Information Technology
Strategic Plan
Fiscal Years 2009-2013
FY2013 Update

Office of the CIO
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Introduction

THE UNIVERSITY OF ARIZONA (UA) is a public land-grant research institution dedicated to preparing students for an increasingly diverse and technological world, and to improving the quality of life for the people of Arizona and the nation.

The University of Arizona is complex in both its organization and its technology, requiring that competing information technology needs be carefully evaluated and deployed to ensure the optimal investment of limited resources. The UA Information Technology (IT) Strategic Plan supports the University of Arizona’s Five Year Strategic Plan, but also stands alone to represent a comprehensive and dynamic blueprint that will serve as a foundation for future plans.

The UA possesses a first-class technology infrastructure and staff. There are many examples of excellent IT service delivery and expert project management approaches to IT throughout the University. The challenge is to weave these best practices into a transparent and comprehensive process for reaching university-level IT funding decisions while ensuring a set of common minimal service standards for all units and departments.

The purpose of The University of Arizona IT Strategic Plan is to:

- Present the guiding principles and objectives for developing and managing information technology at the University of Arizona.
- Identify the most important IT Strategic Initiatives that UA must address in the next five years in order to survive and thrive.
- Provide a prioritized list of initiatives and operational improvements to address the IT opportunities and challenges.
- Provide the pathway for faculty, staff, and students to have the latest technology tools for leadership in teaching, research, and career development.
- Position UA to equal or surpass our peer institutions in the use of technology for teaching, learning, research and overall effectiveness.

This update report highlights the 2012-13 IT accomplishments mapped to UA’s strategic directives.
IT Strategic Planning Climate

The ability to provide advanced information technology (IT) remains a critical factor for the UA in achieving its teaching, research, and public service mission—to discover, educate, serve and inspire. Expanded IT capability will provide the avenue to strengthen the University’s academic excellence, intellectual creativity and spirit of community, even in these difficult economic times. To that end, it is even more important that, as a university, we adhere to the following basic IT objectives, which directly impact the mission of the University of Arizona:

- Eliminate as much redundancy as is possible and sensible
- Look for solutions, programs and partnerships that are cost effective
- Find ways of utilizing all University IT resources, including Arizona University System (AUS) resources, more efficiently and collaboratively
- Recognize security as a common element within everything we do

With these objectives in mind, the following critical strategic guiding principles are applicable:

Leadership, Governance, and Investment Alignment to Mission

University priorities and objectives must drive information technology strategies, investments and decisions. The UA must establish an improved information technology leadership and governance model to provide a clear framework for ongoing dialogue, collaboration, and coordinated decision-making within the University, and within the larger AUS system. At the heart of the governance and leadership model must be just the right proportionality of centralized and distributed IT. Decision-making must be driven by vital mission objectives.

Security and Access as a Priority

The University’s information technology infrastructure and information environment must be stable, safe and secure. The institution must focus on making the environment more secure while maintaining the kind of access required of a public research-oriented University. Balancing security and access poses one of the greatest challenges to our ability to achieve our IT strategic vision.

Services and Infrastructure Ubiquity

To support the University mission, IT Services and Infrastructure must be integrated, accessible, and easy to use. Basic functionality must be ensured so that all University constituents are able to communicate, learn, and disseminate information within and across disciplines and campus borders. This ubiquity of services is vital to the core mission of the University.
## Goals and Major Accomplishments within the UA Strategic Directives Context

Our major FY13 accomplishments, detailed on the following pages, map directly to the Strategic Directives established by UA and the IT Strategic Areas and Goals established by the Arizona Board of Regents (ABOR):

<table>
<thead>
<tr>
<th>ABOR IT Strategic Areas</th>
<th>UA Strategic IT Goals</th>
<th>UA Strategic Directives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Expanding Access &amp;</td>
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<tr>
<td></td>
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<td>Enhancing Educational</td>
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<td>Excellence</td>
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<td>Student Learning &amp;</td>
<td>Improve student</td>
<td>1 3 4 6 11</td>
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<td>Success and Academic</td>
<td>success through</td>
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<tr>
<td>Technology</td>
<td>technology related</td>
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<td>initiatives.</td>
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<td></td>
<td>Provide an environment that encourages the use of technology to facilitate and enhance learning.</td>
<td>1 3 4 6 8 9 10 11</td>
</tr>
<tr>
<td>IT Infrastructure</td>
<td>The University-wide information computing infrastructure must become more accessible, dependable, secure, flexible and scalable with services and tools that are integrated and state-of-the-art to meet the teaching, learning, research and organizational needs of the University of Arizona and the surrounding community.</td>
<td>1 2 3 4 5 9 10 11</td>
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<tr>
<td>Administrative</td>
<td>Business operations</td>
<td>1 3 5 6 7 9</td>
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<td>Effectiveness</td>
<td>must be supported</td>
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<td>with tools and</td>
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<td>for future changes.</td>
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<td>IT Security</td>
<td>The University’s</td>
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<td>standardized manner</td>
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<td>academic and research freedoms.</td>
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<td>Members of the</td>
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<td>University community</td>
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<td>exposure to the</td>
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<td></td>
<td>ongoing threats.</td>
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<tr>
<td>Research Computing</td>
<td>In support of research, UA should provide broad support for basic collaboration technologies, continue its commitment to high performance computing and computation, and begin implementing more advanced technologies.</td>
<td>3 10 11</td>
</tr>
<tr>
<td>Strategic Alliances</td>
<td>Ensure that appropriate information technology collaborations are being utilized in the support of the mission of The University of Arizona to improve life for the people of Arizona and beyond through education, research, creative expression and community engagement</td>
<td>2 3 5 8 10 11</td>
</tr>
</tbody>
</table>
The Year in Review: Key Accomplishments

1. **Microsoft Campus Agreement Enhancements**: The Microsoft Campus Agreement took effect July 1, 2012, which includes:
   - Student option that covers licenses for Microsoft Office and Windows upgrades for a PC or MAC at no charge to students
   - Enterprise Server products for campus at no cost to departments and colleges
   - SQL and Systems Center server products for all campus servers at discount rates
   - Faculty/Staff option that covers licenses for Microsoft Office, Windows, Visio and Project Upgrades for a PC or MAC at no charge to departments and colleges
   - Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee
   - Microsoft’s free eLearning tutorials

2. **Distributed Antenna System (DAS) Project**: Established a partnership with Boingo Wireless to install additional cellular radio antennas to improve cellular voice and data connectivity in Arizona Stadium. The DAS expansion is part of the Strategic Network Master Plan, a ten-year plan developed by campus IT professionals and the Office of the CIO to upgrade the capacity and security of the campus network.

3. **Classroom Technology Upgrades Program (CTU)**— 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.
   - 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.

4. **Mosaic Degree Tracker**: Officially launched Degree Tracker, now known as Smart Planner, to students and staff campus wide. Smart Planner is an interactive online system that helps UA students navigate course planning and creates a more efficient and engaging academic advising experience.

5. **Site in a Box**: Introduced new user-friendly web development service, Site in a Box, to University of Arizona departments, organizations and ASUA clubs, enabling subscribers to customize pre-configured website templates with few or no technical skills required. University Information Technology Services (UITS) partnered with External Relations Marketing to develop the idea and implement the concept.

6. **Health Sciences Education Building (HSEB) Networks**: Successfully outfitted the HESB with modern, robust networking and telephony equipment as well as the configuration and installation of networking devices.

7. **UAccess Symposium**: Hosted first UAccess Symposium, which attracted more than 130 attendees, and covered topics ranging from UAccess tools to creating Analytics dashboards. The goal of the symposium was to bring together the community of UAccess users to learn how different departments are taking advantage of UAccess features and Analytics to improve their workflow and decision-making processes.
8. **Mobile Matters**: Launched Mobile Matters Community for faculty, staff, and students interested in mobile development and design at first Symposium in September 2012.

9. **Enterprise Instructional Support (EIS)**: Extensive effort and capital were invested in the continued support for infrastructure and development of the University's instructional support portfolio with the following outcomes:
   - Desire 2 Learn (D2L) realized a 7% increase in usage (270,000 seats in 7,000 course sites)
   - Increase in storage on the development environment and backup hardware.
   - Integration of Blackboard Collaborate within D2L.
   - A diagnostic tool measuring student readiness to learn in online courses was developed by OEP staff.
   - Collaborative relationships with academic advisors and key representatives from Student Affairs were established to better assist students with course selection.

10. **HPC Metrics and Support**:
    - HPC systems % Use: 60.1%
    - HPC system PIs: 120.
    - HPC PI awards: $70.7M
    - AZ-LIVE research projects: 13 projects.
    - AZ-LIVE PI awards: $4.9M actual.
    - Conducted projects and demonstrations to provide user support and resource information.
    - 7 Visualization Projects.
    - 13 AZ-LIVE Research Projects.
    - 17 AZ-LIVE Instructional Projects.
    - 48 AZ-LIVE Tours.
    - 20 Workshops, Conferences, and Outreach.

11. **External Research Grant Programs**: HPC and AZ-LIVE supported $75.6M in external research grant programs.
The Year in Review: By the Numbers

The UA is tracking the following metrics to assess its progress in pursuing the strategic goals outlined in this strategic plan. Each of these indicators is listed in the following tables together with an assessment of the UA’s current performance and its five-year target for that metric.

### Strategic Area 1: Student Learning & Success:

<table>
<thead>
<tr>
<th>Metric (blue indicated ABOR centralization metric)</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>FY2012 Actual</th>
<th>FY2013 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 Goal</th>
<th>% of FY13 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td># students on hosted email and calendaring services (CatMail)</td>
<td>100% by opening of school 2010</td>
<td>0%</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td># software site or volume discount licenses available through centrally-provided services</td>
<td>10% growth per year</td>
<td>32</td>
<td>35</td>
<td>52</td>
<td>52</td>
<td>74</td>
<td>42%</td>
<td>52</td>
<td>142%</td>
</tr>
<tr>
<td># downloads of free or discounted software from Site License</td>
<td>10% growth per year</td>
<td>new metric</td>
<td>40,980</td>
<td>70,183</td>
<td>62,272</td>
<td>65,840</td>
<td>6%</td>
<td>60,000</td>
<td>110%</td>
</tr>
<tr>
<td>% of campus with centrally provided wireless connectivity</td>
<td>10% growth per year</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>92%</td>
<td>98%</td>
<td>7%</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>Form and continue the CIO’s Information Technology Student Advisory Board (ITSAB)</td>
<td>By June, 2009</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td># seats hosted on central learning management system</td>
<td>10% growth per year</td>
<td>1,640,001</td>
<td>200,313</td>
<td>222,180</td>
<td>252,000</td>
<td>270,000</td>
<td>7%</td>
<td>228,692</td>
<td>118%</td>
</tr>
<tr>
<td># online/email support requests</td>
<td>10% growth per year</td>
<td>new metric</td>
<td>9,139</td>
<td>12,280</td>
<td>18,669</td>
<td>30,856</td>
<td>65%</td>
<td>13,380</td>
<td>231%</td>
</tr>
<tr>
<td># walk-in support requests</td>
<td>10% growth per year</td>
<td>new metric</td>
<td>9,632</td>
<td>12,324</td>
<td>10,816</td>
<td>11,880</td>
<td>10%</td>
<td>14,102</td>
<td>84%</td>
</tr>
</tbody>
</table>

1) The decrease is a result from some software packages that are no longer in use (for instance QWS3270 was used for individuals to access FRS and SIS, UAccess has eliminated that need).
2) Revised metrics from 2009 report
3) The increase in the online/email support requests resulted in the decreased walk-in support requests.
**Strategic Area 2: Infrastructure**

