Kansas State University

Information Technology Three Year Management and Budget Plan
For SFY 2012 – 2014

September 30, 2011

Prepared in response to KSA-75-7210
Article 72
Kansas State University

INFORMATION TECHNOLOGY
MANAGEMENT AND BUDGET PLAN

Plan Date: September 26, 2011

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Information Technology Services

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SECTION I ~ AGENCY PROFILE

Mission
The mission of Kansas State University is to foster excellent teaching, research, and service that develop a highly skilled and educated citizenry necessary to advancing the well-being of Kansas, the nation, and the international community. The university embraces diversity, encourages engagement and is committed to the discovery of knowledge, the education of undergraduate and graduate students, and improvement in the quality of life and standard of living of those we serve.

Kansas State University is a comprehensive, research, land-grant institution serving students and the people of Kansas, the nation, and the world. Since it’s founding in 1863, the university has evolved into a modern institution of higher education, committed to quality programs, and responsive to a rapidly changing world and the aspirations of an increasingly diverse society. Together with other major comprehensive universities, K-State shares responsibilities for developing human potential, expanding knowledge, enriching cultural expression, and extending its expertise to individuals, business, education, and government. These responsibilities are addressed through an array of undergraduate and graduate degree programs, research and creative activities, and outreach and public service programs. In addition, its land-grant mandate, based on federal and state legislation, establishes a focus to its instructional, research, and extension activities which, is unique among the Regents' institutions.

Through quality teaching, the university is committed to provide all students with opportunities to develop the knowledge, understanding, and skills characteristic of an educated person. It is also pledged to prepare students for successful employment or advanced studies through a variety of disciplinary and professional degree programs. To meet these intentions, the institution dedicates itself to providing academic and extracurricular learning experiences which promote and value both excellence and cultural diversity. K-State prepares its students to be informed, productive, and responsible citizens who actively participate in advancing cultural, educational, economic, scientific, and socio-political undertakings.

Research and other creative endeavors comprise an essential component of K-State's mission. All faculty members contribute to the discovery and dissemination of new knowledge, applications, and products. These efforts, supported by public and private resources, are conducted in an atmosphere of open inquiry and academic freedom. Basic to the pursuit of this mission is the university's commitment to broad-based programs in graduate education at both the master's and doctoral levels.

Faculty, staff, and administrators share their expertise through service to the university and disciplinary organizations, via outreach, engagement, and extension-related activities. Their work provides support to numerous projects related to the goals, missions, or aspirations of the departments, colleges of the university, and to the members of the professional community. Through outreach and engagement initiatives, partnerships are established with various stakeholders to translate knowledge and basic research into applications that address public needs. These service activities are integrally related to the land-grant mission.

Extension is governed by Kansas statutes that empower elected county councils and district governing boards with authority and responsibility to assess needs and conduct a local educational program in cooperation with Kansas State University and the United States Department of Agriculture (USDA). A network of local extension professionals and volunteers
link Kansas State University faculty, the National Cooperative Extension System to the USDA, which produces high-quality educational programs.

**Business Programs**

Kansas State University's information technology efforts are supported by Information Technology Services (ITS), the enterprise IT organization serving the campus community. ITS delivers services through five service units: Computing and Telecommunication Services (CTS), the Information Systems Office (ISO), the Information Technology Assistance Center (iTAC), and the Office of Mediated Education (OME), and the Information Security and Compliance Office (ISC), which report to the CIO and Vice Provost. ITS in turn reports to the Provost and Senior Vice President for Kansas State University.

**Program #1: Computing and Telecommunications Services (CTS)** provides server, storage, networking, and communications infrastructure, as well as the associated support services, to the students, faculty, and staff of Kansas State University. These services include the storage and management of the University’s core business data, the maintenance and support of all data and telecommunications equipment, and the copper and fiber optic distribution networks. In addition, CTS also provides paging, radio, and cellular services.

**Program #2: Information Systems Office (ISO)** administers, develops and maintains mission critical databases and associated application systems in support of institutional administrative functions, such as Accounting, Payroll, Budget, Human Resources, Facilities Management, Parking Services, Affirmative Action, Student Financial Assistance, and Student Records and Services. Administrators, faculty, and staff throughout the university use these databases and application systems to operate and administer academic programs and institutional operations. Students use them to access essential services and information.

**Program #3: Information Technology Assistance Center (iTAC)** provides centralized information technology support to the faculty, staff, and students of Kansas State University through the operation of the IT Help Desk. Other services include design, build and maintenance of technology classrooms, university computing lab and innovative classroom environments, and face-to-face and online technical training, instructional design support, equipment checkout and multimedia development in the Media Development Center.

**Program #4: The Office of Mediated Education (OME)** is dedicated to providing innovative and reliable solutions to meet the computing needs of Kansas State University in the areas of teaching and learning as well as research, technology transfer and outreach.

**Program #5: The Information Security and Compliance Office (ISC)** oversees Kansas State University's information security program, with responsibility for managing security technologies; risk management; security assessment and vulnerability management; IT security incident management; security related policies, procedures, standards, and guidelines; security
awareness and training; and coordinating security of distributed systems in colleges and departments.

STATE OF KANSAS IT STRATEGIC DIRECTION
This section summarizes agency direction toward the current administration's strategic initiatives in several key areas of information technology and business system management. Please indicate your agency's plans in each area for the current state fiscal year and for SFY2012, 2013, and 2014.

• Information Technology Cost Reduction: [Indicate your agency's plan to reduce the cost of IT in Kansas.]

<table>
<thead>
<tr>
<th>FY 2011 - 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kansas State University is constantly examining how it completes the technology mission required to keep the campus operating at a high efficiency. K-State is adding technical resources to the campus to respond to the needs of its faculty, students, and State consumers. K-State is carefully examining the future of Executive Information Systems and is beginning the move towards open sourced systems. K-State is implementing a virtual machine cloud for expanded services to campus, expanding the network, and increasing wireless coverage to the entire campus. K-State will increase funding for technology to meet the increasing needs of students, faculty, and staff.</td>
</tr>
</tbody>
</table>

• Electronic Mail:

<table>
<thead>
<tr>
<th>FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options are being explored for extending e-mail privileges to former employees and students. This is in response to inquiries from the Office of Student Financial Assistance, Division of Financial Services, and Human Resources. Each of these offices has separate needs (some regulatory) for maintaining e-mail communication channels with former employees and students beyond the current 3-week window. This will result in about 8,000 additional student and 1,000 additional staff mailboxes, or about $37,500 in increase in annual costs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>None planned at this time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>None planned at this time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>None planned at this time</td>
</tr>
</tbody>
</table>
**Cost Per Mailbox**

<table>
<thead>
<tr>
<th>Year</th>
<th>Faculty/Staff (Per Year)</th>
<th>Students (Per Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>$13.50</td>
<td>$3.00</td>
</tr>
<tr>
<td>FY2012</td>
<td>$13.50</td>
<td>$3.00</td>
</tr>
<tr>
<td>FY2013</td>
<td>$14.85</td>
<td>$3.30</td>
</tr>
<tr>
<td>FY2014</td>
<td>$16.34</td>
<td>$3.63</td>
</tr>
</tbody>
</table>

**Number of Mailboxes**

<table>
<thead>
<tr>
<th>Mailbox Type</th>
<th>Number of Mailboxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Exchange 2010</td>
<td>None</td>
</tr>
<tr>
<td>Microsoft Exchange 2007</td>
<td>None</td>
</tr>
<tr>
<td>Microsoft Exchange 2003 or Later</td>
<td>None</td>
</tr>
<tr>
<td>Lotus Notes</td>
<td>None</td>
</tr>
<tr>
<td>Novel GroupWise</td>
<td>None</td>
</tr>
<tr>
<td>Zimbra Collaboration Suite</td>
<td>34,000 for Students</td>
</tr>
<tr>
<td></td>
<td>7,000 for Faculty/Staff</td>
</tr>
</tbody>
</table>

- **Desktop Support**: [Indicate your agency’s plans regarding desktop support. Include strategies for desktop provisioning, virtual desktop plans, and helpdesk solutions. Also, include how these plans will decrease the total cost of providing desktop support in Kansas.]

