

Sam Houston State University



Office of Information Technology Services A Technology Planning Strategy for 2012 – 2017

Restatement of Core Components of the University Plan

Mission

Sam Houston State University provides high quality education, scholarship, and service to qualified students for the benefit of regional, state, national and international constituencies.

Core values

- ✚ Academic Excellence . . . as the firm foundation
- ✚ Engaging Environment . . . to enhance academic success
- ✚ Proactive Attitude . . . in every endeavor toward improvement
- ✚ Value Orientation . . . in all aspects of the educational environment

Vision

- ✚ SHSU will increase its instructional and scholarly influence through excellence in traditional and non-traditional instructional programs and scholarship to prepare a diverse citizenry for Texas, the nation, and the world, thereby promoting its national recognition.
- ✚ SHSU will maintain its emphasis on quality instruction and on the creation of knowledge and its application to research and service endeavors.
- ✚ SHSU will proactively develop new programs and services and promote civic engagement.
- ✚ SHSU will provide evidence of responsible utilization of resources.

University Goals

SHSU will:

1. Foster an intellectually engaging and stimulating academic environment.
2. Adopt innovative methods to improve the quality and access to instruction.
3. Adjust academic program mix to meet changing demographic characteristics and changing societal needs.
4. Maintain a culture of excellence in a supportive and collegial environment.
5. Place a targeted emphasis on marketing and institutional branding
6. Support and promote regional economic development.
7. Develop appropriate five-year plans/targets for enrollment growth and mix and its instructional and service implications.
8. Make data- and outcome-based continuous improvement a part of our daily environment.
9. Continue to develop physical facilities and infrastructure.

The IT@Sam Planning Strategy

The Office of Information Technology Services seeks to provide the highest quality technology-based services, in the most cost-effective manner, to facilitate the goals of the University.

This is accomplished through a commitment to the core values of the University by setting measurable objectives; realistic tactics to support those objectives; providing a flexible, client centric support structure; and adhering to a broad based communication + collaboration branding and communication methodology.

IT@Sam Goals in Support of University Goals

Goals	University Goal(s) Supported
1) Title: Support teaching and learning. Description: IT@Sam must support teaching and learning through effective software tools, technology enriched classrooms and labs, academic freedom with respect to technology, and cost-effective and responsive support services.	1,2
2) Title: Enhance student experience. Description: IT@Sam must enhance the student experience by providing technology and services that exceed student expectations.	1,2,5,8
3) Title: Enable research computing Description: In recognition of the growth of research and sponsored programs, IT@Sam must enable the research computing infrastructure to provide secure data management and effective computing resources.	9,1
4) Title: Communicate and Collaborate Description: Develop effective strategies for communication and collaboration across constituencies for IT@Sam to be able to foster efficiencies and adapt effectively to changing information	4,8

technology needs.	
5) Title: Facilitate professional development. Description: To retain professional staff and maintain effective IT operations, IT@Sam must have systematic training, professional development, and promotion tracks.	4
6) Title: Develop and implement an agile operational model. Description: IT@Sam must develop and implement an agile operational model that will support evolving campus needs and rapid changes in technology.	2,8,9
7) Title: Implement technology and service improvements. Description: IT@Sam must work collaboratively with campus constituents to implement technology solutions and customer service improvements with a strong emphasis on usability.	2,4,8

IT@Sam Planning

IT@Sam will consider these guiding tenets when planning and implementing this IT Strategic Plan.

- 1) Handheld, highly mobile communication and computing devices are currently pervasive among campus constituents demanding new tactics for support, integration and connectivity to campus resources.
- 2) The various components of the ERP system will require a strong continuous-improvement process as imaging, workflow, multi-vendor and in-house developed systems become increasingly integrated into a 24/7, online, real-time operational environment.
- 3) Security and privacy needs will continue to evolve over the period and require broad-based education and support to effectively meet needs for ubiquitous access with information security concerns.
- 4) Needs for effective collaboration technologies and reporting strategies will continue to increase over the next five to ten years.
- 5) For every central adoption of a new technology service or application on campus, sufficient funds will be invested to ensure adequate user support.
- 6) Capital funding for HEAF will be competitive within the University and offers opportunities for effectively funding planned, administratively sponsored projects.
- 7) Primary staff and operational funding will continue from technology fees tied to semester credit hour production. IT will be managed as cost effectively as possible to mitigate significant annual or biannual increases to these fees.
- 8) Modest gains in enrollment will assist in funding the increased IT services needed for the foreseeable future—no 'game changing' technologies are foreseen at this time.
- 9) Long term success ultimately is based on a commitment to shared values, principles, and objectives that consider business needs and supporting technology in a holistic manner.