<table>
<thead>
<tr>
<th>Metric (blue indicates ABOR centralization metric)</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 Goal</th>
<th>% of FY13 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td># university departments using centrally provided telephone and network services (measure represents # of departments not using central equipment)</td>
<td>0 by 2013</td>
<td>15</td>
<td>15</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>-14%</td>
</tr>
<tr>
<td>Implementation of FTE-Based funding model for centrally provided services</td>
<td>complete by 2009</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>% of campus with centrally provided wireless connectivity</td>
<td>10% growth per year</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>92%</td>
<td>98%</td>
<td>7%</td>
</tr>
<tr>
<td>$ invested in centrally provided network maintenance, upgrades, and converged communications infrastructure</td>
<td>static or increased ongoing funding</td>
<td>$14.6M</td>
<td>$12.3M</td>
<td>$15.8M</td>
<td>$15.8M</td>
<td>$16.9M</td>
<td>7%</td>
</tr>
<tr>
<td># buildings with centrally provided network converged communications infrastructure</td>
<td>5% growth per year</td>
<td>23</td>
<td>27</td>
<td>41</td>
<td>50</td>
<td>57</td>
<td>14%</td>
</tr>
<tr>
<td>Implementation of a centralized, common email and calendaring system for faculty and staff</td>
<td>complete by Dec. 2011</td>
<td>0%</td>
<td>10%</td>
<td>43%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td># virtual servers owned and managed by campus units and located in central (UITS) data center(s)</td>
<td>10% growth per year</td>
<td>28</td>
<td>40</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>2%</td>
</tr>
<tr>
<td># virtual servers owned and managed by UITS and located in central (UITS) data centers</td>
<td>10% growth per year</td>
<td>new metric FY2011</td>
<td>513</td>
<td>588</td>
<td>656</td>
<td>616</td>
<td>-6%</td>
</tr>
<tr>
<td># physical servers located in central (UITS) data center(s).</td>
<td>10% growth per year</td>
<td>363</td>
<td>410</td>
<td>418</td>
<td>438</td>
<td>495</td>
<td>13%</td>
</tr>
<tr>
<td># physical disk arrays located in central (UITS) data center(s).</td>
<td>10% reduction per year</td>
<td>27</td>
<td>23</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>0%</td>
</tr>
</tbody>
</table>
THE YEAR IN REVIEW: BY THE NUMBERS

<table>
<thead>
<tr>
<th>Metric (blue indicates ABOR centralization metric)</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>FY2012 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 Goal</th>
<th>% of FY13 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td># centrally provided storage capacity available to HPC.</td>
<td>5x with Technology Refresh</td>
<td>117 TB</td>
<td>117 TB</td>
<td>117 TB</td>
<td>472</td>
<td>640</td>
<td>36%</td>
<td>585</td>
</tr>
<tr>
<td># calls into central IT support center</td>
<td>10% growth per year</td>
<td>26,000</td>
<td>41,632</td>
<td>56,994</td>
<td>54,395</td>
<td>58,820</td>
<td>8%</td>
<td>41,873</td>
</tr>
<tr>
<td>Implement centrally funded Microsoft Campus Desktop Enterprise Agreement for faculty and staff</td>
<td>complete in 2009</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
</tr>
</tbody>
</table>

1) Though actual metric decreased from 7 to 6, -14% represents progress toward goal of 6.
2) Wireless Network 92% is an average of 99% indoor coverage and 85% of outdoor wireless planning area.
3) Implementation of a centralized, common email and calendaring system in the cloud for faculty and staff scheduled for Dec. 2011 was completed by June 2012 with an on-premise Exchange solution.
4) This number should decrease or increase slowly as more servers are virtualized.
5) *Modified Goal 10% Growth to 10% Reduction. This metric should decrease or stay constant as we consolidate storage into bigger more efficient arrays. Represents progress toward goal to minimize the number of different arrays and to decrease the FTE allocation for management.
6) The 472TB does not include the 117 TB on the old system as they will be retired in July of 2012.

Strategic Area 3: Administrative Effectiveness

<table>
<thead>
<tr>
<th>Metric (blue indicates ABOR centralization metric)</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>FY2012 Actual</th>
<th>FY2013 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 Goal</th>
<th>% of FY13 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver Mosaic on time, within budget, and in scope</td>
<td>by Jan. 2012</td>
<td>on target</td>
<td>on target</td>
<td>75%</td>
<td>95%</td>
<td>99%</td>
<td>4%</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td># centrally hosted enterprise level applications</td>
<td>1 additional application per year</td>
<td>29</td>
<td>351</td>
<td>30</td>
<td>32</td>
<td>20</td>
<td>-38%</td>
<td>34</td>
<td>59%</td>
</tr>
</tbody>
</table>

1) Enterprise Applications currently supports new Mosaic systems and the legacy systems. As legacy systems are replaced and decommissioned, this number will likely decrease in the coming years.
Strategic Area 4: IT Security

<table>
<thead>
<tr>
<th>Metric</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>FY2012 Actual</th>
<th>FY2013 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 Goal</th>
<th>% of FY13 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment of a University Information Security Officer and a management framework</td>
<td>complete by June 2009</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Implementation of a centrally-defined risk assessment program</td>
<td>complete baseline assessment 2009 &amp; reassess 2012</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Implementation of a centrally-defined vulnerability assessment program for systems and web applications</td>
<td>complete by end of 2010</td>
<td>40%</td>
<td>45%</td>
<td>50%</td>
<td>60%</td>
<td>100%</td>
<td>–</td>
<td>100%</td>
<td>60%</td>
</tr>
<tr>
<td>Implementation of an incident management procedure</td>
<td>complete by June 2009</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Implementation of a centrally-defined business continuity program</td>
<td>10% growth per year</td>
<td>40%</td>
<td>45%</td>
<td>25%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>25%</td>
</tr>
<tr>
<td>Implementation of a University standard for antivirus/anti-spyware protection</td>
<td>complete by June 2009</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td># recipients of monthly user awareness newsletter</td>
<td>10% growth per year</td>
<td>55%</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td># presentations and seminars delivered internally (online and in person)</td>
<td>varies depending upon opportunities</td>
<td>87</td>
<td>50</td>
<td>115</td>
<td>–</td>
<td>–</td>
<td>variable</td>
<td>NA</td>
<td>–</td>
</tr>
<tr>
<td>Website redesign to emphasize availability of resources by roles</td>
<td>complete by 2010</td>
<td>10%</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Holding an annual awareness event (#events per year)</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td>1 event per year</td>
<td>1 event per year</td>
</tr>
<tr>
<td>Implementation of centrally-offered initial and refresher employee training</td>
<td>complete by 2010</td>
<td>0%</td>
<td>50%</td>
<td>90%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td>90%</td>
</tr>
</tbody>
</table>

1) Next assessment scheduled for FY2012-2013
2) Corrected metric. Revised assessment of progress based on complexity of initiative as encountered during implementation. Application scanning tool is complex, requires training for campus to use it, is intrusive and must be carefully carried out with only two desktop licenses to share across campus. Revised completion date is during fiscal year 2011-2012
3) No growth due to focus during 2011-12 was on the security review program, which emphasized campus wide server and application vulnerability scanning, as well as developing and maintaining accurate server and application inventory.
4)
**Strategic Area 5: Academic Technology**

<table>
<thead>
<tr>
<th>Metric (blue indicates ABOR centralization metric)</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>FY2012 Actual</th>
<th>FY2013 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 goal</th>
<th>% of FY2013 goal</th>
</tr>
</thead>
<tbody>
<tr>
<td># courses hosted on central learning management system</td>
<td>10% growth per year</td>
<td>3,750</td>
<td>5,800</td>
<td>5,857</td>
<td>6,365</td>
<td>7,000</td>
<td>10%</td>
<td>5,073</td>
<td>138%</td>
</tr>
<tr>
<td># attendees in centrally hosted forums for exploration and showcasing of technology usage in the learning environment</td>
<td>10% growth per year</td>
<td>1,200</td>
<td>1,200</td>
<td>1,446</td>
<td>1,542</td>
<td>1,706</td>
<td>11%</td>
<td>1,933</td>
<td>88%</td>
</tr>
<tr>
<td># calls into central IT support center</td>
<td>10% growth per year</td>
<td>26,000</td>
<td>41,632</td>
<td>56,994</td>
<td>54,395</td>
<td>51,826</td>
<td>-5%</td>
<td>41,873</td>
<td>124%</td>
</tr>
</tbody>
</table>
Strategic Area 6: Research Computing

<table>
<thead>
<tr>
<th>Metric</th>
<th>Goal</th>
<th>FY2009 (baseline)</th>
<th>FY2010 Actual</th>
<th>FY2011 Actual</th>
<th>FY2012 Actual</th>
<th>FY2013 Actual</th>
<th>Growth FY12 to FY13</th>
<th>FY2013 goal</th>
<th>% of FY2013 goal</th>
</tr>
</thead>
<tbody>
<tr>
<td># research groups hosted on the central HPC system</td>
<td>10% growth per year</td>
<td>108</td>
<td>112</td>
<td>132</td>
<td>117</td>
<td>138</td>
<td></td>
<td></td>
<td>85%</td>
</tr>
<tr>
<td>Deliver Kuali Coeus on time, on budget, and in scope</td>
<td>complete by January 2011</td>
<td>10%</td>
<td>See note 1 below</td>
<td>50</td>
<td>75</td>
<td>142.5%</td>
<td>Complete initial rollout by June 2012¹</td>
<td></td>
<td>75%</td>
</tr>
<tr>
<td># centrally provided storage cycles available to HPC</td>
<td>5x with Technology Refresh</td>
<td>117</td>
<td>117</td>
<td>0²</td>
<td>472</td>
<td>640</td>
<td>36%</td>
<td>585</td>
<td>81%</td>
</tr>
<tr>
<td># centrally provided computing cycles available to HPC</td>
<td>5x with Technology Refresh</td>
<td>20</td>
<td>20</td>
<td>0²</td>
<td>43</td>
<td>59</td>
<td>37%</td>
<td>100</td>
<td>59%³</td>
</tr>
<tr>
<td>Dollar value of external grants supported by the research groups on HPC</td>
<td>5% growth per year</td>
<td>*$25.8M</td>
<td>$30.4M</td>
<td>$32.4M</td>
<td>$35.4M</td>
<td>$70.7M</td>
<td>100%</td>
<td>$32.9M</td>
<td>115%</td>
</tr>
<tr>
<td>Framework and plan for ATIF to implement Shibboleth and join InCommon</td>
<td>by July 2009</td>
<td>0%</td>
<td>100%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100%</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td># institutions with ability to permit access based on partner institution credentials (InCommon)</td>
<td>10% growth per year</td>
<td>116</td>
<td>244</td>
<td>290</td>
<td>400</td>
<td>538</td>
<td>34.5%</td>
<td>187</td>
<td>288%</td>
</tr>
</tbody>
</table>

¹) Revised go-live date to reflect delivery of software from foundation. Initial campus rollout includes ability to construct grant proposals and submit them online, as well as the ability to track awards. Rolling it out to campus. We have been constrained by the readiness of the software.
²) No growth until completion of Tech Refresh FY2012.
³) Significant changes in the definition of what UA considered to be "HPC" and some policy decisions in 2006, which added the concept of buy-in nodes, decreased the number of centrally provided computing cycles.
Strategic Area 1: Student Learning and Success

Student learning and success are at the heart of the University of Arizona mission. Today’s students have grown up with technology and bring very different expectations to their educational experience. Teaching emphasis has moved away from memorizing facts and more toward finding, evaluating and using information. UA faculty and staff have a great opportunity to explore new modes of learning and to contribute to the development of IT technologies that can augment the learning experiences of our students. The UA works diligently to understand the needs of students who are considering a UA education, as well as engage current students in various stages of their educational career.

Goal 1: Improve Student Learning and Success through Technology Related Initiatives

Action Item 1

Provide—and, when feasible, expand in response to demand—basic technical services and connectivity for faculty and students across all fields of study. This is an ongoing effort.