**FY 2011**

Investigated Proof of Concept (POC) jointly with Dell Computers to evaluate virtual computing technologies. Conducted a six-month investigation into provisioning physical desktops and hosting fully virtual desktops. Microsoft’s App-V solution was implemented to deliver applications to supported computing lab environments, making it easier to deploy applications and updates in a significantly shorter timeframe. Eliminating the old method of building a “core” image and then manually duplicating that image on each physical lab machine (650+). Now updates can be applied automatically, resulting in manpower savings annually.

**FY 2012**

Plan to move computing labs to Citrix provisioning server to stream the desktop applications and OS to the existing computers. This in combination with currently App-V will result in more efficient delivery and additional savings in manpower.

---

1 Please include all hardware, software and personnel required to support your entire email platform. This includes storage space, physical and virtual server hardware, anti-virus, anti-spam, email encryption, archiving, backup, recovery, mobile email, and any other services included in your electronic mail offering.
FY 2013
Long-range plans are to implement a fully Virtual Desktop Infrastructure solution. It will require investment in new hardware and software upgrades. Allows for purchase of Thin or Zero client devices rather than full CPU platforms. Reducing the cost of desktop refresh. New client devices should have a longer refresh cycle than standard CPU based machines.

FY 2014
Fully implemented, VDI will allow for streamlined delivery of OS and applications to computer labs, studio environments and technology classrooms. Faculty and Staff will have access to streamed environment on any device, anytime, anywhere. Will result in significant cost reduction in purchase of computers for university employees.

Indicate quantities in appropriate cells in the tables below.

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2014 (estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktops</td>
<td>19,500</td>
<td>20,000</td>
<td>20,500</td>
</tr>
<tr>
<td>Desktops Replaced</td>
<td>4,060</td>
<td>4,415</td>
<td>4,415</td>
</tr>
<tr>
<td>Mobile Devices</td>
<td>299</td>
<td>329</td>
<td>329</td>
</tr>
</tbody>
</table>

Number of Desktops

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 7</td>
<td>9,750</td>
</tr>
<tr>
<td>Windows Vista</td>
<td>1,950</td>
</tr>
<tr>
<td>Windows XP or Older</td>
<td>5,850</td>
</tr>
<tr>
<td>Mac OS X</td>
<td>1,950</td>
</tr>
</tbody>
</table>

• **Physical Infrastructure:** [Indicate your agency's plans for data centers, servers and storage. Include all enhancements, additions, or cloud-based strategies. Also, include how these plans will decrease the total cost of providing data center services in Kansas.]

FY 2011
Placed redundant servers at new Olathe Campus to enhance disaster recovery options. Proposal to incorporate all servers located on campus into a central data center, which will result in reduction of support requirements and maintenance costs. This proposal is in the discussion/planning stages at this time.

FY 2012
Need for additional Data Center space will continue to grow as the plans to incorporate all campus servers into the central Data Center. This will allow for increased security, reduction in the number of “physical” servers by placing the majority of them on “virtual host servers”. Thereby reducing the support requirements and maintenance costs.
**FY 2013**

Need for additional Data Center space will continue to grow as the plans to incorporate all campus servers into the central Data Center. This will allow for increased security, reduction in the number of “physical” servers by placing the majority of them on “virtual host servers”. Thereby reducing the support requirements and maintenance costs.

**FY 2014**

Need for additional Data Center space will continue to grow as the plans to incorporate all campus servers into the central Data Center. This will allow for increased security, reduction in the number of “physical” servers by placing the majority of them on “virtual host servers”. Thereby reducing the support requirements and maintenance costs.

*What percentage of your agency’s computer equipment is hosted in the following locations?*

<table>
<thead>
<tr>
<th>State Hosted Data Centers</th>
<th>Agency Hosted Data Centers and Server Rooms</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>100%</td>
<td>%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY2011</th>
<th>Square Foot of Data Center Space Needed</th>
<th>Cost Per Square Foot of Data Center Space</th>
<th>Electricity Cost of Data Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
<td></td>
<td></td>
<td>$33,755.00</td>
</tr>
<tr>
<td>FY2013</td>
<td></td>
<td></td>
<td>$34,430.00</td>
</tr>
<tr>
<td>FY2014</td>
<td></td>
<td></td>
<td>$35,105.00</td>
</tr>
</tbody>
</table>

| FY2014 |                                        |                                          | $35,178.00                      |

Note: Assumed 20%/Yr. increase in cost of electricity and additional hardware.

**Is any component of your data center at capacity?**

<table>
<thead>
<tr>
<th>Floor Space?</th>
<th>Air Handling / Cooling</th>
<th>Electrical</th>
<th>Other (explain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y*</td>
<td>Y**</td>
<td>N</td>
<td>Y ***</td>
</tr>
</tbody>
</table>

* Floor space is nearly fully utilized in the central Data Center. Virtualizing servers and the reconfiguration and installation of additional rack space will better utilize remaining space.

** The current chilled water supply to the Liebert air handlers and the APC In-Row cooled racks is considered to be maxed out. To gain additional cooling in the Data Center would require installation of additional feed and pumps from the power plant. Removal of one or two of the aging Liebert air handlers, which are primarily providing ambient cooling could provide enough chilled water to cool another APC In-Row rack assembly.

*** Virtualizing additional servers where feasible can alleviate rack space issues. Reconfiguration and additional rack space will be required in order to accommodate centralizing all campus servers.

*Indicate quantities in appropriate cells in the tables below.*
How long does it take to provision a server and what is the average cost?

<table>
<thead>
<tr>
<th></th>
<th>Physical</th>
<th>Virtual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to Provision</td>
<td>80 Man/Hrs.</td>
<td>15 Man/Hrs.</td>
</tr>
<tr>
<td>Average Cost Per Server</td>
<td>$7,377.60</td>
<td>$28,595.80 (average $3,574.48 per Host)</td>
</tr>
</tbody>
</table>

What percentage of your agency’s storage is hosted in the following locations?

<table>
<thead>
<tr>
<th></th>
<th>State Hosted SAN</th>
<th>State Hosted Other</th>
<th>Agency Hosted SAN</th>
<th>Agency Hosted Other</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>%</td>
<td>%</td>
<td>80%</td>
<td>20%</td>
<td>%</td>
</tr>
<tr>
<td>FY2012</td>
<td>%</td>
<td>%</td>
<td>85%</td>
<td>15%</td>
<td>%</td>
</tr>
<tr>
<td>FY2013</td>
<td>%</td>
<td>%</td>
<td>90%</td>
<td>10%</td>
<td>%</td>
</tr>
<tr>
<td>FY2014</td>
<td>%</td>
<td>%</td>
<td>100%</td>
<td>0%</td>
<td>%</td>
</tr>
</tbody>
</table>

Cost Per Gigabyte of Storage

<table>
<thead>
<tr>
<th></th>
<th>Cost Per Gigabyte of Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>$9.50 per Gigabyte (based on average of $9,500 per Terabyte)</td>
</tr>
<tr>
<td>FY2012</td>
<td>$10.50 per Gigabyte</td>
</tr>
<tr>
<td>FY2013</td>
<td>$12.00 per Gigabyte</td>
</tr>
<tr>
<td>FY2014</td>
<td>$13.20 per Gigabyte</td>
</tr>
</tbody>
</table>

2 A mainframe should only be recorded here if the mainframe is owned and operated by your agency. Do not record a mainframe here if you are using a mainframe application that is hosted on another agency's mainframe. Mainframes are distinct from midrange servers. Midrange servers should be listed with the other servers in your agency.

3 Physical Servers are defined as unique physical “boxes” that are running a server operating system.

4 Virtual Servers are defined as unique physical “boxes” that are running a virtual operation system. This number should not include the number of virtualized servers, but rather the hardware that is running the virtualized servers.