IT@Sam Service Model

The client centric model implemented in February 2011 provides an open structure where:

1. We develop policy and governance independently from specific IT departments while incorporating client perceptions to promote collaborative decision making.
2. We open lines of communication to understanding the constituent's point of view in order to meet their expectations and needs.
3. We work as consultants in partnership with constituents.
4. We plan interactively with constituents through the use of service level agreements.

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Communicate + Collaborate

The Client Centric Services Model places the University constituent divisions at the center of IT operations. The model moves from the center outward with broader oversight and planning objectives supported as one moves to the sponsorship layer. Client Services is seen as the “front line” support organization, represented by being at the top of the model. Enterprise Services interacts daily with the same constituent divisions though from a more foundational support model. The “back office” and core systems teams work collaboratively across the IT organization.

Executive Sponsorship Mark Adams, Tom Graf, Deborah McKerall		<div><h1>IT@SAM</h1><h2>Communicate + Collaborate</h2><p>The Client Centric Services Model places the University constituent divisions at the center of IT operations. The model moves from the center outward with broader oversight and planning objectives supported as one moves to the sponsorship layer. Client Services is seen as the "front line" support organization, represented by being at the top of the model. Enterprise Services interacts daily with the same constituent divisions though from a more foundational support model. The "back office" and core systems teams work collaboratively across the IT organization.</p></div>		
Client Services Elisa Crossland				
Desktop Management Zac Braaksma, Steven Williams, Mateo Zuniga				
Web Management Rigel Anthis, Jurden Bruce, Vacant				
Service Teams To be Implemented Fall 2011 Team Assignments TBD				
Finance & Operations, Advancement and Office of the President		Client Centric Services Model		
Finance, HR, Payroll Michael Burns Casey Campbell Daniel Mendoza Drew Pilling		Student, Financial Aid, Accounts Receivable, DegreeWorks Kelly Bentsen Nina Cushman Suzette Kohers Robert Koog QiYu Li Colt Ramsden Angela Whitlock		Database and System Administration Corey Arnold Khris Coffey David Combs Corey Crawford Jeremiah Dey Steven Frey James Horn Rob Marti Matt McKnight Vacant
BDMS, SSB, Luminis, CBORD, etc. Brent Campbell, LaDonna Pesek, Elizabeth Pratt		Information Technology Architecture Thomas Dewing Norman Laskie Michael Taylor Brian Tipton		Network Administration Jason Fuermann Wes Jones Marcus Keeling Dustin Thornton Andrew Williams
Sr ERP Analysts (Vacant)				Procurement Gina Morrison Debbie Randolph Beverly Wiggins
Enterprise Services Jacob Chandler		Infrastructure and Support Services Katherine Davis		
Security Administration Project Management Tim McGuffin, Brian Baker Stephanie Brim, Grady Mangum, Kayla Stephenson, Kris Rothe				
Executive Sponsorship Mark Adams, Tom Graf, Deborah McKerall				

IT@Sam Professional Development

In April 2011, President Gibson and the Associate Vice President of Human Resources approved an information technology staffing promotion and merit track that will greatly augment the efforts to train and retain technical staff. The program provides for promotions following annual performance reviews for those staff that have the appropriate education and experience as well as the demonstrable talent and dedication to provide a higher level of support. When staff have reached their 'terminal' position, they are then eligible for merit increases tied as well to their annual performance review.

Additionally, IT@Sam has augmented the staff training budget to provide more staff training.