ACCOMPLISHMENTS

**STUDENT ADMINISTRATION (SA):** Continued enhancement and support for the Student Administration System including:
- Began work on optimization of Financial Aid Term Processes. Project is iterative and will take a full financial cycle to complete.
- Implemented new Student Financial Aid "Shopping Sheet"
- Completed improvements to the online orientation registration system; online payments, automation of session changes, and registration by plan
- Completed online orientation registration for international students
- Completed UAlert enhancements and expansion
- Implemented enrollment permission numbers
- Streamlined advising exceptions processes
- Completed advisor assignments and academic agreements
- Implemented Billing for Differential Tuition
- Developed GradPath
- Created Post Enrollment Requirement Checking (PERC)
- Established waitlist communications

**IDENTITY FEDERATION:** Continued promoting and facilitating the use of Shibboleth/InCommon for inter-institutional collaboration and research, as well as the preferred mechanism for integrating UA’s identity management infrastructure with third-party/hosted/cloud-based services.
- Federated trust relationships were established with several additional third-party service providers this year, including:
  - Evanced (Library resource scheduling)
  - D2L (Learning management system)
  - Gartner (Enterprise IT research)
  - Blackboard Transact (Meal Plans)
TECHNOLOGY (Tier 1) SUPPORT FOR CAMPUS: Continued 24/7 tier 1 support with notable shift in service requests as phone call and walk-in requests increased slightly while on-line service requests increased over 60% year over year.

Total service requests:
- 58,820 calls (+8%)
- 11,880 walk-ins (+10%)
- 30,856 online requests (+65%)

STUDENT IT INVESTMENTS THROUGH STUDENT IT FEE: Due to an increase in total enrollment, received an additional $400K in IT Fee collections. Allowed for additional investment in classroom technologies, software, computing labs, and instructional support. Approximately $9.2M in Student IT Fees collected and distributed among the following initiatives:

- Common Software/New Site Licenses: The Microsoft Campus Agreement took effect July 1, 2012, which includes a Student Option that covers licenses for Microsoft Office and Microsoft Windows Upgrades for a PC or MAC at no charge. Free Product upgrades for the entire 3-year duration of the agreement. Year 2 of 3-year agreement.
- Free eLearning tutorials through IT Academy
- Microsoft's free eLearning tutorials
- Reached 99% indoor coverage & 92% outdoor coverage of wireless planning area.
- Continued operation of the 24/7 Help Desk
- Continued operation of computing laboratories; used as open-access labs and course instruction facilities.
  - Refresh of 5 computing laboratories and refresh of ILC laptop carts and instructor stations.
  - Assumed management and responsibility for 1 new open-access laboratory in the Student Union Memorial Center (SUMC), adding 40 Mac dual boot machines; will be complete shortly before June 30, 2013.
- Established new demo/test environment for D2L, which will facilitate increased capacity to address service packs and other upgrades.
- Student-related software renewals: Renewal of RightAnswers: knowledge management system for Student related content. Renewal of the Sophos antivirus and malware scanning license for student use.
- Online Education Project: 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.
- Classroom Technology Upgrades Program: Year 2 of 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 will begin 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 upgrade to a standard technology configuration.
  - 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.
ITSAB sponsored projects included two pilot projects: purchase of 2 Microsoft PixelSense tablets and a virtual computing environment.

**Classroom Technology Upgrades Program (CTU)** – 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 will begin 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 upgrade to a standard technology configuration.
- 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.

**Continued Enhancement of Enterprise Instructional Support (EIS):** Extensive effort and capital were invested in the continued support for infrastructure and development of the University's instructional support portfolio with the following outcomes:

- Desire 2 Learn (D2L) realized a 7% increase in usage (270,000 seats in 7,000 course sites)
- Increase in storage on the development environment and backup hardware.
- Integration of Blackboard Collaborate within D2L.
- A diagnostic tool measuring student readiness to learn in online courses was developed by OEP staff.
- Collaborative relationships with academic advisors and key representatives from Student Affairs were established to better assist students with course selection.

**Common Software/New Site Licenses:** The Microsoft Campus Agreement took effect July 1, 2012, and includes:

- Student option that covers licenses for Microsoft Office and Windows upgrades for a PC or MAC at no charge to students
- Enterprise Server products for campus at no cost to departments and colleges
- SQL and Systems Center server products for all campus servers at discount rates
- Faculty/Staff option that covers licenses for Microsoft Office, Windows, Visio and Project
- Upgrades for a PC or MAC at no charge to departments and colleges
- Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee
- Microsoft’s free eLearning tutorials

**Classroom Technology Services:**

- Supported the use of classroom technology with 10,223 equipment orders. (Equipment orders declined from FY 12 to FY 13, which is attributed to the addition of equipment in centrally scheduled classrooms which previously had no equipment.)

**Connectivity: Speed/Capacity Upgrades:**

- Education building upgrade was completed.
Work began on the University of Arizona Cancer Center upgrade project.

**AGILITY ENHANCEMENTS:**
- Began work on MPLS edge, which will lead to more, reliable, standardized, consistent and state-of-the-art networking infrastructure.

**2013-2014 PLANS**
- Provide centrally managed converged communications to the Cancer Center.
- Complete MPLS edge deployment.
- Complete GradPath 2.0 project - allowing for streamlined processes for tracking Graduate Plans of Study.
- Continue current wireless network expansion to obtain 100% indoor coverage and 100% outdoor coverage.
- Implement technology for an additional 36 rooms that currently have no technology installed with minimum standards during summer 2013.
- As part of the CTU Program, implement an emergency response communications system enabling bi-directional communications between classrooms and UAPD.
- Campus-wide implementation of lecture capture and streaming needs of campus.

**Action Item 2**
Support the trend toward a mobile computing environment that allows students to manage more effectively with fewer devices. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**COMMON SOFTWARE/NEW SITE LICENSES:** The Microsoft Campus Agreement took effect July 1, 2012, and includes:
- Student option that covers licenses for Microsoft Office and Windows upgrades for a PC or MAC at no charge to students
- Enterprise Server products for campus at no cost to departments and colleges
- SQL and Systems Center server products for all campus servers at discount rates
- Faculty/Staff option that covers licenses for Microsoft Office, Windows, Visio and Project Upgrades for a PC or MAC at no charge to departments and colleges
- Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee
- Microsoft’s free eLearning tutorials

**STUDENT ADMINISTRATION (SA):**
- Improvements to the online orientation registration system; online payments, automation of session changes, registration by plan
- Online Orientation registration for International Students
- UAlert enhancements and expansion
- Prescheduling of new students into required classes using Degree Tracker
- Enrollment Permission Numbers
- Streamlined Advising Exceptions Processes
- Advisor Assignments
- Academic Agreements
- Billing for Differential Tuition
- GradPath
- Waitlist Communications

**TECHNOLOGY (TIER 1) SUPPORT FOR CAMPUS:** Continued 24/7 tier 1 support with notable shift in service requests as phone call, walk-in and online requests increased slightly while on-line service requests increased by over 60% year over year. Total service requests:
- 58,820 calls (+8%)
- 11,880 walk-ins (+10%)
- 30,856 online requests (+65%)

**DEGREE TRACKER:** Launched Smart Planner (formerly known as Degree Tracker) in spring 2013 to help UA students navigate course planning. The system also creates a more efficient and engaging academic advising experience.

**MOBILE APPS:**
- Worked with new Director of Technology Transfer to update the app submission process and documentation information from Tech Launch Arizona.

### 2013-2014 PLANS

- Site License: Continue to work with the BookStores in order to provide the campus with high levels of customer service support.
- Mobile Apps: Continue adding features to the mobile application for enhanced student/visitor/employee experience.
- Develop Version 2.0 of the Mobile Matters website using the Site in a Box template for updated functionality as well as to foster a campus wide mobile application community.
- Update the department directory known as Campus Directory 2.0 in UA website Phonebook.
- Develop a Mobile governance process for prioritization and assessment.

### Action Item 3

Augment IT orientations for incoming students. *This is an ongoing effort.*

### ACCOMPLISHMENTS

**ORIENTATION EVENTS:** Continued outreach to new students by maintaining the online self-help *Getting Started* website, linking to the new students’ *Next Steps* process, and ensuring that online resources are available to students. These resources were promoted to new students via marketing collateral at Orientation expos and other outreach events. The Information Security Office distributed educational information to students about phishing in FY 2013 to help protect their computers and provide them with free resources at UA.
2013-2014 Plans

- Plan for next year’s orientation events.

**Action Item 4**

Offer ongoing university-wide materials, references, tutorials, and other training resources in common technologies to facilitate faculty and student success in their curricular pursuits. *This is an ongoing effort.*

**Accomplishments**

**Online Resources:**

- Completed pilot of Skillsoft training material with HR.
- Continued support of UACBT with over 1000 online courses.
- Developed and implemented support model for Microsoft Academy.

**Mosaic Training:**

- Ongoing training development, revision, and delivery continues for UAccess Financials.
- Ongoing training development, revision, and delivery continues for Business Office Toolkit, UAccess Analytics, UAccess Employee and UAccess Student.
- Hosted first annual UAccess Symposium and Speaker Series to convene UAccess users for learning, sharing and networking opportunities.
- Migrated Mosaic Community website to UAccess Community website to expand learning and information sharing among UAccess users.
- Developed and delivered online training resources for Lync and Outlook end users. Hands-on Outlook classes and office hours offered on an ongoing basis.

2013-2014 Plans

- Continue sustaining training for UAccess systems.
- Develop/revise and deliver training for updates and upgrades to existing UAccess systems and for UAccess Research.
- Implement an Enterprise Learning Management (ELM), an employee-oriented training management system, in partnership with Human Resources.

**Action Item 5**

Hold periodic informal sessions with students to discuss technology issues and solicit feedback. *This is an ongoing effort.*

**Accomplishments**

**Information Technology Student Advisory Board (ITSAB):** ITSAB’s 12 team members continued to meet on a regular basis and work on new bylaws to strengthen the year-to-year transitions of the board.
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S
UCCESS

 Purchased two PixelSense tables, located in the UA Library, to be used by students for collaborative projects.
 Co-hosted and judged entries in the first App-a-thon, where UA students developed mobile applications for the Pixel Sense tables purchased by ITSAB.

IT SURVEYS: Developed the 2013 Educause Center for Applied Research (ECAR) graduate student survey to measure student opinions on IT services, priorities and potential initiatives at the University of Arizona.

ASSOCIATED STUDENTS OF THE UNIVERSITY OF ARIZONA: Conducted frequent and specific interactions with Associated Students of the University of Arizona.

2013- 2014 PLANS

 Continue ITSAB with increased focus on education and member involvement.
 Hold ITSAB-led student focus groups as needed on relevant student IT issues such as classroom technology and the network master plan.

Action Item 6

Increase the opportunities for faculty and students to experience and evaluate new technologies. This is an ongoing effort.

ACOMPLISHMENTS

CLASSROOM TECHNOLOGY UPGRADES PROGRAM (CTU) – 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 will begin 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.
 A cross-institutional team was assembled to consider and make recommendations for meeting the lecture capture and streaming needs of campus.

CONTINUED ENHANCEMENT OF ENTERPRISE INSTRUCTIONAL SUPPORT (EIS): Extensive effort and capital were invested in the continued support for infrastructure and development of the University’s instructional support portfolio with the following outcomes:

 Desire 2 Learn (D2L) realized a 7% increase in usage (270,000 seats in 7,000 course sites)
 Increase in storage on the development environment and backup hardware.
 Integration of Blackboard Collaborate within D2L.
 A diagnostic tool measuring student readiness to learn in online courses was developed by OEP staff.
 Collaborative relationships with academic advisors and key representatives from Student Affairs were established to better assist students with course selection.
MULTIMEDIA EQUIPMENT: Gear-to-Go (GtG) provided free check out of audio, visual, and lighting equipment to students, faculty, and staff in support of coursework or UA business. In FY 2013 there were 3,721 Gear-to-Go reservations accommodated for students, faculty and staff. 161 Gear-to-Go devices were refreshed, expanding the number of available resources. Gear-to-Go to go also simplified the check-out processes to make equipment more accessible to students and faculty.

AZLIVE: Continued ongoing support of AZLive—3-D environment for graphics, stereoscopic projection technology, acoustical tracking devices, and four-channel audio to create the illusion of being present in a virtual world. This year 17 Instructional projects, 7 Scientific Visualization Projects, 48 AZ-LIVE tours and 13 research projects were completed in the center.

TEACHING ACADEMY: A symposium was offered in the fall and spring where faculty and instructional staff could explore instructional practices, technologies, and planning and assessment tools.

NEW FACULTY ORIENTATIONS: OIA continued new faculty orientations previously held by LTC to familiarize new faculty with technology resources at UA.