5 Please include operating system, staff, hardware, rack space, security, and patching
## IT Staffing:

<table>
<thead>
<tr>
<th>IT FUNCTIONAL AREA</th>
<th>SFY 2012 ACTUAL FTE</th>
<th>SFY 2013 PROJECTED FTE</th>
<th>SFY 2014 PROPOSED FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Management &amp; Administration (Leadership, Managers, Directors and Accounting &amp; Assistants)</td>
<td>10.0</td>
<td>14.5</td>
<td>10.0</td>
</tr>
<tr>
<td>Technical Management and Supervision</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Maintenance and Enhancement (in-production systems)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Development (Includes general and tactical plans, business area analysis, process reengineering, prototyping, application design, coding, integration and testing)</td>
<td>1.0</td>
<td>21.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Data Administration, Data Analysis/Validation and Database Administration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Engineering, Technical Management and Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Operations, Management and Technical Support</td>
<td>5.0</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Web application development and maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unix &amp; Windows Server Administration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT Security</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Designers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction Technology Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire Technicians</td>
<td>5.0</td>
<td>6.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Project Managers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Repair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help Desk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desktop Support</td>
<td>1.0</td>
<td>7.0</td>
<td>1.0</td>
</tr>
<tr>
<td>TOTAL FTEs</td>
<td>24.0</td>
<td>127</td>
<td>25.0</td>
</tr>
</tbody>
</table>

TOTAL CLASSIFIED AND UNCLASSIFIED IT EMPLOYEE SALARY: $9,513,934
Office of the Vice Provost for Information Technology Services

Ken Stafford
Vice Provost and Chief Information Officer

Kelly Moon
Administrative Assistant / IT-S Administrative Services Coordinator

Susan Schanks
Financial Services

Jean Braddy
Accounting

Brenda Gage
Accounting

Kathy Leonard
Purchasing / Licensing

Patti Sexton
Accounting

Leonard Finney
Procurement Officer

Ramon Dominguez
Purchasing

Tony Donnelly
HR / Budget Special Assistant

VACANT
Associate Vice Provost

Kelly Moon
Administrative Assistant / ITS Administrative Services Coordinator

VACANT
IF Planning Coordinator

VACANT
Planning / Portfolio Management and Process / Data Analysis

Tuesday, August 30, 2011
Kansas Information Technology Architecture

- **Target Architecture:** The standards as outlined in the “target” architecture as defined in the Kansas State Information Technology Architecture version 12 (KITA) is more applicable to non-academic agencies of the State of Kansas than a Regents research University. However, the Information Technology Services department at Kansas State University has participated in the development and support of KITA by providing a contributing member to the Kansas Technology and Architecture Review Board (KTARB). As an active member of this board, Kansas State University has assisted in version upgrades; technology, product and service surveys; and reviewing the compiled document before releasing to the Information Technology Executive Council (ITEC).

- **KITA Compliance:** As stated above concerning the “target” architecture, Kansas State University would not be viewed as being non-compliant in any of the targeted areas. K-State is currently using or in the process of implementing many of the “target” products in it’s IT Business Initiatives, Technology Infrastructure, IT Business System Initiatives and On-Line Enabled Service Initiatives. K-State will continue to review those areas as they relate to KITA and where applicable use those targets as a foundation for the investigation and selection of IT Software and Infrastructure products.

- **Technology Infrastructure:** K-State continually works to improve redundancy and fault tolerance for all mission critical systems and infrastructure at the university. In addition, K-State continues to experience growing demand for server and storage infrastructure, both to support existing enterprise services and systems as they grow, and to support new business demands from the University. As a way to meet this demand and minimize the demand on resources, as well as to improve the redundancy and supportability of existing enterprise systems, K-State continues to migrate many services into a virtualized server infrastructure. It is anticipated that virtualization will continue during the next three years, however, it is not always a technically or financially feasible solution.

- **Cloud Computing:** In the Spring of 2011 a Proof of Concept (POC) was conducted jointly with Dell to evaluate the feasibility of virtual (Cloud) computing technologies in environments supported by the Information Technology Assistance Center (iTAC). Included in the POC was the testing of AppV, Citrix XenDesktop and VMware VCenter. With the help of our vendor partners, the Instructional Technology team within iTAC learned a lot about desktop virtualization. Based on the six month investigation, it was determined that the Citrix XenDesktop Suite along with Microsoft’s App-V technology would be the best fit for the K-State computing environment. The ability of the software to provision physical desktops, host fully virtualized desktops, and provide cloud-based applications to users, fits the ITS vision of flexibility and ease of management. iTAC is now working with other groups within ITS to develop a timeline and a plan for moving forward in the implementation of the virtual computing environment. In 2011, iTAC deployed Microsoft’s App-V solution to deliver applications to our lab environments to more easily deploy applications in a shorter timeframe and to deploy updates to applications as they are released instead of the old method of waiting until reimaging the labs.
Phase II of the project will include moving to Citrix provisioning server to stream the desktop to existing computers. This combined with App-V allows ITS to fully stream the operating system and applications.

Phase III of the project will be moving to a full Virtual Desktop Infrastructure (VDI) solution, which will require major hardware and software upgrades in the Data Center and Computing Labs to support an enterprise VDI deployment. VDI will allow us to purchase Thin or Zero client devices with all computers processing taking place on servers in the Data Center. This will allow for streamlined delivery of OS and applications to computer labs, studio environments and technology classrooms for students, staff and faculty to use on any device, anytime, anywhere, which is the end goal—a device agnostic application delivery as a virtual scholars desk to faculty and students.

• **Service Oriented Architecture:** K-State continues to move towards a Service Oriented Architecture by utilizing web services as outlined in the Web Services section below and through the expansion of the WebMethods Transaction Hub. During FY11, WebMethods was upgraded to version 8.0. The upgrade involved replacing dated tier hardware infrastructure as well as installing new software. This will stage K-State for continued growth towards SOA and creates a 3yr “safe zone”. K-State encourages the adoption of Business Process Methodologies and the establishment of a “service repository”.

• **Web Site Accessibility:**

*Has your agency completed a web site accessibility assessment for compliance with ITEC Policy 1210 Web Accessibility Requirements on your external Internet website(s)?*

K-State has not as of the time of this report completed a formal, full assessment of the University website: [www.k-state.edu](http://www.k-state.edu).

<table>
<thead>
<tr>
<th>Content Type</th>
<th>Total Pages</th>
<th>Automated Evaluation</th>
<th>Full Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total Pages Evaluated</td>
<td>Overall Violations Identified as of Report Date</td>
</tr>
<tr>
<td>HTML-based</td>
<td>359,430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-HTML-based</td>
<td>72,515</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>431,945</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 Actual number if available, otherwise estimate. “Pages” generally corresponds to web pages for HTML-based content (note that web applications may be construed to present multiple pages per file). For non-HTML-based content, “pages” should represent the number of items (documents, files, etc.).

7 For any given page, some accessibility requirements can be evaluated by automated testing, but compliance with other requirements must be validated manually. The pages-violations reported under “Automated Evaluation” are those obtained from running an automated scan. “Full Evaluation” refers to the number of pages for which both the automated evaluation and a comprehensive manual evaluation (of remaining items) has been performed.

For more information on this process, including how to obtain access and training for the automated scanning tool available to state agencies, please visit: [http://da.ks.gov/kpat/itplan/](http://da.ks.gov/kpat/itplan/).

8 For example, PDF, Microsoft Office documents, etc. Please indicate the types of items evaluated.
### Other websites: ome.ksu.edu

<table>
<thead>
<tr>
<th>Content Type</th>
<th>Total Pages Evaluated</th>
<th>Overall Violations Identified as of Report Date</th>
<th>Total Pages Evaluated</th>
<th>Overall Violations Identified as of Report Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTML-based</td>
<td>2,700</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-HTML-based</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,200</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Strategic Information Management Plan

- **Data Catalog:**
  
  Please answer the questions below.

<table>
<thead>
<tr>
<th>Does Your Agency Have A Published Data Catalog?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Systems Office has recently recruited a Data Analyst, and is in the process of creating data catalog using Data Cookbook.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If so, is it Available to Other State Agencies?</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is not completed at this time.</td>
</tr>
</tbody>
</table>

- **Data Exchange Standards:**

  List the name of all current automated interfaces used for data exchange in your agency and classify them as internal or external data exchanges.