The approved information technology staffing promotion and merit track matrix follows:

Grade	ERP Services	Systems	Client Services
24	Sr ERP Analyst* IT Architect* ERP Analyst Manager*	IT Architect* Network Infrastructure Manager*	
22	Database Analyst IV* ERP Analyst IV*	Network Architect IV* System Administrator IV*	Lab & Classroom Services Manager* Technician IV* Web Developer IV* Software Technician IV*
20	Database Analyst III ERP Analyst III	Network Architect III System Administrator III	Software License Manager*
18	Database Analyst II ERP Analyst II	Network Architect II System Administrator II	Technician III Web Developer III
17		Data Center Manager*	
16	Database Analyst I ERP Analyst I	Network Architect I System Administrator I	
15		Data Center Assistant II*	
14		Network Administrator I	Technician II Web Developer II
12		Data Center Assistant I	Technical Trainer* Technology Inventory Specialist* Web Developer I
9			Technician I

*Indicates Merit Eligible Position. All other positions promotion track

IT@Sam Communicate + Collaborate

In addition to the client-centric service model and the staffing-development model, IT@Sam is also enhancing its communications, branding and governance. The "Communicate + Collaborate" brand is now a standing

departmental email signature and used in a monthly online newsletter sent to all of campus faculty and staff. Client satisfaction surveys were enhanced and are reviewed on a daily basis with follow-up action escalating to directors for any dissatisfied ratings.

Since January 2011, IT@Sam has had direct representation on the President's Cabinet.

The communication strategies in place include:

- ✚ Daily summary of client satisfaction surveys
- ✚ Weekly intra-departmental update on IT accomplishments, issues, and staff "shout-outs"
- ✚ Weekly Management Team meetings
- ✚ Weekly intra-departmental project planning updates
- ✚ Participation at President's Cabinet with follow-up one-on-one with the President
- ✚ Monthly IT@Sam Newsletter including client satisfaction survey summary results
- ✚ Email broadcasts for campus-wide technology notifications on an as-needed basis
- ✚ Ongoing use of listservs for target populations such as ERP functional related lists for finance; human resources/payroll; financial aid; student system; residence life, etc.

IT@Sam Governance

IT governance at SHSU is structured through the following cross-constituent methodologies.

ERP Steering Committee

Overall ERP planning management oversight is provided by the ERP Steering Committee who defines and manages milestones; authorizes contracting resources, software and hardware acquisitions; appoints team leads and subcommittee structures; and sets ERP policy. The committee consists of the following members:

- ✚ Provost, Vice President for Academic Affairs
- ✚ Vice President for Finance and Operations, Executive Sponsor
- ✚ Vice President for Enrollment Services, Executive Sponsor
- ✚ Vice President for Student Services
- ✚ Associate Vice President for Information Technology
- ✚ Associate Vice President for Enrollment Management
- ✚ Assistant Vice President for Information Technology
- ✚ Director of Enterprise Services
- ✚ Director of Audits and Analysis
- ✚ IT Project Coordinator (ERP)

Data Standards Committee

The Data Standards Committee was formed in Spring of 2010 to formulate the data standards for the ERP implementation. The Committee's ongoing charge is to oversee the overall integrity of University data, manage ERP upgrades, and provide guidance, planning and review of ongoing administrative business development. The committee consists of the following members:

SHSU Data Owners:

- ✚ Finance and Operations, VP Finance and Operations
- ✚ Student and Enrollment Management, VP Enrollment Management
- ✚ Academic Affairs, Associate Provost
- ✚ Banner General, Designated IRM

SHSU Data Custodians:

- ✚ Graduate Admissions: Director of Projects
- ✚ Undergraduate Admissions: Director
- ✚ Purchasing: Director of Procurement and Business Services
- ✚ Budgeting: AVP Budget and Operations
- ✚ Student Records: Registrar
- ✚ Banner General: Director ERP Services
- ✚ Financial Aid: Director of Financial Aid
- ✚ Residence Life: Director of Residence Life
- ✚ Human Resources: Director of Human Resources
- ✚ Payroll: Manager
- ✚ Accounting/Cashier/Accounts Payable: Controller

Other Ex-officio Members

- ✚ Audits and Analysis, Director
- ✚ Institutional Research and Effectiveness, Director
- ✚ Research Administration, Director