2013-2014 PLANS

- Continue above initiatives as funding allows.
Strategic Area 2: Information Technology Infrastructure

The UA is an engine of discovery and advancement for society. Our IT infrastructure must support this vital role. We must enhance the University-wide information technology infrastructure and make it more accessible, dependable, secure, flexible, and scalable to meet the teaching, learning, research, and organizational needs of the University of Arizona and the community.

The UA network must minimally keep up with and preferably exceed the speed demands of the university and community. In 2003, the UA set in place a 10-year Network Master Plan that serves as a strategic direction for infrastructure improvements for the University. The UA has transitioned to an FTE-based funding model (July, 2008) with the core of this business model focused on upgrading the campus network, the internal building networks, and the quality of service components, which includes redundancy and stability.

The University's computing and storage infrastructure must keep pace with the demands for reliable, interoperable, and scalable capacity. The UA community increasingly relies on systems for administration, collaboration, communication, computation, learning, and reporting. Computing facilities, data storage systems, middleware, and systems integration services are crucial components on which application systems and IT services are built.

Goal 2: The network must be robust, reliable, standardized, consistent, state-of-the-art, and operating with continuous improvements and stable funding.

Action Item 1

Conduct upgrades to the core network, the internal building networks, and the quality of service components, which include redundancy and stability. This is an ongoing effort.

ACCOMPLISHMENTS

SPEED/CAPACITY UPGRADES:
- Education building upgrade was completed.
- Work began on the University of Arizona Cancer Center upgrade project.

AGILITY ENHANCEMENTS:
- Began work on MPLS edge, which will lead to more, reliable, standardized, consistent and state-of-the-art networking infrastructure.

VOICE MESSAGING SYSTEM:
- Purchased Cisco CUWL licenses that enabled procurement of software for Cisco Unity Connection. Licenses for voice messaging are included for all currently VOIP users.
- Unity Connection Voicemail system was installed and tested; implementation planning underway.
IPS/IDS SYSTEM:
- IDS was deployed on border traffic areas for testing purposes and will be redeployed at the Data Center.

TELEPHONE EQUIPMENT ROOM MONITORING:
- Environmental monitors were installed in 4 new buildings.

2013-2014 PLANS
- Complete MPLS edge implementation.
- Move existing campus VOIP users to the new voice messaging system, Unity Connection.
- Continue with environmental monitor installation across the campus as the budget permits.

Action Item 2
Complete the installation of wireless. This is an ongoing effort.

ACCOMPLISHMENTS

CAPACITY/SPEED ENHANCEMENTS: Indoor wireless coverage was added to 5 buildings and an upgrade/refresh was completed in 3 buildings. Outdoor coverage was added in 12 areas. 99% of campus indoor space and 95% of outdoor space has wireless coverage.

2013-2014 PLANS
- Continue to expand outdoor wireless coverage.
- Finish Cancer Center to achieve 100% indoor wireless coverage.
- Continue indoor wireless refresh project.

Goal 3: The university-wide computing infrastructure must become more accessible, dependable, secure, flexible, and scalable with services and tools that are integrated and state-of-art to meet the teaching, learning, research, and organizational needs of the University and the surrounding community.

Action Item 1
Develop infrastructure and processes for collaborative development of common solutions and governance across units. This includes:
- Collaboration in IT governance, standards and processes.
- Evaluation of localized management.
- Optimizing server and systems administration investments where appropriate.
- Optimizing computing and storage investments by consolidating services where appropriate.
- Optimizing and consolidating network management where appropriate.
- Optimizing and consolidating other IT support functions where appropriate.
ACCOMPLISHMENTS

**ENHANCED THE IT GOVERNANCE, STANDARDS AND PROCESSES COLLABORATION:**
- Mosaic project will formally end on June 30, 2013. All projects will transition to "sustaining" mode, and a final report will be issued.
- Enhanced UAConnect and CatNet governance documentation, policies and guidelines.
- Participated in Research Computing oversight for campus.

**CONTINUED GROWTH AND INVESTMENT IN SCALABLE, CENTRALIZED SERVER HOSTING AND ADMINISTRATION:**
- Purchased a limited number of licenses for VMware vCloud Director Suite licenses to develop a private cloud pilot.
- Replaced old rack mounted ESX cluster servers with 12 new blade servers that conform to infrastructure standard.
- Rebuilt the College of Medicine virtual server infrastructure to conform with the new standard (Cisco UCS Blades and EMC VNX storage).
- Number of virtual servers owned and managed by campus units and located in central (UITS) data center(s) decreased by -20% to 38. This decrease was due to FSOs decision to build their virtual infrastructure.
  - Number of virtual servers owned and managed by UITS and located in the central (UITS) data center increased by 5% to 688.
  - Number of physical servers located in central (UITS) data center(s) increased by 15% to 502. Including 182 servers and storage arrays co-located in the UITS data center.
- The server infrastructure for Site-in-A-Box (self-managed websites) was completed and is now available for departments, campus organizations, and faculty.
- The virtual desktop infrastructure has increased to 192 virtual workstations in production.
- A VDI pilot is in progress with the College of Engineering.

**CONTINUED GROWTH AND INVESTMENT IN SCALABLE STORAGE FOR CONSOLIDATION EFFORTS:**
- Built a D2L development environment to augment the existing production and test environments.
- Replaced the enterprise monitoring system with an open source system to decrease licensing costs and increase flexibility.
- Implemented new file server platform to enhance performance for new campus services.

**CONSOLIDATION OF OTHER IT SUPPORT FUNCTIONS:**
- Identity Federation: Continued promoting and facilitating the use of Shibboleth/InCommon for inter-institutional collaboration and research, as well as the preferred mechanism for integrating UA’s identity management infrastructure with third-party/hosted/cloud-based services. Federated trust relationships were established with several additional third-party service providers this year, including:
  - Evanced (Library resource scheduling)
  - D2L (Learning management system)
  - Gartner (Enterprise IT research)
  - Blackboard Transact (Meal Plans)
**Strategic Area 2: Information Technology Infrastructure**

- **Technology (Tier 1) Support for Campus:** Continued 24/7 tier 1 support with notable shift in service requests as phone call and walk-in requests increased slightly. On-line service requests increased by 60% year over year.
  
  Total service requests:
  - 58,820 calls (+8%)
  - 11,880 walk-ins (+10%)
  - 30,856 online requests (+65%)

- **Common Software/New Site Licenses:** The Microsoft Campus Agreement took effect July 1, 2012, and includes:
  - Student option that covers licenses for Microsoft Office and Windows upgrades for a PC or MAC at no charge to students
  - Enterprise Server products for campus at no cost to departments and colleges
  - SQL and Systems Center server products for all campus servers at discount rates
  - Faculty/Staff option that covers licenses for Microsoft Office, Windows, Visio and Project Upgrades for a PC or MAC at no charge to departments and colleges
  - Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee
  - Microsoft’s free eLearning tutorials
  - Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee.
  - Microsoft’s free eLearning tutorials

- **Classroom Technology Services:**
  - Supported the use of classroom technology with 10,223 equipment orders.
    (Equipment orders declined from FY 12 to FY 13, which is attributed to the addition of equipment in centrally scheduled classrooms which previously had no equipment.)

- **Web Services:**
  - 457 websites centrally hosted.
  - Working with External Relations, an institutional need was identified to help colleges and departments create websites that followed Redbar branding guidelines without requiring an experienced web designer.
  - The Site-in-a-Box website was created on a Drupal platform with External Relations to address the issue of uniform branding guidelines for UA websites. It also supports mobile devices through state of the art mobile responsive design.

**2013-2014 Plans**

- Continue services above as funding allows.
- Continue developing the private cloud as a production environment available to all campus departments.
- Creating a pilot program in cooperation with ITSAB to provide students with virtual desktops.
- Implement a geographically dispersed DB cluster for D2L to increase improve fault tolerance.
- Continue with current storage infrastructure and increase capacity where necessary.
STRATEGIC AREA 2: INFORMATION TECHNOLOGY INFRASTRUCTURE

- Expand file server infrastructure to accommodate local storage lecture capture.
- Continue leveraging Shibboleth/InCommon for federated IdM with third-party service providers.
- Minimum technology standards will be reviewed/updated in FY2013-2014. Needed upgrades will be scheduled.
- Support an increase in the number of hosted websites and create new ways to simplify them for the University.
- Site in a Box 2.0 with added functionality and features.

**Action Item 2**

Provide state-of-the-art tools and infrastructure for real-time collaboration environments accessible from multiple departments, campuses, and private enterprise. This should include new learning tools and spaces that support multi-level interactions among students, instructors, and other academic partners. *This is an ongoing effort.*

**Accomplishments**

**Identity Management Infrastructure:** Upgraded UA NetID infrastructure--now running on current version of 389 Directory Server in enterprise VMWare environment; acquired new hardware for EDS (currently being configured; updated LDAP server software on test NetID/EDS server).

**Immediate NetID Creation:** Project completed. Developed an enhanced real-time provisioning of person data to accommodate new Designated Campus Colleague business process.

**Enabling Application Integration:**
- The adoption of SOA principles and web services-based integration continues to expand.
  - Several new UAccess Student web services were brokered via SOA infrastructure
  - Research administration grant data web service was provisioned to feed data to UA@Work website.
  - UAccess Student Guest Center identity service extended to external applications via SOA infrastructure.
- Enhanced UA Schedule of Courses service to provide additional detail (long course description and prerequisites).

**MACE Grouper Software:** Migrated Grouper application and database to version 2.1.3. Upgraded Grouper server infrastructure to three systems (2 web/UI servers in HA configuration, plus Grouper loader). Grouper database migrated to Oracle 11g, and moved to higher-performance database server.

**2013-2014 Plans**

- Continue creating composite web services and brokering web services from enterprise applications via SOA infrastructure.
- Provide option for JSON formatting of data, in addition to XML.
- Continue leveraging Shibboleth/InCommon for federated IdM with third-party service providers.
- Complete EDS HW/SW upgrade; Upgrade production Shibboleth IdP hardware and software version.
- Continue building test IAM infrastructure and improving provisioning process for test identities.
- Investigating the use of API gateway products, such as WSO2 API Gateway, Vordel, etc, to provide web service registry functionality as well as access control to services.
- Test existing SOA/BPEL10g processes in SOA 11g environment; identify migration issues; formulate migration plan.
- Perform more extensive testing of RBAC; develop Grouper RBAC "recipe" for application developers.
Strategic Area 3: Administrative Effectiveness

There is an ever-increasing need for accurate, integrated information not limited by existing functional boundaries. Our ability to address this need is restricted by systems that are aged and technologically out of date. Our administrative systems are surrounded by extensions, augmentations, and supplemental distributed systems maintained by individual departments and other operating units. There is no controversy at all over the need to replace our entire suite of administrative systems. With certain administrative systems in need of attention and growing dependencies, the institution has identified a strategy for modernizing the UA’s administrative systems.

In February 2008, the UA CIO introduced the “Enterprise Systems Replacement Proposal” which outlines the roadmap for the replacement of the UA’s administrative systems. The roadmap includes targeted solutions, resource requirements, high-level implementation timeline, and projected budget. Many of the goals and actions listed here are a reflection of the actions that occurred in a replacement effort.

The transition from project status to sustaining mode has been essentially transparent to campus. The sustainment group has worked closely with teams within the UITS Client and Infrastructure Services group (24/7 IT Support Center, the Environment team, and Security and Access Management) to ensure that the systems are managed well and that clients receive an exceptional level of customer service.

Goal 4: Business operations must be supported with tools and applications that are flexible, responsive, permit real-time web access, facilitate self-help, and ensure information integrity. The appellations must be interoperable, modern, and poised for future changes.

Action Item 1

Describe the overall blue-print for our ongoing and envisioned administrative systems and how they are and/or will be inter-connected. Percent Complete: 100%

ACCOMPLISHMENTS

This action item is complete.

Action Item 2

Based on the blueprint architecture, define a comprehensive roadmap for the integration and interoperability of the UA’s administrative systems. Percent Complete: 100%

ACCOMPLISHMENTS

This action item is complete.

