

**THE UNIVERSITY OF TEXAS AT SAN ANTONIO
TRANSFORMING LEARNING AND SERVICES THROUGH TECHNOLOGY
STRATEGIC PLAN FOR INFORMATION RESOURCES MANAGEMENT (2003-2007)**

Mission Statement of the Office of Information Technology, UTSA:

To provide innovation, leadership and operation for the University's information technology environment, to ensure availability and reliability of the technology-based information management infrastructure and tools that support the University's mission of teaching, research and public service.

Goals, Objectives and Strategies

IR Goal 1: Enhance the instructional and research missions of the University through the use of information technology.

The University will continue to provide advanced levels of technology to support students and faculty, in keeping with the institutional emphasis on learning technologies and research facilities.

Supports Agency Goal A – Instructional and Operational Support

Supports Statewide Goal 1 – Transformation of Government

Supports Statewide Goal 4 – Access and Participation

Objective 1 – Continue the evolution of the learner-centered environment through appropriate teaching and communications technologies.

Strategy 1 – Distance Learning Initiatives

Continue expansion of distance learning classes and facilities; participate in the University of Texas TeleCampus, augment Library services with further application of distance learning strategies

Strategy 2 – Asynchronous learning

Continue sponsorship of new courses available online; support the WebCT courseware management system; provide integration with Student Information system to promote electronic record-keeping and retrieval in support of classes, individual studies and advising.

Strategy 3 – Student and faculty training and support

Ongoing instruction in basic computer skills and concepts to enable ease of learning in electronic environments; addition of general-purpose labs as needed in new buildings.

Strategy 4 – Departmental labs, faculty development labs

Continuing expansion and support of special – purpose labs with computing software and hardware appropriate to the discipline or the project within the discipline.

Strategy 5 – Increased student access to technology

Equip additional integrated electronic classrooms; provide more areas for students to use laptops.

Objective 2 – Place emphasis on support for research as UTSA continues to add graduate programs and degrees.

Strategy 1 – Continue to seek outside sources of funding

Many opportunities are becoming available through grants and gifts; UTSA has been the recipient of a number of grants from the Telecommunications Infrastructure Fund; additional cooperative projects will be pursued.

Strategy 2 – Identify new initiatives for pilot programs with faculty and departments

As the University expands its upper level offerings and programs, opportunities for innovative projects will be sought and funding requested.

Strategy 3 – Participate in Internet2

Increased availability of network capacity for large computational projects will offer scholars the opportunity to conduct research not possible with present networks facilities.

Objective 3 – Build technologies to support the advanced resources needed in the Library.

Strategy 1 – Increased digital collections and archives.

The library collections are a key resource for the University's research mission.

Strategy 2 –Support for specialized collections

Support the increased capacities required by the photographic collection of the Institute of Texan Cultures.

Strategy 3 – Reorganize electronic resources and provide indexes.

The complexity of electronic databases and other resources makes necessary the utilization of Knowledge Management software and supporting hardware

Strategy 4 – Scholarly publication

Make possible the Library's participation in digitizing theses and dissertations, and facilitate scholarly publishing.

Strategy 5 - Research portals

Provide Web-based tools and connections that aid in the accumulation and organization of scholarly information.

Strategy 6 – Geographic Information System

Provide a standardized GIS for use by Library patrons.

IR Goal 2: Provide secure and reliable technological infrastructure for the campuses.

The University will maintain state-of-the art connectivity and technologies throughout the campuses.

Supports Agency Goal A – Instructional and Operational Support

Supports Statewide Goal 1 – Transformation of Government

Supports Statewide Goal 4 – Access and Participation

Objective 1 – Enable access for all students, faculty and staff members, as well as parents and public, to the basic electronic tools used to support the curriculum and academic progress.

Strategy 1– Access to email

Provide email access to all student, faculty and staff through a single email system.

Strategy 2 – Multipurpose, general computing labs

Continue to provide basic computing facilities available to enrolled students.

Objective 2 – Maintain currency in all areas of hardware and communications equipment.