<table>
<thead>
<tr>
<th>Data Exchange Name</th>
<th>Internal or External Data Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Hub (WebMethods 8.0)</td>
<td>Internal</td>
</tr>
<tr>
<td>XML – Web Services</td>
<td>Internal</td>
</tr>
</tbody>
</table>

What percentage of current automated interfaces that are using standards-based data exchanges compared to proprietary data exchanges?

<table>
<thead>
<tr>
<th>Percent Standards Based</th>
<th>Percent Proprietary</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

- **External Collaborative Groups:**

  List the number of agency external collaborative groups dealing with 1) services to citizens, 2) efficiency of agency operations, 3) local governments.

<table>
<thead>
<tr>
<th>Services to Citizens</th>
<th>Efficiency of Agency Operations</th>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• **Metadata Repository:**
  *Please answer the questions below.*

<table>
<thead>
<tr>
<th>Does Your Agency Have An Agency Metadata Repository?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Cookbook will provide a Metadata Repository. Not currently available.</td>
</tr>
<tr>
<td>Confluence Wiki, using Metadata in a variety of instances. Internal to ITS.</td>
</tr>
</tbody>
</table>

• **Online Transactional Services**:  
  *List new and existing online services that your agency has deployed. Also, categorize each online service as being consumed by citizens, businesses, or other governmental entities.*

<table>
<thead>
<tr>
<th>Online Service Name</th>
<th>New or Existing</th>
<th>Used by Citizens, Businesses, and/or Government</th>
<th>Other Agencies Involved (list)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-State Online</td>
<td>Existing</td>
<td>Citizens</td>
<td>None</td>
</tr>
<tr>
<td>Talisma (Recruiting System)</td>
<td>Existing</td>
<td>Citizens</td>
<td>None</td>
</tr>
<tr>
<td>ExpanSIS</td>
<td>Existing</td>
<td>Students and Institutional Partners</td>
<td>Other Academic Institutions</td>
</tr>
</tbody>
</table>

• **Portfolio Management Methodology:**
  *Please answer the questions below.*

<table>
<thead>
<tr>
<th>Does Your Agency Use an Application Portfolio Management Methodology?</th>
</tr>
</thead>
<tbody>
<tr>
<td>None at this time.</td>
</tr>
</tbody>
</table>

---

9 An “Online Service” is defined in this document to mean a “service” provided by the state that is available on the Internet for its customers to access. Examples of Online Services include Income Tax E-Filing, the Kansas Business Center, and the Registered Offender Website.
• **Web Services**\(^\text{10}\): 

<table>
<thead>
<tr>
<th>Web Service Name</th>
<th>New or Existing</th>
<th>Used by Citizens, Businesses, and/or Government</th>
<th>Number of Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-State Web Presence</td>
<td>Existing</td>
<td>Citizens (K-State User Community)</td>
<td>Hundreds of thousands</td>
</tr>
<tr>
<td>• Web Search</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• People Search</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Directory Search</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-State Admissions</td>
<td>Existing</td>
<td>Citizens (K-State User Community)</td>
<td>Tens of thousands</td>
</tr>
<tr>
<td>• Application Submission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• High School ACT code lookup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• College ATP code lookup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Management</td>
<td>Existing</td>
<td>Citizens (K-State User Community)</td>
<td>Millions</td>
</tr>
<tr>
<td>• Key requests and translations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Change notifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Directory queries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Authentication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Authorization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration</td>
<td>Existing</td>
<td>Citizens (K-State User Community)</td>
<td>Millions</td>
</tr>
<tr>
<td>• Person event processing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Affiliation event processing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Publish/Subscribe services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Translation Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Library ID Card Door access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Grades &amp; Academic Information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Financial Transactions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Data Encryption / Decryption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• File Transfer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Event Logging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-State Information Request Form</td>
<td>Existing</td>
<td>Governmental Agencies</td>
<td>Tens of thousands</td>
</tr>
<tr>
<td>• High School ACT code lookup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• College ATP code lookup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Request Submission</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{10}\) A “Web Service” is defined in this document to mean “software system designed to support interoperable machine-to-machine interaction over a network.” ("Web Services Glossary." World Wide Web Consortium. Available at http://www.w3.org/TR/2004/NOTE-ws-gloss-20040211/)
AGENCY IT STRATEGIC DIRECTION

Kansas State University’s enterprise IT direction is driven by institutional goals and priorities as well as the needs of the campus community. Kansas State University’s 2025 Visionary Plan (http://www.k-state.edu/2025) was published..

K-State 2025: A Visionary Plan for Kansas State University

Our Mission, Vision, and Goals

Mission

The mission of Kansas State University is to foster excellent teaching, research, and service that develop a highly skilled and educated citizenry necessary to advancing the well-being of Kansas, the nation, and the international community. The university embraces diversity, encourages engagement, and is committed to the discovery of knowledge, the education of undergraduate and graduate students, and improvement in the quality of life and standard of living of those we serve.

Visionary Goal

By 2025, Kansas State University will be recognized as one of the nation’s Top 50 Public Research Universities.

Thematic Goals

1. Research, Scholarly and Creative Activities, and Discovery: Create a culture of excellence that results in flourishing, sustainable, and widely recognized research, scholarly and creative activities, and discovery in a variety of disciplines and endeavors that benefit society as a whole.

2. Undergraduate Educational Experience: Build a connected, diverse, empowered, engaged, participatory culture of learning and excellence that promotes undergraduate student success and prepares students for their professional, community, social, and personal lives.

3. Graduate Scholarly Experience: Advance a culture of excellence that attracts highly talented, diverse graduate students and produces graduates recognized as outstanding in their respective professions.

4. Engagement, Extension, Outreach, and Service: Be a national leader and model for a re-invented and transformed public research land-grant university integrating research, education, and engagement.

5. Faculty and Staff: Foster a work environment that encourages creativity, excellence, and high morale in faculty and staff, responds to changing needs, embraces diversity, values communication and collaboration, and is respectful, trusting, fair, and collegial for all.

6. Facilities and Infrastructure: Provide facilities and infrastructure that meet our evolving needs at a competitive level with our benchmark institutions and are an asset to recruit and retain quality students, faculty, researchers, and staff.

7. Athletics: Strengthen the interconnectivity between intercollegiate athletics and the campus community to prepare our student-athletes for success in school, in sport, and after graduation and benefit our university, community, and state.
Theme 6: Facilities and Infrastructure – Proposed Strategic Action Plan
(Highlight of actions pertaining to Infrastructure taken from Theme 6 PDF)

Overarching Thematic Goal: University facilities and infrastructure will meet the evolving needs of students, faculty, staff, and stakeholders at a level that is competitive to our benchmark institutions and serve as an asset to recruit and retain quality students, faculty, researchers, and staff.

What we plan to do...
1. Develop and foster integration with surrounding communities.

4. Develop core facilities to support new integrative research centers and interdisciplinary collaboration.

11. Develop information technology and utility infrastructures accessible to all, capable of supporting the evolving needs of the campus community and ensuring business continuity.

14. Develop responsive planning and implementation processes that engage stakeholders in analyzing facilities and infrastructure needs.

What we expect to happen in 1-5 years...
- Create robust and reliable information technology ensuring business continuity and consistent with the achievement of the highest quality levels of support for research, instruction, student services, and administration.

What we expect to happen in 6-10 years...
- Enhanced campus community experience and collaborative learning and working environments promoted by facilities that support multidisciplinary work and integrated interaction between students, faculty, researchers, staff, and administrators.

What we expect to happen in 11-15 years...
- Well-maintained buildings, utilities, IT infrastructure, and grounds consistent with the expectations and image of a highly ranked land grant research and teaching institution.
- Signature facilities that promote collaborative learning and working environments, multidisciplinary work, and integrated interaction between students, faculty, researchers, staff, and administrators.
AGENCY IT ACCOMPLISHMENTS
This section summarizes agency IT accomplishments that happened in the previous state fiscal year. (Listed by functional unit in ITS)

Computing & Telecommunications Services (CTS):

• **Work- Orders** - May, June and July we received 476 work-orders and processed 361.

• **Second Demarcation Point** – Worked with Cox Communications to implement a secondary demarcation point on the northern side of campus. The fiber infrastructure is in place to support the new demarcation point and is scheduled to come online mid September.