Information Technology Resource Council

In the fall of 2011, the newest governance committee is being formed. The Technology Council provides high-level oversight on strategic planning initiatives campus-wide; works with IT@Sam to help define service level agreements; assist in technology deployment strategies; and provides input on the 5-year strategic and capital plans. The council consists of the following members:

- ✚ Associate Vice President for Distance Learning
- ✚ Associate Vice President for Information Technology
- ✚ Representative for Provost/VP-Academic Affairs
- ✚ Representative for VP-Finance & Operations
- ✚ Representative for VP-Enrollment Management
- ✚ Representative for VP-University Advancement
- ✚ Representative for VP-Student Services
- ✚ Representative for Faculty Senate
- ✚ Representative for Staff Council
- ✚ Representative for Student Government Association

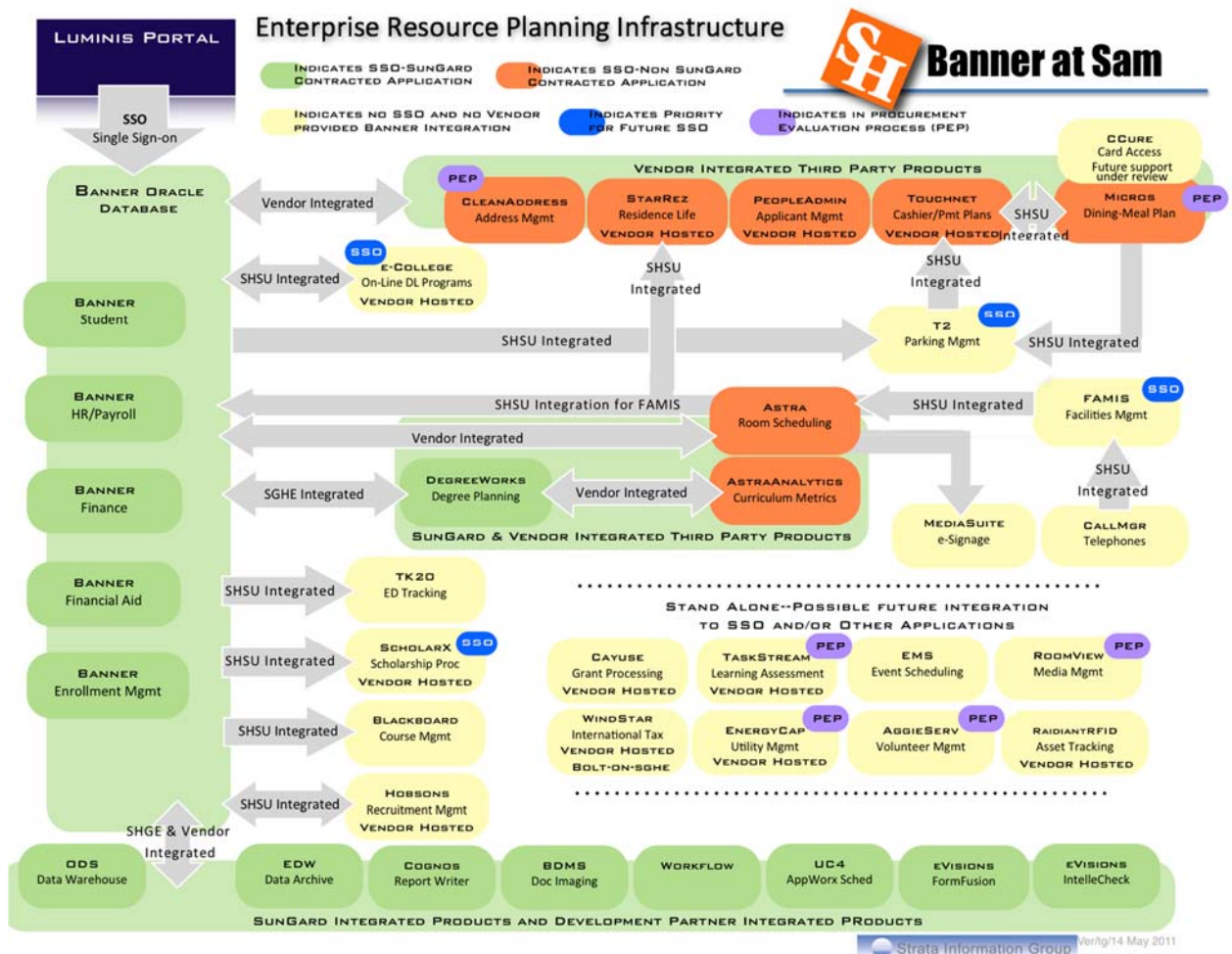
Web Resource Development Council

[Info and membership go here]