Strategy 1 – Hardware and software inventory review.

Analyze replacement and expansion needs on an annual basis.

Strategy 2 – Replacement cycles

Replace all equipment on planned cycles; includes servers, desktops, and telecommunications equipment

Objective 3 – Ensure Quality of Service

Strategy 1 – Extend network to new buildings

The ambitious building schedule that has dominated planning for Information Technology over the past decade continues; the present network configuration is state-of-the-art, but must be extended to new sites both on the Main campus and at the Downtown campuses.

Strategy 2 – Continue to build redundancy in the network

Bring the level of redundancy to 100%, including new extensions of the network.

Strategy 3 – Distributed support services and Help Desk

Continue to build services dedicated to timely response for user problems; provide continuing technical training to personnel in these service areas.

Objective 4 – Introduce new access and infrastructure technologies

Strategy 1 – Wireless and VoIP

UTSA has pilot projects in the areas of wireless, in the University Library, and Voice over IP. Continue the efforts to integrate these services as academic initiatives are funded.

Strategy 2 – Unified messaging

As it becomes feasible, UTSA will implement unified messaging for faculty and staff.

Strategy 3 – Storage area network

A critical area for further growth and for continued service is increased data storage, along with management tools for organization and monitoring.

Objective 5 – Increase security in existing and planned technologies

Strategy 1 – Network

Continue projects to install Virtual Local Area Networks to achieve increased segmentation of the network, and provide further layering of the access paths; provide Virtual Private Network technologies for faculty and staff off-campus access.

Strategy 3 – Application security

Develop further security for client-server applications throughout the network.

Strategy 4 - Secure wireless technologies

Access to the University's resources through wireless is expected to be a high priority in the near future, and UTSA will follow the standard as it is developed.

Strategy 5 – LDAP, single sign-on

Critical systems will be protected by directory services, requiring a single point of access and authentication procedures.

Strategy 6 – Telephone firewall

Plans call for the installation of the firewall in the 2002-2003 fiscal year, but further protection of the telephone system will be employed as needs are identified.

IR Goal 3: Improve administrative effectiveness through use of innovative technological applications, driven by customer needs.

The University will use technology to enable self-service, customized service and communication with students, parents, faculty, staff and public.

Supports Agency Goal A – Instructional and Operational Support
Supports Statewide Goal 1 – Transformation of Government
Supports Statewide Goal 4 - Access and Participation

Objective 1 – Effective electronic resources for administration of the University’s records and program

Strategy 1 – Student information system

The initial implementation of Banner, the student information system, is expected to be completed in 2002. Over the following two years, further development is expected, with upgrades supplied by the vendor, as well as integration with other systems.

Strategy 2 – Increase participation in data warehouse

Data warehouse applications, both at the University of Texas System level and at the campus level are expected to grow. Data mining and knowledge management systems will be required in order for UTSA to take full advantage of the information available for executives and managers.

Objective 2 – Expand facilities for e-business and Web services

Strategy 1 – Portal

Significant effort will be devoted to acquiring and/or developing applications to support the University’s proposed information portal. As potential Web-based services are identified the portal is expected to be central to all inquiry and transaction processing for administrative information.

Strategy 2 – ADA compliance for Web services

UTSA will bring all Web pages into compliance with 1 TAC 206.

Objective 3 – Additional functionality and services

Strategy 1 – Recruiting capabilities

As the Banner implementation draws to a close, auxiliary systems for student recruiting will be added.

Strategy 2– Document imaging

Currently UTSA has a small pilot for document imaging. With the next biennium a centralized system will be evaluated, along with the software for archiving and managing official records. Complete implementation of the systems will continue into the 2004 –2005 time frame.

IR Goal 4: Improve information management and stewardship.

The University will continue to adopt standards and best practices in information management for privacy, security, suitability and availability. Redundant services will be eliminated.

Supports Agency Goal A – Instructional and Operational Support
Supports Statewide Goal 2 – Information Management Practices
Supports Statewide Goal 3 – Stewardship of Information

Objective 1 – UTSA will complete provisions for the management of information security.