• **Infrastructure Upgrades**
  - **West Hall** - upgraded the router to a 6509E with redundant Supervisor 720's. This upgrade was necessary to install the NAC appliance - SafeConnect - in the Residence Halls. In order for SafeConnect to function, all Housing routing had to be done from a router that sits in line with the NAC appliance.
  - **Ahearn Gymnasium** - Installed cable tray throughout the facility and installed 33 802-11N A/G access points to provide wireless coverage throughout the facility. The cable tray was also designed to accommodate a rewire to CAT-6 as time allows. The Emergency Notification devises were also placed throughout the Facility.
  - **Military Science** - Installed wireless access points and emergency notification devises throughout the facility.
  - **Willard Hall** - Installed wireless access points and emergency notification devises throughout the facility.
  - **Cardwell Hall** - Contracted with AT&T to establish wiring path and category 6 cabling for the Basement and first floor. The contractor has completed the pathways on both floors and has a large part of the cabling done within the basement.
  - **Seaton Hall** - Contracted with AT&T to install cable trays and CAT-6 cabling in two of the labs located in Seaton Hall.
  - **Fairchild** - a complete overhaul of wiring, replacing end-of-life switching and hub infrastructure with 1Gb capable switches, improving wireless coverage, and connecting the building infrastructure at 1Gb to the core.
  - **Manufacturing Learning Center (AMI), Shellenberger, and Eisenhower** - upgraded the building backbone from fast ethernet to 1GB
  - **Student Union** - upgraded the building backbone from fast ethernet to 1GB and improved wireless coverage throughout the building.
  - **Nichols Hall** - installed and tested the Nichols 10Gb Beocat link between KSU and KanRen. We are waiting for the KU side to be completed, in order to do end-to-end testing.
  - **Holton Hall** - replaced aging switch and hub infrastructure with 1Gb capable switches. The building is ready to be moved to 1Gb connection to the core.
  - **Call Hall** - replaced aging switch and hub infrastructure with 1Gb capable switches, and installed wireless access points and emergency notification devices throughout the building. The building will be moved to 1Gb connection to the core when fiber is available to the entry point closet.

• **Fiber Placement**
Power-Plant/Vet-Med-Installed 216 strand Hostile environment fiber between Power Plant and Vet Med Switch room. This project was to place hostile fiber between the 2 switch rooms due to needing additional fiber between the 2 switch rooms as well as sizing the fiber to allow the dual feed on hostile fiber for all buildings along the route.

South Ring- 72 strand fiber from Beech Art hand-hole to Parking Garage Provides a redundant feed from Power plant to Hale as well as allowing dual connectivity for approximately 8 buildings along this route.

South East Ring - Place 216 fiber Hostile from Hale to meet the 144 strand fiber at the Hand-hole outside Beech Art This project is to provide redundant fiber path between Power Plant and Hale as well as to complete the ability to dual feed approximately 12 buildings along this route.

- Fiber/Copper Relocation
  Bramlage Coliseum- Relocated and cut-around of 600 pair copper cable and fiber feeding Bramlage due to construction conflicts of existing conduit pathway with the construction of the new practice facility.
  Christian Track and Baseball Connectivity- Relocated the fiber and copper infrastructure providing Voice and Data services to the Christian Track and Baseball complex due to new road construction with in the Jardine Complex.
  Foundation Connectivity - Relocated the fiber entering the Foundation due to conflict with City of Manhattan Storm Water improvement project. (36 Strand Single-Mode Fiber)
  McCall Road Relocations - City of Manhattan Capital improvement project along McCall Road required KSU to dig pot- holes (test holes) and relocate and lower copper and fiber as required allowing for placement of new Storm Water, Water and Curb and guttering.
  Hazardous Waste Facility Feeder - This project placed cable for the relocation of the Hazardous waste facility from the existing building to an adjacent building. This was required due to the current building that was being occupied is being torn down.
  Childcare Camera and Hand-hole Replacement- Project required to place single-mode fiber to Camera located in front of Childcare due to existing fiber was damaged during construction of Childcare.
  Hostile Fiber placement to Dykstra- This project placed single-mode hostile fiber to Dykstra off of the new Power Plant/Vet Med Hostile Fiber to allow single-mode fiber connectivity to Dykstra. Indoor single-mode still required from Hostile to Distribution Frame.

- Various
  Existing Fiber rearrangements (Fusion Splicing) Made various single-mode Fusion Splice rearrangements in existing splice cases to optimize the redundant fiber connectivity involving IGP – Vet Med – West Hall Switch rooms.

- Cable Television:
  Putnam hall - Replaced riser cable from entry point and Interdiction system that was damaged from lighting strike to building.
  Dorms - Balanced cable input to optimum input levels to main amplifier in each dorm for distribution to all rooms.
  Football Complex- Checked input to all amplifies and changed out amplifier units that were below 750 MHz.
  Jardine- Balanced input levels to all Interdiction system devices for optimal output.
  All buildings - Replaced power supplies in interdiction devices that were not functioning.
• **Additional Projects**
  • Rolled-out **WPA2** enterprise wireless services to campus.
  • Installed Nexus 10Gb-capable switching infrastructure in the **Data Center**, and worked with EST to move services to the new infrastructure.
  • Installed, tested, and deployed the Safe Connect NAC for the **Residence Halls**.
  • Worked with the IT Security group to design and implement early phases of the **PCI compliance** strategy, including setting up a secured vlan environment for handling credit card transactions.
  • Assisted iTAC by installing and configuring network infrastructure to support 8 new **high technology classrooms** across campus.
  • Worked with Aruba to utilize **Airwave** for configuring and monitoring Aruba wireless controllers, as well as monitor Cisco wireless controllers.
  • Completed the new design for the **KSU Border** routing and firewall implementation - replacing equipment, which is end-of-life as of Feb, 2012. The new design will support 10Gb core connections, and allow flexibility to "privatize" out subnet space behind the firewalls. New routers and firewalls have been ordered.

**Integrated Systems Office (ISO):**

**iSIS**
  • Updated iSIS to Peoplesoft Campus Solutions version 9.0 and updated Peopletools to Version 8.5
  • Implemented the K-State 9 program to change how general education requirements are calculated for students.
  • Implemented electronic ordering, payment, and delivery of transcripts via AVOW
  • Modified iSIS to make it easier for students to locate textbook information
  • Modified the Admissions Web Application, iSIS, and DARS to support new post-baccalaureate minors policies and procedural changes
  • Implemented the graduation application in iSIS for graduate students
  • Implemented new features for English language program for international students.

**HRIS**
  • Implemented on-line Conflict of Interest in HRIS Employee Self Service
  • Implemented online time entry for students
  • Update Peopletools to version 8.5.1

**FAMIS**
  • Update FAMIS to version 8iR2

**Oracle Financials for Facilities (OFA)**
  • Update database to Oracle 10g from 9i

**FIS**
  • Implemented new electronic funds transfer for travel vouchers
  • Ensured all interfaces into the new State of Kansas SMART system function properly.