IT@Sam Enterprise Resource Planning Infrastructure

The IT environment at SHSU has moved very aggressively in the past three years from a highly customized in-house developed legacy ERP to a system that consists of SunGard Banner, many associated third party software applications and services, and in-house applications. The ERP project has completed Phase I of its implementation and is live on Financial Aid, Finance, Human Resources and Payroll, Student, Enrollment Management, Residence Life, Cashiering, Operational Data Store and Reporting, as well as utility applications such as Workflow, Imaging, Scheduling, etc.

Phase II was launched in the Spring of 2011 as a more ongoing process of creating a significant number of workflows within and across systems, enhancing single sign-on and integrating additional applications into the ERP. The following diagram represents the ERP infrastructure.



IT@Sam Security Awareness and Risk Assessment Planning

To help mitigate risks to data security and to address personal identity protection in compliance with statutory and TSUS guidelines, IT@Sam has developed an annual awareness training and risk assessment review. The program is structured in three phases: security awareness and risk assessment activities; assessment of results and documentation updates; and program reporting and closeout. The following diagram illustrates the annual cycle.

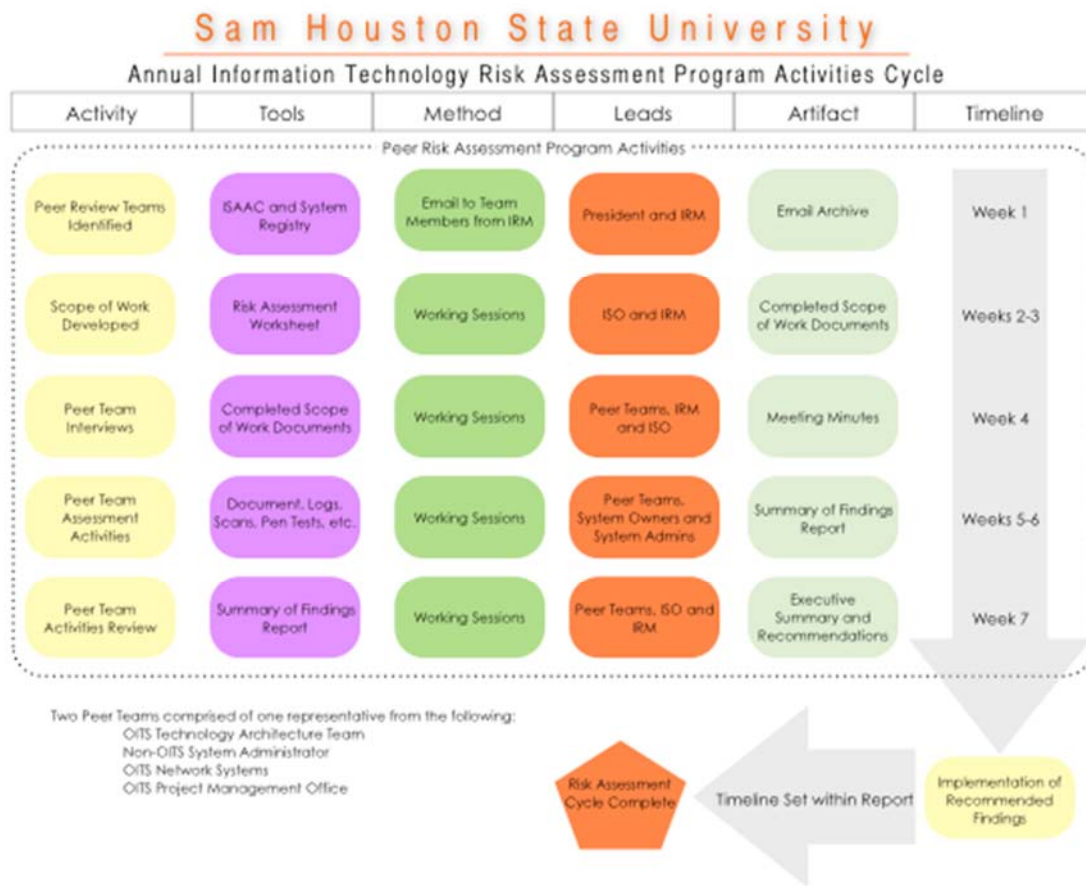
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Annual Information Technology Security Program Cycle



