications, and allow entry of grants, presentations, creative works, and research data. This data will then be available for reviews and for generating curriculum vitae. Five colleges will pilot UA Vite in fall 2013.
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