**Parking Services**
  • Implemented new T2Flex parking system.
Information Technology Assistance Center (iTAC):

IT Help Desk
- Logged 46,405 trouble tickets using the data to monitor trends, improve communication, documentation and training for end users, improve services and improve training for the IT Help Desk staff. (iTAC staff logged a total of 50,066 tickets). In June 2010, the Help Desk migrated from Remedy to Service-now. As part of the migration, we were able to review workflow processes from report of an incident to inception and make adjustments to provide faster time to resolution. The IT Help Desk has published a few articles in the Service-now knowledge base. The use of Linktivity, a remote desktop support system has expanded from 370 instances of use in 2009 to 609 in 2010.
- Checked out 3,694 instances of laptops, LCD projectors, tripods, digital still and video cameras, the laptop cart and more. Revised the policies and procedures for late charges to discourage late returns.
- Purchased Microsoft System Center Configuration Management for desktop support. Included system administrators from across campus in training sessions and implementation discussions. Deployed SCCM for 14 departments across campus.
- Reduced inventory from $20,000 for computer repair to approximately $5,000 with the goal of moving to a “just in time” inventory model.
- Provided technical assistance to 82 departments and offices on campus (data only available from Sept – Dec).
- Initiated the Digital Signage Steering Committee and pilot for campus wide digital signage

Instructional Technology
- Completed upgrades to eight general use technology classrooms; two were major renovation projects. Installed basic technology in ten rooms – Blumont Hall 122, Fairchild Hall 208, Kedzie Hall 216, Natatorium 2, Seaton Hall 162, Waters Hall 132, and Willard Hall 115, 120, 122, and 123. The technology includes a projector, a simple control panel, switching equipment, and sound amplification.
- Provided gratis consultation and installation services for 25 technology classrooms, conference rooms and studio environments. Major projects that the team has consulted on includes: planning for the upgrade of UM 105, planning and design for K-State Olathe Innovation Campus; planning, design, and installation for the Chapman Center for Rural Studies, and planning and design for the $4 m Justin addition. The entire unit consulting was in addition to the day-day maintenance of the 55+ technology classroom environments.
- Received approval for a Proof of Concept (POC) proposal to evaluate virtualizing the desktop for computing labs, which will be a bake-off of three different technologies to
discover the best solution for K-State. Dell donated software and approximately $65K in resources for the POC.

Client Services
• Worked with an intern with the “Earth, Wind, and Fire: Sustainable Energy for the 21st Century” Research Experience for Undergraduates (REU), university researchers and iTAC staff to measure computer power consumption in support of the university's efforts towards a sustainable campus. The results provided the data to make an informed decision about power settings and additional information about the use of power management software. Deployed Faronics PowerSave to university computing labs, InfoCommon, technology classrooms and one studio classroom environment (Ackert 219).

Technology Training & Instructional Support
• Trained 85 unique faculty in 70 training sessions on the use of the technology classrooms. Twelve faculty were trained on the use of Polycom and ten trained on the use of SMART boards (data only available for Aug – Dec due to the departure of a staff member.
• Provided 61 technical training sessions for 689 attendees on topics ranging from K-State Online to web design (HTML, Dreamweaver, CSS), and K-State Zimbra. Training sessions includes the TechBytes and IDT Roundtable series.
• Developed two online training courses with more than 41 attendees in the web design series and 19 in the social media course.
• Installed a large format scanner to scan images that are 5’x7’ and provided training sessions for the Departments of Art and Apparel, Textile and Interior Design, College of Architecture, Planning and Design and K-State Libraries

Office of Mediated Education (OME):
• KEAS/eProfile. Registering for an eID was simplified and improved. Support tickets related to eID creation have decreased since these improvements were released. Student emergency contact information can now be updated in eProfile; additionally, students are required to update/review their info as they change their eID password.
• K-State Online/Axio. Released Axio 5.3 and 5.4 to continue improving the technology stack and architecture of Axio. These releases also included user interface improvements to the Assessment Suite and Course Content tools.
• Selective scholarship. Developed a web-based scholarship application, administrative and reporting tool for the Office of Admissions to manage their scholarship application process.
• DCE/EIS. Working with Division of Continuing Education, we released EIS 2.3, which included several requested feature enhancements and back-end improvements.
• **Application Services Administration.** Recent projects include: enhanced the reliability and scalability of KSU enterprise web applications such as K-State Online, K-State website ([www.k-state.edu](http://www.k-state.edu)) and Central Authentication Services, and added application monitoring, resulting in increased availability of applications to K-State users.

• **Integration.** Recent projects include: Upgraded to webMethods 8.0 and replaced app-tier hardware, changed HRIS data integration to real-time to improve employee experience, and changed all iSIS interfaces to web-services to support iSIS v9 and people tools upgrade.

• **Webteam.** Recent university-level web projects include: K-State 8, HLC Study, homepage feature rotation tool, K-State chats tool, K-State 2025, NCAA cert, Secure IT @K-State Training tool, and Advisories.

**Office of Information Security and Compliance (ISC):**

• Enhanced the intrusion detection system

• Formalized firewall management

• Enhanced peer-to-peer filtering and network traffic shaping capability

• Enhanced and expanded the Virtual Private Network (VPN) service

• Implemented annual IT security training required for all employees

• Launched a major program to comply with Payment Card Industry Data Security Standards to ensure protection of credit card information

**SECTION II ~ MAJOR IT APPLICATIONS**

**Unmodified Applications**

**Application #1:** Classroom Scheduling (Schedule/25)  
**Purpose:** Provides for effective utilization of general use classrooms. (Proprietary software, source code not provided.)  
**Planned Initiatives:** Upgrade application to current version if needed.

**Application #2:** Event Room Scheduling (Resource/25)  
**Purpose:** Provides for effective utilization of rooms for special events. (Proprietary software, source code not provided.)  
**Planned Initiatives:** Upgrade databases to 11g.

**Application #3:** Parking Services System (T2 Flex)  
**Purpose:** Enables effective management and sale of parking permits and collection of parking violations. (Proprietary software, source code not provided.)  
**Planned Initiatives:** Upgrade application and databases to 11g.

**Application #4:** Computrition Food Service System
Purpose: Enables effective management of recipes, menus, and food inventories for preparation of meals for residence hall dining centers; also used to teach K-State students how to use a commercial food service system. (Proprietary software, source code not provided.)

Planned Initiatives: None planned

Application #5: Facilities Estimating Program (FESTOR)
Purpose: Provides K-State Division of Facilities with automated tools for estimating work order and project costs.
Planned Initiatives: Upgrade database to 11g.

Application #6: Facilities Management Information System (FAMIS)
Purpose: Provides the Division of Facilities with the ability to effectively manage, track, and report requests for services.
Planned Initiatives: Add-on map server capability to store CAD drawings.

Application #7: Survey System
Purpose: Web-based survey authoring and execution system
Planned Initiatives: Branding changes, minor user requested feature additions, upgrade database to 11g.

Application #8: TEVAL
Purpose: Serves as a student rating system to support teaching evaluations.
Planned Initiatives: Minor user-requested feature additions, upgrade database to 11g.

Application #9: K-State Research Exchange (K-REx)
Purpose: Collect and manage full-text digital copies of scholarly material created by K-State faculty and students, including journal articles, book chapters, conference papers, theses and dissertations, etc.
Planned Initiatives: Upgrade database to 11g.

Application #10: Tahlequah
Purpose: Supports management of billable Telecommunications services such as dial tone, cell phones, authorization codes, calling cards, pagers, etc.
Planned Initiatives: Ongoing maintenance and enhancement requests.

Application #11: Billing platform
Purpose: Provides the back-end for the Telecom and Technical Services groups to bill for services—dial tone, cell phones, authorization codes, calling cards, pagers, dial-up, cable TV, computer repair, and other services—and access to customers to manage their accounts.
Planned Initiatives: None planned.

Application #12: Service-now
Purpose: Service-now is web-based IT service management software providing capacity to manage enterprise IT incident management functionality.
Planned Initiatives: Implementation of Change Management module is in the proposal stage.

Application #13: K-State Zimbra Collaboration Suite (Hosted Provider)
Purpose: The K-State Zimbra Collaboration Suite provides electronic mail and calendaring services in an interactive, collaborative environment to over 30,000 students, faculty, staff, and affiliates of Kansas State University.
Planned Initiatives: None planned.

Application #14: K-State Emergency Alerts (Externally hosted by Rave Wireless)
Purpose: K-State Alerts uses automated phone calls and text messaging to alert subscribers to University closings and crisis situations.
Planned Initiatives: Ongoing maintenance and enhancement requests.

Application #14: KEAS
Purpose: Central electronic ID authentication/authorization system
Planned Initiatives: Ongoing maintenance and enhancement requests.

Application #15: Axio
Purpose: Axio is a Learning Management Systems/Course Management system providing various tools to facilitate mediated instruction and collaboration.
Planned Initiatives: Ongoing maintenance and enhancement requests.

Application #16: Financial Information System (FIS)
Purpose: Provides central accounting and financial compliance and reporting functions.
Planned Initiatives: None planned.