Action Item 3

Identify the most cost-effective solutions for improving business operations and systems on the road map. Percent Complete: 100%
**ACCOMPLISHMENTS**

This action item is complete.

**Action Item 4**

Continually explore opportunities for collaboration on a Tri-University basis on administrative systems. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**TRAINING:** Regular and on-going communications with ASU and NAU on both business and technology aspects of administrative systems.

**COLLABORATION:**
- Continued the collaboration and sharing of information with NAU and ASU.

**2013-2014 PLANS**

- Continue to share information about Degree Tracker and Degree Search with ASU and NAU.

**Action Item 5**

Describe data warehouse architecture, capability, and usability as a support for administrative system operations as well as its current role in reporting and analysis. *Percent Complete: 100%*

**ACCOMPLISHMENTS**

This action item is complete.

**Action Item 6**

Implement significant human resources–related improvement projects on payroll, time capture, and other elements of the related road map by adopting PeopleSoft Human Capital Management. *Percent Complete: 100%*

**ACCOMPLISHMENTS**

**MANAGER SELF SERVICE:** Work on Manager Self Service 3.0 is in progress.
- Completed Release 3.0 – Requirements Gathering
- Completed New Hires/Rehires
- Work has been completed on I-9s (MSS/ESS), but currently on hold due to form changes initiated by federal government.
- Notice of Appointment/Reappointment is 80% completed and will be finished in summer 2013.
- MSS transaction reprioritized in October 2012 for remaining areas:
  - Other Professional Compensation
  - Supplemental Compensation
  - Summer/Winter Session
  - Weekend MBA
Strategic Area 3: Administrative Effectiveness

- Inter-departmental Promotions/Transfers
- Department Changes

Promotion and Tenure Tracking: Completed process to make information available for reporting through Analytics.

Faculty Requisition and Offers Planning: A program for University departments to use to plan faculty recruitments, approve plans, and track associated offers. In FY 2013, additional employee categories were configured for the system.

Educational Assistance Program: Implemented online self-service eligibility process.

2013-2014 Plans

Manager Self Service: Continue work on Manager Self Service with completion of release 3 as follows:
- Continue support of PeopleSoft HCM via People Tools upgrade and bundle release updates.
- Complete I-9s (MSS/ESS) for fall 2013.
- New completion date for remaining areas has not yet been determined:
  - Other Professional Compensation
  - Supplemental Compensation
  - Summer/Winter Session
  - Weekend MBA
  - Inter-departmental Promotions/Transfers
  - Department Changes

Action Item 7

Implement significant student information system–related improvement projects for calendaring, course enrollment and management, and process automation, e.g., prerequisites, and then other elements of the related roadmap by adopting PeopleSoft Campus Solutions.

Percent Complete: 100%

Accomplishments

Student Administration (SA): Continued enhancement and support for the Student Administration System including:
- Began work on optimization of Financial Aid Term Processes. Project is iterative and will take a full financial cycle to complete.
- Implemented new Student Financial Aid "Shopping Sheet"
- Completed improvements to the online orientation registration system; online payments, automation of session changes, and registration by plan
- Completed online orientation registration for international students
- Completed UAlert enhancements and expansion
- Implemented enrollment permission numbers
- Streamlined advising exceptions processes
- Completed advisor assignments and academic agreements
- Implemented Billing for Differential Tuition
Developed GradPath
Created Post Enrollment Requirement Checking (PERC)
Established waitlist communications

2013-2014 PLANS

- Preschedule new students into required classes using Degree Tracker for Spring 2014
- Complete optimization of Financial Aid Term Processes
- Implement Transfer Student Online Orientation
- Develop and implement Academic Agreements 2.0 and Satisfactory Academic Progress (SAP)
- Develop and implement GradPath 2.0 and pending transaction dashboard

Action item 8

Replace the Financial Record System with the Kuali Financial System. Percent Complete: 100%

ACCOMPLISHMENTS


TRANSITION: Effected transition from project mode to sustaining mode.

- Substantial expansion of financials reporting accomplished under governance structure, with particular attention paid both to central needs and college/department needs.
- Fully integrated Archibus into enterprise systems framework, with tech staffing provided by UITS.

2013-2014 PLANS

- Continue to expand report offering using Financials Reporting Governance structure.

Action Item 9

Replace the Sponsored Projects Information System (SPINS) with Kuali Coeus (KC) Research Administration. Phase one: 100% complete

ACCOMPLISHMENTS

- Completed 50% of campus implementation of KC Research Administration to colleges/departments.

2013-2014 PLANS

- Finish rollout to colleges and departments and implement IRB back office by December 31, 2013.
- Transfer Research Administration to sustaining organization as of July 1, 2013.
Strategic Area 4: Information Technology Security

UA is engaged in designing and implementing a comprehensive security program to protect sensitive information, reduce risk, and define roles and responsibilities. This vision will require sustained, broad-based effort for a number of years. Communication and collaboration among the Information Security Office, University IT Services, and the University community will serve as its foundation. The conversation will establish the values and principles, set the risk tolerances, and help define the environment that the security program supports and protects. Evolution and integration of security services and policies into University service and information architecture will serve to reduce the likelihood of security incidents and to increase the University community’s participation in securely managing and disseminating information.

Goal 5: The University’s information assets and technology environment must be increasingly and effectively secured in a consistent standardized manner without limiting our academic and research freedoms.

Action Item 1
Conduct University-wide Security Risk Assessment. This is an ongoing effort. Baseline 100% complete.

ACCOMPLISHMENTS

**Tri-U Risk Assessment:** The Tri-U IT Risk Assessment Workgroup has adopted the ISACA IT Risk Framework. The framework was modified slightly to fit higher education, but will be a shared framework among the Tri-U institutions.

**Annual Security Roadmap:**
- Conducted follow-up security maturity assessment to measure security posture as more programs become implemented and sustained.
- Developed assessment based on NIST to be used for assessments (low, moderate and high).
- Revised Data Facility Physical Security Standard, Server Security Standard, Access Control Standard to include HIPAA regulatory requirements, vetted and approved, and made available to campus.

**UA Risk Assessment:** Continued application and server scanning.

**Priority Security Reviews:** Information Security Office worked with College of Medicine-Tucson and College of Education to launch encryption pilot program with Sophos encryption product. Ongoing.

- A two-part security risk assessment was distributed to campus units. Approximately, 80% of departments completed 2013 assessments.
- A new ISO was hired in December 2012. Work is progressing on a new multi-year security strategy to address campus’ information assurance needs.
2013-2014 PLANS

- An updated vulnerability management program is being incorporated into the new information security plans. Implementation of this enhanced program will be dependent on available funding.
- Moving forward, the Information Security office will work with campus units to leverage existing campus site licenses from Microsoft and Apple for encryption.

**Action Item 2**

Develop and implement a University-wide Security Applications Review Process. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**ENTERPRISE APPLICATIONS:** Coordinated security reviews for Internal Audit of UAccess Financial System, D2L and UAccess Student System and Financial Aid.

**PROCEDURES:** Completed training modules in place for both web developer security and scanning tool training.

**MOSAIC PROJECT:** A UITS team has formed with the scope of scanning UITS applications. All applications were scanned and ongoing scanning continues.

**WEB APPLICATION SECURITY:** Web application and security scanning training program in place. Inventory database in development to record criticality of applications.

**CAMPUS-WIDE SCANNING:** Campus-wide scanning of applications and servers implemented and ongoing.

**MITIGATION PLANS:** Working with partnership units to assist with mitigation plans and security review scanning for servers and applications. During 2012/2013, the Information Security Office was in transition while searching for a new ISO. Partnership units were encouraged to continue mitigation efforts, including application and server scanning and encryption of mobile devices. *This is an ongoing effort.*

**ENTERPRISE SYSTEMS SECURITY:** Continue periodic application scans of PeopleSoft HCM and SA continue on an ongoing basis.

2013-2014 PLANS

- As funding allows, continue to enhance, expand, and support all above activities.

**Action Item 3**

Improve Security Practices and Monitoring of Network Traffic. *This is an ongoing effort.*
ACCOMPLISHMENTS

**Firewall Services:** Continued work on network firewalls at the University network perimeter and on departmental subnets.

**PCI Workgroups and Listservs:** Continued to provide leadership and collaboration among SAQC (Self-Assessment Questionnaire, ‘C’ level) merchants to facilitate PCI (Payment Card Industry) certification for campus. Quarterly meetings held with SAQ C Merchants. Annual assessment assistance provided.

**Incident Management:** Continued to improve incident reporting. Standardized processes implemented to ensure that incident handling is thorough and improves overall security posture of affected units and campus, including lessons learned being fully implemented.

**Sensitive Data Protection:** Implemented campaign for faculty-sensitive data cleanup and encryption of research PI data. Continued communication of campaign to department heads and faculty groups.

**PCI DSS:** Continued to meet quarterly to review work plans and address compliance issues of new PCI DSS 2.0 regulation. Research, collaborate on, and implement mobile device security.

### 2013-2014 Plans

- Review existing incident handling procedures and work with campus to improve the processes and policies moving forward.
- Wider implementation of mobile device encryption.

**Action Item 4**

Set strategic direction for identity management and deploy access management system for UAccess systems. *This is an ongoing effort.*

**Accomplishments**

**Identity Federation:**

- Continued promoting and facilitating the use of Shibboleth/InCommon for inter-institutional collaboration and research, as well as the preferred mechanism for integrating UA’s identity management infrastructure with third-party/hosted/cloud-based services.
- Federated trust relationships were established with several additional third-party service providers this year, including:
  - Evanced (Library resource scheduling)
  - D2L (Learning management system)
  - Gartner (Enterprise IT research)
  - Blackboard Transact (Meal Plans)
**Upgrade Paths:**

- Upgraded UA WebAuth environment to latest release of JA-SIG CAS (3.4), running on virtual server resources.
- Provisioned UA Web Service registry, integrated with SIA access request portal, which allows UA developers to browse information about web services, register information about web services they provide, comment-on and provide feedback to web service owners, and receive updates concerning operational issues and version changes.
- Acquired 1000-user license for DuoSecurity (two-factor authentication) via Internet2/InCommon NET+ program.
- Developed proof-of-concept integration with WebAuth (CAS) and Shibboleth.
- Joined Internet2 Multi-Factor Authentication Cohortium (an NSTIC-funded initiative to advance the use of MFA in the research & education sector).
- Upgraded UA NetID infrastructure—now running on current version of 389 Directory Server in enterprise VMWare environment; acquired new hardware for EDS (currently being configured).
- Updated LDAP server software on test NetID/EDS server; installed REST EDS service in test environment.

**2013-2014 Plans**

- Continue leveraging Shibboleth/InCommon for federated Identity Management with third-party service providers.
- Deploy production two-factor WebAuth/Shibboleth infrastructure; participate in MFA consortium to better understand MFA use cases and alignment with authentication level of assurance.
- Complete EDS HW/SW upgrade; Upgrade production Shibboleth IdP hardware and software version.
- Continue building test IAM infrastructure and improving provisioning process for test identities.
- Continue to monitor progress of CIFER, possibly reassess participation at future date.

**Action Item 5**

Facilitate Business Continuity Plan. *This is an ongoing effort.*

**Accomplishments**

**Awareness:** Incorporated business continuity planning in awareness efforts. This is addressed in risk mitigation action plans. *This is an ongoing effort.*
2013-2014 PLANS

- Work is progressing on a new multi-year security strategy to address campus information assurance needs.

**Action Item 6**

Investigate and recommend encryption solution for campus. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**CENTRALLY MANAGED ENCRYPTION SOLUTION:** Sophos Encryption was used in some pilot departments, but widespread adoption has not occurred across campus.

2013-2014 PLANS

- Moving forward, the Information Security office will work with campus units to leverage existing campus site licenses from Microsoft and Apple for encryption.

**Goal 6: Members of the University community must become increasingly aware of their responsibilities, and accept accountability for minimizing the University's exposure to the ongoing threats.**

**Action Item 1**

Education and awareness. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**PROGRAMS:**

- Incorporated information in electronic newsletters and other publications for employees and organizations. *Ongoing*
- Distributed email to students in FY 2013 regarding phishing attempts and provided information on how to protect their computers and direct them to free resources at UA. *Ongoing*
- Maintained UA Information Security Facebook page to post online security information that is current and relevant to UA community. *Ongoing*
- Delivered security awareness presentations for MIS 111 students and library science graduate students.