Additionally, the Data Owners, working with the University designated Information Resource Manager (IRM) determines the criticality of systems based on objective criteria for how the system is used and the constituent base served. Annually, the ISO updates ISAAC (DIR risk-assessment tool) for a peer review

team to assess the effectiveness of the management by the system owners and system administrators as it pertains to the overall system architecture; security management; budget and planning; and data management. The risk assessment program activities and timelines are illustrated in the following diagram.



IT@Sam Objectives in Support of IT@Sam Goals

Objectives developed in support of the IT@Sam goals are incorporated into a five-year capital plan that ensures that tactics don't remain simply a wish list for IT but rather a dynamic, date driven, work plan. Many objectives logically support different IT@Sam goals. All must support at least one goal to ensure that the information technology support at SHSU is driven by the University Mission, Vision, Core Values and Goals. IT@Sam objectives are a means to an end and not an end in themselves.

Objectives (Should be quantifiable, and should be focused on improvement or sustaining current level of performance.)	KPI (include timeframe)	Timeframe	Goal(s) Supported
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1) Implement a structure for integrating business process mapping and usability analysis into IT@Sam projects.	Business process mapping and usability analysis are applied to IT@Sam projects by March 2012	March 2012	1, 2, 4, 6
2) Publish results of assessment and evaluation efforts.			4, 5
3) Introduce technologies to allow for laptops as a primary workstation for faculty and staff that have ongoing needs for mobile computing.	Complete by January 1, 2012/High		1, 3, 4, 6
4) Augment client services through implementation of new knowledge base, incident management and asset tracking software and/or services.	Complete by January 1, 2012/High		All
5) Implement a four-year computer replacement program for faculty and staff to ensure adequate resources and cost effective operations.	In place by September 1, 2011 and on-going/High		1, 3, 6
6) Migrate network infrastructure to support enterprise class multi-protocol label switching in core and server components.	Complete by August 15, 2013/High		3, 6
7) Migrate network infrastructure to support enterprise class multi-protocol label switching for end point distribution.	Complete by August 15, 2014/Phase II		3, 6
8) Implement service level agreements with campus constituents through the service team support model.	Complete by January 1, 2012/High		All
9) Work collaboratively with DELTA to ensure an effective, efficient and flexible learning management system environment is provided for campus.	On-going/Standard		1, 2, 3
10) Monitor and manage campus wireless infrastructure in a manner that will facilitate faculty and students to utilize mobile technology to enhance and facilitate academic achievement and experience.	On-going/Standard		1, 2
11) Identify campus software add-on enhancements or application features that promote and enable collaboration and data sharing among faculty, staff and students.	On-going/Standard		1, 2, 4
12) Implement a fee-based staffing augmentation solution that allows IT to facilitate core technology service support for research functions or to provide oversight as appropriate for operations.	On-going/Standard		3
13) Implement an enhanced IT@SAM website providing a service catalog for constituents to easily identify options available and services provided.	Complete by January 1, 2012/High		1, 2, 4
14) Develop and publicize, a plan for annual professional development opportunities for IT staff, that encourages and enables participants to be qualified for promotion consideration.	In place by September 1, 2011 and on-going—updated annually/High		5