Application #17: OFA-Facilities (Oracle Financials for Facilities)
Purpose: Provides the Division of Facilities with accounting and financial compliance and report functions.
Planned Initiatives: None planned.

Application #18: UBS (University Budget System)
Purpose: Provides for effective university budgeting practices.
Planned Initiatives: None planned.

Application #19: iSIS (PeopleSoft Campus Solutions)
Purpose: Provides authorized and secure access to student information in support of K-State’s teaching and advising mission.
Planned Initiatives: None planned.

Application #20: Degree and Audit Reporting System (DARS)
Purpose: Provides students and their advisors with transcript analysis for monitoring academic progress at the course completion level against the student’s current curriculum, including what-if analysis against alternative curriculums in support of the university’s mission of teaching and advising.
Planned Initiatives: None planned.

Application #21: PDB (Persons Database)
Purpose: The PDB is a central registry of information about persons. It uniquely identifies K-Staters and facilitates mapping of these members records between different systems.
Planned Initiatives: On-going maintenance and support.

Application #22: DCE/EIS
Purpose: Web-based application for creating and managing distance courses offered by the Division of Continuing Education at Kansas State University.
Planned Initiatives: Upgrade EIS 2.4 to allow for use of the Student Facilitation Checklist.

New / Modified Applications

Application #23: iSIS (PeopleSoft Campus Solutions)
Purpose: Provides authorized and secure access to student information in support of K-State’s teaching and advising mission.
Planned Initiatives: Oracle databases upgrade to 11g, and implement a student interface for mobile devices.
Hosted: Agency internally hosted
Functions: Undergraduate admissions, graduate admissions, enrollment, tuition and fees assessment, student financial aid, student demographics, and transcript maintenance.
**Interaction:** Agency-internal  
**Hardware:** 8 Netra-T12s, 4 Sparc T5120s, 3 Sun V440s, 1 Sun 880  
**Network Protocols:** Ethernet – TCP/IP and SQL*Net  
**System s/w:** Sun-Solaris, Intel-Novell  
**DBMS:** Oracle 10gR2  
**Client:** Standard web browser  
**Special s/w:** PeopleTools, SQR  
**Languages:** PeopleTools, SQR, Microfocus COBOL  
**Implemented:** Phased into production fall 2007 through summer 2008  
**Revision:** 2010, version 9.0;  
**Maintenance:** Vendor (Oracle/PeopleSoft) and Kansas State University

**Application #24:** Degree Audit and Reporting System (DARS)  
**Purpose:** Provides students and their advisors with transcript analysis for monitoring academic progress at the course completion level against the student’s current curriculum, including what-if analysis against alternative curriculums in support of the university’s mission of teaching and advising.  
**Planned Initiatives:** Upgrade databases to Oracle 11g. Upgrade to version 4.0.  
**Hosted:** Agency internally hosted  
**Functions:** Record of academic progress against degree requirements, identifies courses required to complete degree.  
**Interaction:** Agency-internal  
**Hardware:** 4 Sun Servers for Web Services and Oracle Database Servers  
**Network Protocol:** Ethernet-TCP/IP with SQL*Net  
**System s/w:** Sun/Solaris Server and Intel-Windows  
**DBMS:** Oracle 10gR2  
**Client:** Standard web browser for KATS access to DARS; DARS Desktop Client (Power Builder) for power user access to DARS  
**Special s/w:** DARS (proprietary software)  
**Languages:** Oracle SQL, PL/SQL, MicroFocus COBOL, Java  
**Implemented:** 1999  
**Revision:** 2009; Version 3.5.9  
**Maintenance:** Vendor (redLantern, LLC) and Kansas State University

**Application #25:** Human Resource Information System (HRIS)  
**Purpose:** Human capital management  
**Planned Initiatives:** Apply tax updates and bundles, upgrade to version 9.1, upgrade PeopleTools to v.8.51, implement employee recruitment module.  
**Hosted:** Agency internally hosted  
**Functions:** Employee payroll, personnel records, benefits, and employee self-service.  
**Interaction:** Agency-internal  
**Hardware:** 1 Sunfire V490 and 1 Sunfire 880, Intel-Novell servers  
**Network Protocols:** Ethernet – TCP/IP and SQL*Net  
**System s/w:** Sun-Solaris, Intel-Novell  
**DBMS:** Oracle 11gR2  
**Client:** Standard web browser  
**Special s/w:** PeopleTools, SQR  
**Languages:** PeopleTools, SQR, Microfocus COBOL  
**Implemented:** October 1995  
**Revision:** March 2008; Version 9.0  
**Maintenance:** Vendor (PeopleSoft/Oracle) and Kansas State University

**Application #26:** UBS (University Budget System)  
**Purpose:** Provides for effective university budgeting practices.  
**Planned Initiatives:** Upgrade PeopleTools to v.8.51.  
**Hosted:** Agency internally hosted  
**Functions:** University budgeting functions
**Application #27**: Financial Information System (FIS)

**Purpose**: Provides central accounting and financial compliance and reporting functions.

**Planned Initiatives**: Upgrade application to Oracle eBusiness Suite v.12.1.2, and upgrade databases to 11g.

**Hosted**: Agency internally hosted

**Functions**: General ledger, accounts receivable, accounts payable, grants accounting, project accounting, fixed assets, cash management, financial reporting, and interfaces to/from other systems such as HRIS, iSIS, and SMART.

**Interaction**: Agency-internal

**Hardware**: 2 Sunfire V890s; 1 Sunfire V880; 5 Sunfire 440s; 5 Sunfire V240s; 2 Sunfire V210s

**Network Protocols**: Ethernet TCP/IP with SQL*Net

**System s/w**: Sun Solaris Version 8, Oracle Database Server

**DBMS**: Oracle 10gR2

**Clients**: Standard web browser

**Special s/w**: Oracle Financials, Oracle Discoverer, Optio Print Solution

**Languages**: Oracle Developer (Forms and Reports), Oracle Discoverer, SQL, Java

**Implemented**: July 2005

**Revision**: Version 11.5.10

**Maintenance**: Vendor (Oracle) and Kansas State University

**Application #28**: OFA-Facilities (Oracle Financials for Facilities)

**Purpose**: Provides the Division of Facilities with accounting and financial compliance and reporting functions.

**Planned Initiatives**: Upgrade databases to Oracle 11g, and explore possibility of moving functionality into FIS and FAMIS systems.

**Hosted**: Agency internally hosted

**Functions**: General ledger, purchasing, storeroom operations, inventory management, billing and accounts receivable, and gas pump interface.

**Interaction**: Agency-internal

**Hardware**: 3 Sun Ultra 80s

**Network Protocol**: Ethernet TCP/IP with SQL*Net

**System s/w**: Sun Solaris Version 8, Oracle Database Server

**DBMS**: Oracle 10gR2

**Clients**: Standard web browser

**Special s/w**: Oracle Financials, and Oracle Developer

**Languages**: Oracle Developer (Forms and Reports), SQL, Java

**Implemented**: June 1999

**Revision**: April 2010; Oracle eBusiness Suite v.11.5.10

**Maintenance**: Vendor (Oracle); Kansas State University

**Application #29**: Service-now

**Purpose**: Service-now is web-based IT service management software providing capacity to manage enterprise IT issues.

**Functions**: Service Request (Work Order) management to replace Telecom Work Order System which allows submission and status tracking of work requests for 197 departments on campus.
Planned Initiatives: Change Management implementation in proposal stage.
Hardware: The server and storage infrastructure is managed and maintained by the hosted provider.
Network: K-State TCP-IP network
System s/w: Service-now Application (hosted provider)
DBMS: n/a
Clients: Standard web browser
Special s/w: n/a
Language: Java scripting
Implement: Fall 2011
Revision:
Maintenance: Hosted provider

Twilight Applications / To Be Retired

Application #30: EReports (Optio)
Reason: Obsolete non-supported system that needs to be replaced.