**Computer-Based Staff Training:**

- 13,843 unique users have completed mandatory training. Metric is based on approximation of employees at 12,000.

**Web Developer Security Education:** Web developer training is completed and available at the ISO website. Information Security Liaisons and application scanning program have been the impetus for developers to complete the training. *Ongoing*
Information Security Awareness:
- Hosted Annual Information Security Awareness Day on the Mall during Parents Weekend.
- Leveraged events during Security Awareness Month in order to reach out to a wider audience on campus.
- Created Facebook security web page and brochure.
- Delivered security awareness presentations for MIS 111 students and library science graduate students.
- Offered awareness and training session opportunities for Information Security Liaisons and Managers on firewall implementation.
- Hosted Educause Security Professionals Online Conference for ISMs.
- Co-hosted NIST/OCR HIPAA Security Online Conference for units that need to comply with HIPAA regulations.
- Developed role-based refresher training modules that can be delivered on an ad hoc basis to various campus groups as needed.

2013-2014 Plans
- Information Security office plans to participate in Orientation during fall 2013.
- Web developer training will continue to be stressed as part of the ISL program and required prior to getting application scanning training ongoing.
- Hold annual Information Security Awareness Day.
- Distribute awareness information via new employee and student orientations, departments and monthly electronic newsletters, and other publications for employees and organizations.
- Considering adoption of a third-party computer-based training solution for ongoing user awareness needs.
Strategic Area 5: Academic Technology

UA must continue to refine and develop instructional technologies and resources to provide instructors and students with a first class infrastructure for teaching and learning. As advancing technologies provide new opportunities for scholarship, the University must proactively and strategically pursue and develop these instructional tools with active input from students, faculty, and staff to meet their evolving needs.

Goal 7: Provide an environment that encourages the use of technology to facilitate and enhance learning.

In late 2009, a strategically new organization was formed to provide exceptional resources and support to all those engaged in instructional activities at the University of Arizona. The Office of Instruction and Assessment (OIA), reporting to the Vice Provost for Academic affairs, offers support to the UA teaching community in course and curriculum design; online course development; program and classroom assessment and evaluation; instructional strategies; and learning technologies. UITS continues to contribute the necessary infrastructure and technical support to ensure the success of the OIA mission.

Action Item 1

Offer ongoing University-wide materials, references, tutorials, and other training resources for faculty and students in the common technologies they will need to be successful in their curricular pursuits. This is an ongoing effort.

Accomplishments

Online Instructional Resources:

- Work continued on the development of a Teaching Resource web site for use by OEP project leaders and the general campus community.
- Worked collaboratively with the Outreach College for integration and resource sharing with their program-focused project initiative.
- UA Bookstore is working with various departments within UITS in order to cultivate a speaker series that will bring knowledge to the campus community.
- Although no longer labeled “Tech Tuesdays” educational sessions continue, to bring experts to the campus community in order to speak on technology related topics.
- Further developed collaborative relationships with University Libraries and Disability Resources Center to better integrate and centralize faculty support.
- Held planning meetings for spring development offerings and in June 2013 held a 3-day intensive session.
- Continued development on Quality Matters demo course site within D2L.
- Designed a set of criteria to assess new undergraduate online course proposals. Criteria forwarded to the UA General Education Committee.

Continued Enhancement of Enterprise Instructional Support: Extensive effort and capital were invested in the continued support for infrastructure and development of the University's instructional support portfolio with the following outcomes:

- Desire 2 Learn (D2L) realized a 7% increase in usage (over 252,000 seats in 6,365 courses).
Student Administration enrollment data integration was refined.
Refined the process that loads employees/students into D2L to utilize four points of verification to ensure everyone is loaded.
Various security, redundancy, and stability enhancements were implemented for D2L and iTunes.
Early Alerts was integrated with D2L.

**COMMON SOFTWARE/NEW SITE LICENSES:** The Microsoft Campus Agreement took effect July 1, 2012, and includes:
- Student option that covers licenses for Microsoft Office and Windows upgrades for a PC or MAC at no charge to students
- Enterprise Server products for campus at no cost to departments and colleges
- SQL and Systems Center server products for all campus servers at discount rates
- Faculty/Staff option that covers licenses for Microsoft Office, Windows, Visio and Project Upgrades for a PC or MAC at no charge to departments and colleges
- Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee
- Microsoft’s free eLearning tutorials

**CLASSROOM TECHNOLOGY SERVICES:** UITS supported the use of classroom technology with 10,223 equipment orders. (Equipment orders declined from FY 12 to FY 13, which is attributed to the addition of equipment in centrally scheduled classrooms which previously had no equipment.) Two classrooms in the Chandler facility were equipped with technology. SBS 100 was equipped with high density WiFi capabilities to facilitate high density internet usage for 500+ students in a course. Classroom Technology Services personnel are actively participating in the Classroom Technology Upgrade Program.

**ORIENTATION EVENTS:** Continued outreach to new students by maintaining the online self-help Getting Started website and video, linking to the new students’ Next Steps process, and ensuring that online resources are available to students. These resources were promoted to new students via marketing collateral at Orientation expos and other outreach events.

**TRAINING:** UITS Workshops and Training Team provided Microsoft Outlook training geared specifically to the University’s system.

**2013-2014 PLANS**
- OIA educational, outreach and assessment tools, such as website, blog, and social media outlets will be continued on an ongoing basis.
- Develop RFP for FY14 projects targeting hybrid, bottleneck, summer/winter, and fully online course conversions.
- Implement of a student diagnostic tool.
- Implement an online course delivery criteria and rubric.
- As part of Classroom Technology Upgrade program, minimum standard technology configurations for central managed classrooms will be reviewed/updated in FY2013-2014. Needed upgrades will be scheduled and implemented.
- Continue Orientation events and outreach to new students.
- Continue updates to Site License website.
Strategic Area 5: Academic Technology

Action Item 2

Provide—and, when feasible, expand in response to demand—basic technical services and connectivity for faculty and students across all fields of study. This is an ongoing effort.

Accomplishments

Student Administration (SA): Continued enhancement and support for the Student Administration System including:
- Began work on optimization of Financial Aid Term Processes. Project is iterative and will take a full financial cycle to complete.
- Implemented new Student Financial Aid "Shopping Sheet"
- Completed improvements to the online orientation registration system; online payments, automation of session changes, and registration by plan
- Completed online orientation registration for international students
- Completed UAlert enhancements and expansion
- Implemented enrollment permission numbers
- Streamlined advising exceptions processes
- Completed advisor assignments and academic agreements
- Implemented Billing for Differential Tuition
- Developed GradPath
- Created Post Enrollment Requirement Checking (PERC)
- Established waitlist communications

Identity Federation: Continued promoting and facilitating the use of Shibboleth/InCommon for inter-institutional collaboration and research, as well as the preferred mechanism for integrating UA's identity management infrastructure with third-party/hosted/cloud-based services.
- Federated trust relationships were established with several additional third-party service providers this year, including:
  - Evanced (Library resource scheduling)
  - D2L (Learning management system)
  - Gartner (Enterprise IT research)
  - Blackboard Transact (Meal Plans)

Technology (Tier 1) Support for Campus: Continued 24/7 tier 1 support with notable shift in service requests as phone call and walk-in requests increased slightly while on-line service requests increased over 60% year over year.
Total service requests:
- 58,820 calls (+8%)
- 11,880 walk-ins (+10%)
- 30,856 online requests (+65%)

Student IT Investments through Student IT Fee: Due to an increase in total enrollment, received an additional $400K in IT Fee collections. Allowed for additional investment in classroom technologies, software, computing labs, and instructional support. Approximately $9.2M in Student IT Fees collected and distributed among the following initiatives:
Common Software/New Site Licenses: The Microsoft Campus Agreement took effect July 1, 2012, which includes a Student Option that covers licenses for Microsoft Office and Microsoft Windows Upgrades for a PC or MAC at no charge. Year 2 of 3-year agreement.

Free Product upgrades for the entire 3-year duration of the agreement

Free eLearning tutorials through IT Academy

Microsoft's free eLearning tutorials

Reached 99% indoor coverage & 92% outdoor coverage of wireless planning area.

Continued operation of the 24/7 Help Desk

Continued operation of computing laboratories; used as open-access labs and course instruction facilities.

- Refresh of 5 computing laboratories and refresh of ILC laptop carts and instructor stations.
- Assumed management and responsibility for 1 new open-access laboratory in the Student Union Memorial Center (SUMC), adding 40 Mac dual boot machines; will be complete shortly before June 30, 2013.
- Established new demo/test environment for D2L, which will facilitate increased capacity to address service packs and other upgrades.

Student-related software renewals: Renewal of RightAnswers: knowledge management system for Student related content. Renewal of the Sophos antivirus and malware scanning license for student use.

Online Education Project: 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.

Classroom Technology Upgrades Program: Year 2 of 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 advisory and steering committee was created and will begin 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 upgrade to a standard technology configuration.
- 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.
- ITSAB sponsored projects included two pilot projects: purchase of 2 Microsoft PixelSense tablets and a virtual computing environment.

**INFORMATION TECHNOLOGY STUDENT ADVISORY BOARD (ITSAB):** ITSAB’s 12 team members continued to meet on a regular basis, and continued to work on new bylaws that strengthen the year-to-year transitions of the board.

- Purchased two PixelSense tables, located in the UA Library, to be used by students for collaborative projects.
- Co-hosted and judged entries in the first App-a-thon, where UA students developed mobile applications for the Pixel Sense tables purchased by ITSAB.

**CONTINUED ENHANCEMENT OF ENTERPRISE INSTRUCTIONAL SUPPORT (EIS):** Extensive effort and capital were invested in the continued support for infrastructure and development of the University's instructional support portfolio with the following outcomes:
Desire 2 Learn (D2L) realized a 7% increase in usage (270,000 seats in 7,000 course sites)
Increase in storage on the development environment and backup hardware.
Integration of Blackboard Collaborate within D2L.
A diagnostic tool measuring student readiness to learn in online courses was developed by OEP staff.
Collaborative relationships with academic advisors and key representatives from Student Affairs were established to better assist students with course selection.

**Common Software/New Site Licenses:** The Microsoft Campus Agreement took effect July 1, 2012, and includes:
- Student option that covers licenses for Microsoft Office and Windows upgrades for a PC or MAC at no charge to students
- Enterprise Server products for campus at no cost to departments and colleges
- SQL and Systems Center server products for all campus servers at discount rates
- Faculty/Staff option that covers licenses for Microsoft Office, Windows, Visio and Project Upgrades for a PC or MAC at no charge to departments and colleges
- Home Use Program for faculty and staff to enjoy Microsoft Office for personal use at home for a very small fee
- Microsoft’s free eLearning tutorials

**Classroom Technology Services:**
- Supported the use of classroom technology with 10,223 equipment orders. (Equipment orders declined from FY 12 to FY 13, which is attributed to the addition of equipment in centrally scheduled classrooms which previously had no equipment.)

**Open Computing Labs:** Continued to maintain 12 general and multimedia labs, open to the campus community and staffed by student consultants. Staffed hours in the multimedia labs were expanded by 100% doubling the available time for classes and open access use. Additionally, the schedule was altered to enable more available times on Sundays due to student demand.

**Multimedia Equipment:** Gear-to-Go (GtG) provided free check out of audio, visual, and lighting equipment to students, faculty, and staff in support of coursework or UA business. In FY2012-2013 there were 3,721 Gear-to-Go reservations accommodated for students, faculty and staff and 161 Gear-to-Go devices were refreshed, expanding the number of available resources. Gear-to-Go to go also simplified the check-out processes to make equipment more accessible to students and faculty.

**Connectivity:**

**Speed/Capacity Upgrades:**
- Education building upgrade was completed.
- Work began on the University of Arizona Cancer Center upgrade project.