15) Engage faculty and staff to review current business processes and identify software or resource options that can be provided in order to more effectively or efficiently meet campus goals.	On-going/Standard		1, 2, 4, 6
16) Develop more formal customer service provision expectations for both internal and external customers.	In place by January 1, 2012 and on-going—updated annually/Standard		All
17) Create QA review process, through user group feedback loops for continuous QA improvements.	In place by January 1, 2012/Standard		All
18) Provide E-mail archiving, retention, additional storage and mailbox resiliency by implementing Exchange 2010	Complete by January 1, 2012/High		1, 2, 3, 4, 6
19) Provide IM, Presence, Audio Video and Web Conferencing by implementing Lync 2010.	Complete by May 1, 2012/Standard		3, 4, 6
20) Implement separate Production server virtualization cluster from Development to continue in virtualizing server infrastructure to reduce physical footprint, lower energy costs, and increase speed of deployment.	Complete by August 1, 2013/Standard		6
21) Implement second on-site data center facility to provide local disaster recovery and business continuity.	Complete by August 1, 2015/Standard		1, 3, 6
22) Convert common sign-on systems to single sign-on to provide faster and more convenient authentication.	Complete by January 1, 2017/Standard		1, 2, 4, 6
23) Implement a Service Catalog.	Complete by August 1, 2015/Standard		1,2,4,6
24) Centralize documentation of contracts, hardware, and software renewals to assure faculty and staff do not have an interruption in technology services.	Complete by August 1, 2015/Standard		All
25) Implement a structured ERP upgrade process to ensure that the ERP products are regularly updated.	Ongoing/High		1, 6
26) Promote and further develop the data classification strategy to ease reporting while promoting security and privacy.	Ongoing/High		1, 4
27) Provide Oracle and SQL Server training for DBAs.	Ongoing/High		5, 6
28) Upgrade Application Server to Oracle 11g.	Complete by August 1, 2011/High		5, 6
29) Implement Workflow to support efficiencies and process automations.	August 2011 and on-going/High		1, 4, 6
30) Conduct Java, Spring, Groovy, Grails training to support the future direction of the ERP system.	Complete by May 1, 2012/Standard		1, 2, 5, 6
31) Participate in Code Camps and Community Source Initiatives to promote professional development, enhance Banner, and support new needs of our campus.	On-going/Standard		1, 2, 4, 5
32) Implement Banner TReX to automate the import of electronic high school transcripts.	Complete by January 1, 2012/Standard		1, 2,
33) Integrate Banner with Cayuse.	Complete by August		3, 4

	1, 2013/Standard		
34) Integrate Banner with PeopleAdmin.	Complete by August 1, 2012/Standard		1, 4, 6
35) Upgrade FAMIS to xir3 and integrate with Banner.	Complete by August 1, 2012/Standard		1, 4, 6
36) Implement client-centric service teams to support incident management and technology request fulfillment for faculty and staff.	Complete by January 1, 2011/Standard		All
37) Develop a "Service-Oriented Architecture (SOA)" for IT@Sam based on "IT Infrastructure Library (ITIL)" best practices. This project, which will include a comprehensive ITIL training program for all IT@Sam full-time staff, will result in a fully service-oriented approach to managing information technology services at SHSU.	In Place by January 1, 2012/High		All
38) Reallocate funds previously used for student salaries and supplement to provide dedicated full-time staff positions in key service areas.	Complete by January 1, 2012/High		All
39) Fully implement a campus-wide, enterprise-class "Content Management System (CMS)" to support SHSU web development needs.	Complete by January 1, 2014/Standard		1, 2, 3
40) Continue building the comprehensive branding and marketing plan for IT@Sam to help foster communicative and collaborative interactions with SHSU faculty, staff and students.	Complete by January 1, 2011/Standard		4
41) Implement a "Green IT" program through implementation of power-management, supply and equipment recycling, and supply/resource conservation.	Complete by August 1, 2013/Standard		6
42) Develop a new IT@Sam website that empowers faculty and staff with self-service tools and training materials.	Complete by August 1, 2012/High		1, 4, 6
43) Develop and publish structured processes for IT@Sam services including requesting and upgrading campus software, technology purchasing, web and desktop services in order to empower faculty and staff with the tools needed to support planning.	In place by September 1, 2011 and on-going—updated annually/Standard		1, 2, 3, 4
44) Continue to develop and enhance faculty and staff training programs to support implementation of emerging technologies (e.g. social media) and campus technology priorities (e.g. cyber security).	In place by September 1, 2011 and on-going—updated annually/Standard		All