Application #31: Remedy
Reason: Moving functionality to Service-now
SECTION III ~ IT PLANNED PROJECTS

There are currently no Kansas State University projects reporting to KITO at this time. As new proposals under review become more defined and are established as projects and meet the criteria outlined in KSA 75-7209, they will be reported to KITO at that time.
## SECTION IV ~ Business and Technology Radar Chart

<table>
<thead>
<tr>
<th>Kansas State University</th>
<th>FY 2012</th>
<th>FY 2013</th>
<th>FY 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IT Business Initiatives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance Identity Management Services</td>
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<tr>
<td>Improve K-State web presence</td>
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<tr>
<td>Develop and foster integration with surrounding communities</td>
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<tr>
<td>Develop core facilities to support new integrative research centers and interdisciplinary collaboration</td>
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<tr>
<td>Develop information technology and utility infrastructures accessible to all capable of supporting the evolving needs of the campus community and ensuring business continuity</td>
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<tr>
<td>Develop responsive planning and implementation processes that engage stakeholders in analyzing facilities and infrastructure needs</td>
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<tr>
<td><strong>Technology Infrastructure</strong></td>
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<tr>
<td>Wireless Campus Initiative - in proposal stages</td>
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</tr>
<tr>
<td>Upgrade Core Router - Hardware</td>
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<tr>
<td>Incorporate departmental servers and server rooms into the central Data Center</td>
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<tr>
<td>Server virtualization where applicable</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Critical Server and Storage maintenance and upgrades - ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IT Business System Initiatives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate and implement campus content management systems</td>
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<td></td>
</tr>
<tr>
<td>Evaluate and implement Oracle iProcurement if feasible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upgrade database versions of key enterprise systems, DATS, SIS, HRIS, OFA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCM, Upgrade to version 9.1 and implement Employee Recruitment Model</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Upgrade Peoplesoft to v. 8.5.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIS, upgrade to Oracle eBusiness Suite v. 12.1.2</td>
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<tr>
<td><strong>Online-Enabled Services Initiatives</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Software upgrade to Oracle 11g and implement a Student Mobile Interface</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Request rollout in Service-now, Fall FY12; Move Change Management (software) from Remedy to Service-now; Plan implementation of additional Service-now modules to enhance IT Services</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## SECTION V ~ Enterprise Business Partners Model

<table>
<thead>
<tr>
<th>Business Partners</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Applications, Transfer Coursework, Financial Aid Requests, Enrollment Requests, Class Assignments, Advising Requests, Library Requests, Other Service Requests</td>
<td>Acceptance / Orientation Info, Enrollment Info, Grades, Financial Aid Info, Bills, Syllabi, Course Content</td>
</tr>
<tr>
<td>Parents of Students</td>
<td>Tuition Payments, Financial Aid Information, Fees</td>
<td>Bills, Parent Info, Events Info, International Study Info</td>
</tr>
<tr>
<td>Alumni</td>
<td>Personal Info Updates, Donations, Membership Fees</td>
<td>Acknowledgments, Events Info, General Campus Info</td>
</tr>
<tr>
<td>Extension / Kansas Residents</td>
<td>Consulting Requests, Requests for Services, Speakers Info</td>
<td>Research Info and Work Products, Consulting Info, General Info</td>
</tr>
<tr>
<td>General Public</td>
<td></td>
<td>General Campus Info, Research Information, Events Info</td>
</tr>
<tr>
<td>Vendors / Contractors</td>
<td>Bids, Invoices, Bills, Contracts, Licenses, Documentation, Training, Data Access, Books, Journals</td>
<td>Requests for Proposals, Fix Requests, Payments</td>
</tr>
<tr>
<td>Data Vendors</td>
<td>Bids, Invoices, Bills, Contracts, Licenses, Documentation, Training, Data Access, Books, Journals</td>
<td>Requests for Proposals, Fix Requests, Payments</td>
</tr>
<tr>
<td>Other Kansas Universities or Colleges</td>
<td>Shared Planning Information, Student Transfer Info, Course Info</td>
<td>Shared Planning Information, Student Transfer Info, Course Info</td>
</tr>
<tr>
<td>State Agencies</td>
<td></td>
<td>Information Requests</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>Research Information, planning Information, Reports</td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>RFP’s, Grant Awards, Financial Aid Funds, Info Requests</td>
<td></td>
</tr>
<tr>
<td>Professional Societies</td>
<td>Consulting Requests, Research Requests, Technology Transfer Requests</td>
<td>Consulting and Research Information, Intellectual Property, Information Delivery</td>
</tr>
<tr>
<td></td>
<td>Bills, Research Work Product, Event Announcements, Acceptance of Papers</td>
<td>Fees for Dues or Event Registration, Research Work Products</td>
</tr>
</tbody>
</table>
### SECTION VI ~ Enterprise Value Chain

**Kansas State University Value Chain**

<table>
<thead>
<tr>
<th>Goals</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The mission of Kansas State University encompasses teaching, research, service, and extension, serving students, Kansas, the nation and the world.</td>
<td>Students, Parents, Alumni, Kansas Residents, General Public, Other Kansas Universities, Federal Government, State Government, Industry, Professional Societies, Research Communities</td>
</tr>
</tbody>
</table>

#### Core Business Processes

<table>
<thead>
<tr>
<th>Supporting Processes</th>
<th>Supporting Activities</th>
<th>Core Business Processes</th>
<th>Primary Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Management</td>
<td>IT Management</td>
<td>Research Resources Management</td>
<td>HR Management</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Procurement Management</td>
<td>Physical Plant Management</td>
<td></td>
</tr>
</tbody>
</table>

#### Supporting (Financial, HR, IT, Research...) Assets

<table>
<thead>
<tr>
<th>Process Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>Research and Development</td>
</tr>
<tr>
<td>Recruitment</td>
<td>Research Proposals</td>
</tr>
<tr>
<td>Admissions, Enrollment</td>
<td>Research Administration</td>
</tr>
<tr>
<td>Instruction / Learning</td>
<td>Research Prototype Development</td>
</tr>
<tr>
<td>Academic Support</td>
<td>Research Support</td>
</tr>
<tr>
<td>Placement Counseling</td>
<td>Publishing / Performance</td>
</tr>
</tbody>
</table>

#### Extension and Engagement

<table>
<thead>
<tr>
<th>County / Community Service</th>
<th>Information Delivery</th>
<th>Consulting Service</th>
<th>Training / Development</th>
<th>Alumni Support</th>
</tr>
</thead>
</table>

#### Quality Management

| Teaching: Assessment, Degrees, Credentialing, Transcripts, Tenure | |
| Research Assessment, Peer Review, Research Awards, Tenure | |
| Service: Assessment, Evaluation, Tenure, Participation | |

**University Information / Knowledge Assets**
SECTION VII ~ Enterprise Application Map

Kansas State University Application Map

### Supporting Processes
- FIS (Oracle Financial Information System)
- UBS (University Budget System)
- OFA (Oracle Financial for Facilities)
- FAMIS
- FESTOR
- HRIS (Human Resources Information System)
- ISIS (PeopleSoft Campus Solutions)
- Zimbra Collaboration Suite
- Oracle Calendar
- Reosource 25
- Schedule 25
- Flex T2
- Computrion
- PDB (Persons Database)
- KEAS

### Process Management
- **Goals**
  - The facilitation of learning
  - The creation of information and knowledge
  - The application of information and knowledge to benefit society
  - The distribution of information to extend knowledge throughout Kansas.

### Customers
- Students
- Parents
- Alumni
- Kansas Residents
- General Public
- Other Kansas Universities
- Federal Government
- State Government
- Industry
- Professional Societies
- Research Communities
- Support (Financial, HR, IT, Research,...) Assets

### Supporting Activities
- Recruitment
- Admissions
- Enrollment
- Instruction / Learning
- Placement
- Counseling
- Research and Development
- K-State Research Exchange (KREX)

### Primary Activities
- Community Service
- Professional Service
- University Service
- Training / Development
- Alumni Support

### Core Business Processes
- Information Delivery
- Consulting Service
- Training / Development
- Alumni Support

### Extension and Engagement
- K-State Research Exchange (KREX)

### University Information / Knowledge Assets
- University Information / Knowledge Assets
SECTION VIII ~ Enterprise Data Map

[Diagram of enterprise data map showing connections between various departments and data types, such as Admissions, Curriculum, Human Resources, Student, Project Info, Facilities, and Financial Data.]