**Redundancy/Stability Enhancements:**
- Continued due diligence in firewall provisioning and installation. 70 new virtual firewalls were provisioned and replaced border firewalls with new hardware. *This is an ongoing effort.*
AGILITY ENHANCEMENTS:
- Completed the Routing at the Edge project, 15 installations complete. 100% complete.
- 50 buildings were provided with centrally managed converged communication. 100% complete.
- Two more departments were moved to centrally provided telephone and network services. 100% complete.

ONLINE EDUCATION PROJECT (OEP): The goal of the Online Education Project 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. Continued solicitation of proposals to create hybrid delivery courses, bottleneck enrollment, winter/summer session courses, and fully-online academic programs. 100% complete.

2013-2014 PLANS
- Finish Cancer Center implementation of centrally provided telephone and internet services.
- Classroom Technology Upgrades Program: Minimum technology standards will be reviewed/updated in FY2013-2014. Needed upgrades will be scheduled.
- Continue the implementation plan by upgrading an additional 36 classrooms with a standard configuration technology in FY 2014.
- Reach 100% indoor and outdoor coverage of the wireless planning area.
- Classroom technologies project now under Frank Feagans; some activities may be delayed until FY14.
- Upgrade of D2L production and demo/test environment.
- Continued purchase of student use software to improve student success and the overall student experience. Continued operation of the 24x7 help desk as planned. Continue support of iTunesU.
- Refresh gear for Gear-To-Go, replacing broken or retired equipment and adding greater capacity for more reservations.
- Online education project (OEP): Continued solicitation of proposals to create: hybrid delivery courses, bottleneck enrollment, winter/summer session courses, and fully-online academic programs.

Action Item 3
Provide opportunities for faculty to explore and pilot new technology initiatives. This is an ongoing effort.

ACCOMPLISHMENTS
LEARNING AND TEACHING WITH TECHNOLOGY (LATTE.OIA.ARIZONA.EDU): LATTe continues to meet monthly, membership has now grown to 100 individuals from all over campus. Some new SIGs were formed; inactive ones were discontinued 100% complete.
TEACHING ACADEMY: Three events were held allowing students, faculty and staff an opportunity to familiarize themselves with emerging technologies, new learning tools and methodologies. 100% complete.

D2L: Continued to create numerous D2L play spaces for faculty to explore additional tool sets and features within the learning management system and worked with several faculty members to develop solutions for migrating responder data into D2L for student assessment activities.

AZLIVE: Continued support of AZLive—3-D environment for graphics, stereoscopic projection technology, acoustical tracking devices, and four-channel audio to create the illusion of being present in a virtual world. This year 17 Instructional projects, 7 Scientific Visualization Projects, 48 AZ-LIVE tours, 20 workshops and conferences and 13 research projects were completed in the center. The Virtual Reality (VR) Annex continues to work with faculty to create images that faculty can use for teaching and instruction. This is an ongoing effort.

MULTIMEDIA LEARNING LABORATORY: Continued growth and support of Multimedia Learning Laboratory, which provides lab space, software, and consultation for creation of multimedia projects. Added Sunday hours to make lab more available to students. 100% complete.

OUTREACH TO FACULTY: OIA hosted the Learning Technologies Showcase for faculty to share best practices of the use in learning technologies and hosted the Online Technologies Speed-Learning Event for faculty to experience online teaching tools. 100% complete.

FACULTY EDUCATION COMMITTEE: This committee launched initiatives such as teaching assistant preparation through seminars and brown bags. This is an ongoing effort.

2013-2014 PLANS

- Continue support of AZLive and VR Annex.

Action Item 4

Provide the faculty with instructional examples to stimulate imagination and creativity in teaching. This is an ongoing effort.

ACCOMPLISHMENTS

ENHANCED TEACHING RESOURCES: Professional Development - in addition to the Teaching Academies and May Showcase, OIA hosts seminars, workshops, brown bags and presentations throughout the academic year that address topical needs of faculty beginning to use technology or perfecting strategies to maximize instructional impact of technologies and to share ideas and stimulate innovative and exploratory ideas.

FACULTY SPEAKER SERIES: A series of short videos of faculty describing their use of instructional technologies. Videos for this series continue to be added, and are accessed through the OIA website. Content consists of interviews with faculty on teaching strategies and experiences in regards to specific areas of instruction.
OIA Website: The OIA website continues to be updated and expanded. New materials, references and examples of new technology (e.g., Mobile Computing) are added as they evolve.

Learning and Teaching with Technology (LATTE.ouia.arizona.edu): LATTe continues to meet monthly, membership has now grown to 100 individuals from all over campus. Some new SIGs were formed, inactive ones were discontinued.

Faculty Forums: Hosted faculty forums to share ideas and stimulate innovative and exploratory ideas.

2013-2014 Plans

- Continued growth of D2L usage, D2L data storage investment, and expansion of the product capabilities in order to better serve our community.

Action Item 5

Organize and facilitate faculty forums to present new approaches in teaching. This is an ongoing effort.

Accomplishments

Outreach to Faculty: OIA hosted the annual Learning Technologies Showcase for faculty to share best practices of the use in learning technologies and hosted the Online Technologies Speed-Learning Event for faculty to experience online teaching tools.

2013-2014 Plans

- As funding allows, continue to enhance, expand, and support all above activities.
Strategic Area 6: Research Computing

As a Research University, it is critical to the mission of the UA that we maintain a competitive position among our peers. Research serves to interconnect the UA campus with our community and university partners. Research today has an increased emphasis on interdisciplinary research and on research collaborations with industry. Our reliance on high performance computing and the need for sophisticated visualization, simulation, and modeling software has far surpassed our expectations. Research computing is strategically important for the UA, is critical to the success of faculty research programs, and is an important factor in faculty recruitment and retention. Through high performance computing and technological collaborations, we can increase achievement in research, scholarship, and creative expression.

An important component of any research institution is the reliance and interaction with external entities. Funding agencies, foundations, and corporate sponsors provide a major fraction of the support for the University of Arizona. These entities, through reporting and auditing requirements, evaluate some parts of information technology use at the UA. To respond effectively, we need to streamline financial reporting systems to allow principal investigators to track expenditures and usage as efficiently as possible. Additionally, grant-funding agencies are scrutinizing the availability of a robust networking and computing infrastructure as criterion in funding decisions. In all, our challenge remains to define where to make the investment of additional resources to support our researchers’ needs.

Goal 8: In support of research, the UA should provide broad support for basic collaboration technologies, continue its commitment to high performance computing (HPC), high throughput computing (HTC) and computation, and begin implementing more advanced technologies.

Action Item 1

Provide sufficient networking and computing resources to enable access to HPC and HTC environments. This is an ongoing effort.

ACCOMPLISHMENTS

Networking Resources:

Speed/Capacity Upgrades:

- Education building upgrade was completed.
- Work began on the University of Arizona Cancer Center upgrade project.

Redundancy/STability Enhancements:

- Continued due diligence in firewall provisioning and installation.
- 70 new virtual firewalls were provisioned and replaced border firewalls with new hardware. This is an ongoing effort.

Agility Enhancements:

- Nine more buildings were provided with centrally managed converged communication. 100% complete
IDENTITY FEDERATION:

- Continued promoting and facilitating the use of Shibboleth/InCommon for inter-institutional collaboration and research, as well as the preferred mechanism for integrating UA’s identity management infrastructure with third-party/hosted/cloud-based services.
- Federated trust relationships were established with several additional third-party service providers this year, including:
  - Evanced (Library resource scheduling)
  - D2L (Learning management system)
  - Gartner (Enterprise IT research)
  - Blackboard Transact (Meal Plans)

2013-2014 PLANS

- Assuming stable funding, we will continue to enhance, expand, and support all above activities.
- Replace Routing at the Edge project with MPLS at the Edge project, and within this project we will also accomplish routing at the same time.
- As opportunities arise, continue the discussions between central and de-centralized information technology units to eliminate redundancies in service offerings and streamline process. This is a continuing effort that is discussed with college, department and research groups as an option available when they request collaborating on providing services or resources.

Action Item 2

Provide and enhance user support to ensure the University community is able to access the University network and research computing resources. This is an ongoing effort.

ACCOMPLISHMENTS

HPC METRICS AND SUPPORT:

- HPC systems %-Use: 60.1%
- HPC system PIs: 120.
- HPC PI awards: $70.7M
- AZ-LIVE research projects: 13 projects.
- AZ-LIVE PI awards: $4.9M actual.
- Conducted projects and demonstrations to provide user support and resource information.
- 7 Visualization Projects.
- 13 AZ-LIVE Research Projects.
- 17 AZ-LIVE Instructional Projects.
- 48 AZ-LIVE Tours.
- 20 Workshops, Conferences, and Outreach.

EXTERNAL RESEARCH GRANT PROGRAMS: HPC and AZ-LIVE supported $75.6M in external research grant programs.
**ONLINE SURVEY TOOLS:** Provided support for DatStat Illume online survey tools. Staff provided user consulting and support for research-related Illume surveys. *This is an ongoing effort.*

- As the new HPC/HTC systems were brought online, job monitoring/visibility tools were investigated to enhance researchers’ ability to utilize the central computing facilities. The PBS batch/queue/scheduling "Analytics" module is not currently available for the latest version of the product that we are using on the new HPC/HTC systems. Altair’s beta Analytics was installed early May 2013 for testing and evaluation.

- During the 2011 HPC refresh cycle, an IBM iDataPlex system, designed for large numbers of serial jobs was included as a third type of computing system design to complement the MPI/parallel cluster and OpenMP/parallel, shared memory system. This item is in production and will continue to be supported and evaluated through its expected 3-4 year life-cycle.

**2013-2014 PLANS**

- Continue above initiatives as funding allows.

**Action Item 3**

Provide options for storing very large data sets that can be actively accessed by multiple research groups. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**DATA MANAGEMENT AND CURATION ADVISORY COMMITTEE:** Charged to provide input to CIO, Dean of Libraries, and VPR regarding a possible institutional approach to the management and curation of research data. A Library representative has been added to the Research Computing Steering Committee (UA RC governance committee) to maintain UITS understanding and involvement in development and implementation in future Data Management planning.

**2013-2014 PLANS**

- Funding approval for Jan 2014 RFP initiation has been requested. Next Generation HPC/HTC systems are planned to be installed Jan 2015.
- Continue to reduce backup and storage costs for campus. FSO approved rate changed from $53/TB/year to $59/TB/year based on the currently available storage drive costs.
- Storage and HPC/HTC node "buy-in" offers research groups alternatives to operating their own clusters and high capacity storage systems. There are currently four HPC buy-in and 34 storage buy-in/rental groups.

**Action Item 4**

Replace the Sponsored Projects Information System (SPINS) with Kuali Coeus (KC) Research Administration.
**ACCOMPLISHMENTS**

**DASHBOARDS:** BI dashboards that provide campus visibility to proposals and designed similar for awards. Initial set of dashboards completed and in use. Rolled out KC Release 3 to Optical Sciences, Public Health, and Engineering. 100% complete.

**AWARDS DATA:** Awards data made available through Analytics.

**PROPOSAL FUNCTIONS:** Rolled out proposal functions to pilot colleges: Optical Sciences, Public Health, and Engineering.

**2013-2014 PLANS**

- Campus Rollout of KC 3.0 to colleges/departments will go beyond June 30, 2013. Largely in control of SPS.
- Project will transfer to "sustaining" organization July 1, 2013, with project activities continuing.
- Estimate completion by Dec 31, 2013.

**Action Item 5**
Continuously upgrade and replace the HPC and HTC systems to ensure a level of performance that satisfies the increasing demand for computational power. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**HPC STORAGE:** Created HPC Storage “rental” service for TB level storage requirements. 100% complete and ongoing.
- UA FSO rate of $59/TB/year was established for 2012-2013.
- DDN GridScaler and SFA 10000 high capacity > (2PB capable) and high performance, parallel (GPFS) storage implemented.

**HPC/HTC SYSTEMS IMPLEMENTATION:** PBS Analytics beta installed May 2013 for testing and evaluation; Web Portals (PBS Content Manager) initial training completed Jan 2013, product not available due to security concerns, updated product scheduled for June 2013 install for further evaluation; OS switching capability installed, however no user requests for switching have been received. OS switching might also be called cloud, virtualization.

**2013-2014 PLANS**

- HPC Storage: this is an ongoing item. The new FSO rate was established as $59/TB/year.

**Action Item 6**
UITs should continue to participate with faculty on major research initiatives involving information technology, where it is appropriate and of institutional advantage. Further, UITS should provide proactive encouragement and supportive services that create opportunities
where faculty from diverse disciplines might come together on collaborative projects involving information technology. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**HPC METRICS AND SUPPORT:**
- HPC systems %-Use: 60.1%
- HPC system PIs: 120.
- HPC PI awards: $70.7M
- AZ-LIVE research projects: 13 projects.
- AZ-LIVE PI awards: $4.9 M actual.
- Conducted projects and demonstrations to provide user support and resource information.
- 7 Visualization Projects.
- 13 AZ-LIVE Research Projects.
- 17 AZ-LIVE Instructional Projects.
- 48 AZ-LIVE Tours.
- 20 Workshops, Conferences, and Outreach.

**ASU-UA HPC PORTAL PROJECT:** Collaborated on the ASU-UA HPC Portal project to develop the capability of sharing ASU and UA HPC resources among the three Arizona Universities. Project currently placed on hold.

**SECURITY PLANS AND ASSESSMENTS:**
- HIPAA HITECH compliance policy mapping from HIPAA Security Rule to UA policies and standards has been completed. HIPAA HITECH compliance checklists were created based on NIST standards, with the ability to filter by high, moderate or low-level NIST. HIPAA compliance matches moderate-level NIST.
- 6 of 11 standards and guidelines updated, vetted, approved and published for HIPAA compliance.
- ITAR Workgroup participation provides security expertise and assist with ITAR initiatives. *This is an ongoing effort.*
- FISMA assessment for NIH Children's Study grant was discontinued.

**2013-2014 PLANS**
- Work is progressing on a new multi-year security strategy to address campus' information assurance needs. Part of this strategy will include a comprehensive information security framework that addresses broad University compliance needs, including HIPAA.
Action Item 7

Continue the development of the Arizona Tri-University Identity Federation (ATIF) management project and produce a roadmap for each university to make research and academic collaboration easier and provide the ability to enter into other university and governmental identity management federations, nationally and internationally. Percent Complete: 100%

ACCOMPLISHMENTS

This item is complete.
Strategic Area 7: Information Technology Strategic Alliances

UA can nurture a collaborative environment by improving and formalizing communications between central and distributed information technology areas. The UA and ASU share expertise in supercomputing and have agreed to share the physical resources needed to provide for researcher needs.

One of the more intriguing collaborative efforts ongoing nationally among universities is the Open Source movement to write administrative software specifically for higher education. UA has established itself as a partner in the Kuali project, which is developing an open source university financial system (Kuali Financials System) and a related open source research administration system (Kuali Research Administration). Both ASU and UA have joined the Sakai open source initiative to write a course management system.

A tri-university initiative was launched to develop an Arizona Tri-University Identity Management Federation (ATIF). The goal is to establish a plan for forming the federation and produce a roadmap for each university to meet the goals of ATIF. Such a federation will make research and academic collaboration easier among the universities and will give them the ability to enter into other university and governmental identity management federations, nationally and internationally.

Our ongoing commitment to the joint establishment, design, and maintenance of the Phoenix Biomedical campus between UA and ASU, and now NAU has reinforced the need for partnering with our sister institutions to provide information technology services to our community and the state.

The information security leaders of the three universities regularly share information to leverage their collective knowledge and experience, and collaborate in developing policies and initiatives. In this manner, they have assisted in drafting an information security policy and supporting guidelines for the Arizona Board of Regents. Another initiative involves the selection of network and application vulnerability scanning solutions.

Goal 9: Ensure that appropriate information technology collaborations are being utilized in the support of the mission of the University of Arizona: to improve life for the people of Arizona and beyond through education, research, creative expression and community engagement.

Action Item 1

Improve technological collaborations with ASU and NAU as well as Arizona’s community colleges to facilitate interactions and build synergies that strengthen each University and the system as a whole. This is an ongoing effort.

Accomplishments

Collaboration: Collaborative efforts have continued between the three state universities. This is an ongoing effort.

- Continued to have regular interactions with peers at ASU and encouraged teams to work together and share knowledge through a monthly conference call.
- Sun Corridor Terapop, a joint effort between ASU, UA, and NAU is well underway to allow the universities to connect to high speed national and international research and education networks. The launch of this new network is expected in July 2013.

**Outreach:**
- Hosted one-day DegreeTracker working session with ASU and NAU.
- Provided leadership and participation to support collaborations in 5 areas (Application Scanning, Encryption, Sensitive Data Cleanup, Metrics, and Mobile Devices. Progress made in application/server scanning and sensitive data cleanup.
- Established a co-managed (ASU & UA) data center on the Phoenix Biomedical Campus. There is a small data center in the ABC1 building that we currently share with ASU. We arranged for a number of departments to locate equipment in the ABC1 data facility. ASU continues to manage the facility in a very collaborative arrangement with UA.

**2013-2014 Plans**
- Assuming stable funding, we will continue to enhance, expand, and support all above activities.
- All five information security areas mentioned above will be part of ISO strategic planning in order to develop a mature, long-term security program.
- Continue to pursue long term vision for a more substantial data center on the Phoenix Biomedical Campus to support the local research activities.
- Launch Sun Corridor Terapop network.

**Action Item 2**
Collaborate on the selection, provisioning, and operation of network and application vulnerability scanning solutions. **100% complete.**

**Accomplishments**

*This item is complete.*

**Action Item 3**
Collaborate on information security awareness and training initiatives. **This is an ongoing effort.**

**Accomplishments**

**Mandatory Security Training Program:** Preparing for 2nd campus-wide security risk assessment, to be conducted in the coming fiscal year. **This is an ongoing effort.**

**Risk Assessment:** Collaborated with and assisted UA departments in developing mitigation plans to reduce risk based on the results of the University-wide risk assessment. Worked with the departments to implement initiatives such as a security review program and encryption projects. Developed of a campus-wide security risk assessment including, vetting and implementation, which took place in FY13. **This is an ongoing effort.**
**Web Application Security Review:** In collaboration with campus constituencies, implemented a Web Application Security Review based on criticality of applications, as determined in the risk assessment. *This is an ongoing effort.*

**2013-2014 Plans**

- New ISO strategic plan will take risk-based approach toward campus security initiatives.
- For web application security review, ongoing work needs to be done to develop a full database of all applications that also identifies the criticality of applications.

**Action Item 4**

Continually explore opportunities for collaboration on a Tri-University basis on administrative systems. *This is an ongoing effort.*

**Accomplishments**

**Training:** Continued to share information within the Tri-U system related to administrative system enhancements and issues. The Directors of the Business Analysis functions at the three Universities are meeting telephonically on a regular basis to discuss projects and business processes.

**Collaboration:**

- Participated in Tri-U research initiative with ABOR around use of research data sources (SciVal, Academic Analytics, and Data 180).
- Internet2 SEGP Program: The Tri-University CIOs have all signed the SEGP agreement with the Internet2, making the Sun Corridor network entity an official provider in Arizona.

**Outreach:**

- Hosted 1-day working session on Degree Tracker with ASU and NAU.
- The Tri-University CIOs have all signed the SEGP agreement with the Internet2, making the Sun Corridor network entity an official provider in Arizona.
- Facilitated a Tri-U meeting of analysts and technical staff associated with the enterprise systems in spring 2013 at ASU.

**2013-2014 Plans**

- Continue to facilitate Tri-U meetings of analysts and technical staff on a consistent basis.
- Make the Sun Corridor Networking initiative available to K-12, libraries and other community anchors.

**Action Item 5**

Continue the UA/ASU joint membership in CENIC (Corporation for Education Network Initiative in California) and National Lambda Rail. *100% complete. This project was completed in 2008-09, and continues to be funded as needed.*
ACCOMPLISHMENTS

**Network Upgrade:** Continued to fund and work with CENIC and National Lambda Rail and upgraded the network connectivity from campus to our Phoenix router and from the Phoenix router to CENIC to 10Gbps. 100% complete

**Broadband Governance Council:** The strategic planning committee produced their report and presented it to the broader committee for feedback and approval.

**Internet2 SEGP:** The Tri-University CIOs signed the SEGP agreement with Internet2, making the Sun Corridor network entity an official provider in Arizona.

**Regional Networking Initiatives:** Improved the diversity of Arizona’s connectivity to the national research and education networks by establishing diverse paths between Tucson & Phoenix during the Sun Corridor planning efforts. Established relationships with Internet2 and NLR that will serve the region well. Working with WRN, CENIC, and LEARN to insure the region is well connected on diverse paths with no single points of failure.

**2013-2014 Plans**

- The UA’s relationship with CENIC will change as they will no longer provide the institution with Internet2 and NLR connectivity. The Sun Corridor network will take over that responsibility. The UA’s future relationship with CENIC will be more consortium based and will focus on the connectivity needs of the southwestern United States.
- Continue to participate in and guide, as appropriate, the efforts of the statewide Broadband council.
- Internet2 SEGP: Make the Sun Corridor Network available to K-12, libraries and other community anchors.
- Continue work with regional networking initiatives to enhance the statewide and national network access and capabilities.
- Establish formal relationships between Sun Corridor, WRN and CENIC.

**Action Item 6**

Continue the development of the Arizona Tri-University Identity Federation (ATIF) management project and produce a roadmap for each university to make research and academic collaboration easier and provide the ability to enter into other university and governmental identity management federations, nationally and internationally. 100% complete.

**Accomplishments**

This item is complete.

**Action Item 7**

Continue to strengthen the interface between the Arizona Universities Network (AZUN). 100% complete.
**ACCOMPLISHMENTS**

*This item is complete.*

**Action Item 8**

Define a new comprehensive and sustainable IT environment and support model that will take into account non-UA occupants and continual expansion of facilities, students, and occupants. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**IT SUPPORT POSITIONS:** The partnership with PBC COM has continued to grow through investments by UITS in staffing and equipment. The partnership grew again in FY13 as UITS took on another staff member on the PBC campus. Additionally, COM Phoenix recently transitioned much of their server environment to UITS hosted infrastructure.

**HEALTH SCIENCES EDUCATION BUILDING (HSEB) NETWORKS:** The HESB was 100% completed and held its grand opening in FY 13. The building was outfitted with modern, robust networking and telephony equipment, wiring, and configuration and installation of networking devices by UITS.

**2013-2014 PLANS**

- Continue to support these activities and others as opportunities arise.
- Ongoing support for HSEB networks.
- Coordinate solutions and operations through establishment of sustainable fund source and cross-unit governance team.

**Action Item 9**

Create an inventory of open-source collaborations and potential open source solutions. *100% is complete.*

**ACCOMPLISHMENTS**

*This item is complete.*

**Action Item 10**

Expand partnerships and programs throughout the state such as telemedicine and statewide networking. *This is an ongoing effort.*

**ACCOMPLISHMENTS**

**STATE OF ARIZONA-COUNTIES COMMUNICATION NETWORK (SACCN)ET:** Continued work with SACCNet. UA CIO is a member of the SEDNet (State Education Network) Education Coordination Council.
**GovNet:** GovNet is no longer in operation, however UITS will continue working with the statewide Broadband Governance Council promoting a statewide education network.

**Broadband Governance Council:**
- Continued participation in state-level group to coordinate statewide networking efforts.
- Continued efforts in WestNet and WRN regarding regional networking needs.
- The plan for a research and education network for AZ was completed and ratified. Plans are well underway.

**Regional Networking Initiatives:** SEGP application process was successfully completed by the Tri-University consortium. A detailed network design and plan for the regional network was formulated and adopted.

**2013-2014 Plans**
- Continue working with the statewide Broadband Governance Council promoting a statewide education network.
- Continued efforts in WestNet and WRN.
- Implement the Sun Corridor network and begin extending the capabilities into regional communities.
- Continue working to establish a partnership as we deploy a robust 21st century video infrastructure for UA.