Strategy 1 – Prepare campus for HIPAA security.

The requirements for protection of the health-related information in research and health-care systems mandated by the Health Insurance Portability and Accountability Act of 1976 will be met.

Strategy 2 – Disaster Recovery/Emergency Preparedness

Complete disaster recovery provisions for all campuses and all critical information systems. Design further protection for networks and large computing resources in an emergency.

Strategy 3 – Maintain information security policies and document all procedures.

UTSA will continue to adopt policies based on the requirements of the Department of Information Resources rules and customized to fit the academic environment.

Strategy 4– Enhanced security training for systems administrators in the field

Security is maintained by numerous employees, in the central department and throughout the campuses' academic departments. A robust training program will be in place for currency in security issues and technologies.

Strategy 5 – Physical security.

Distributed computing and the addition of many mobile computing devices will require new models of physical protection and awareness.

Objective 2 – Information Management Practices

Strategy 1 – Records management

Implement a full electronic records management program, with emphasis on training and management software for archiving.

Strategy 2 – Configuration management

Given the complexities of the information systems being planned or proposed, a complete configuration program will become necessary.

Strategy 3 – Software Management program

Continue to develop the software management program and the automation of license inventories.

Strategy 4 – Participate in common architecture

UTSA will conduct a review of production systems and databases to arrive at a shared architecture designed to eliminate redundancy of service, while providing more security for critical applications.

Strategy 5 – Quality assurance.

Quality assurance practices will be applied to all projects.

Program support – The above Objective and Strategies support the many and varied programs of the University, and are directed strongly towards its academic mission. The services provided and planned are distributed in nature, coordinated by the Office of Information Technology.

The University of Texas at San Antonio Current Environment

Priorities

The University of Texas at San Antonio places a great deal of emphasis on ongoing strategic planning efforts, involving many departments and campus leaders, and the priorities that result from such efforts. Projects involving computing, voice, data and video technologies are approved by Executive Officers in support of strategic goals and initiatives. Other allocations can be made at the departmental level with the concurrence of the Deans or Vice-Presidents and through the customary budget processing. Some specialized systems are acquired through grants.

Projects involving student educational activities and academic services are generally given high priority as a result of the planning process.

Information Resources Planning Methodology

During the summer of 2002, a committee will be established to review priorities for information technology projects, head by the Chief Information Officer and Associate Vice President for Information Technology. Recommendations of the committee will be forwarded to the executive level for approval.

Most projects involving acquisition or development of technology are initiated at the user level, either as a result of a needs assessment or through the work of a task group appointed by one of the Vice Presidents to complete the analysis of a specific topic or procedure.

Operating Systems

Since information technologies are implemented in the context of cooperative participation in the UT-Systems major projects, operating system standards are set to match the shared environment. In addition, the University's use of the DEFINE system at UT-Austin for our fiscal and human resource processing further make it necessary that UTSA use compatible systems and standards. The other strategic statewide standards for all technologies are followed at UTSA.

Additionally the Office of Information Technology supports Windows '95, '98, 2000, NT, UNIX, and MAC OS.

Software Audit and Management

Each department conducts a software inventory under the management of the UTSA Software Manager, listing name, version, the number of licenses in use and number not needed. The department will take action to have unused applications removed and determine cost savings that result. The aggregate figures and data will be reported to the Department of Information Resources and a university-wide database will be created, so that subsequent reporting can be made in a timely manner.

Quality Assurance Practices

Information resource projects are under the direction of the Office of Information Technology, which is developing guidelines and templates to aid in the systematic reviews inherent in the quality assurance process. No project is at the present time undertaken without an analysis of risk and estimates of benefits. All projects are subject to the scrutiny of the Internal Audit office and of the University of Texas System auditors. UTSA will formalize all seven steps required by the Information Resources Management Act within the present fiscal year, including:

1. 1. Planning project development: in place
2. 2. Determining the projected benefits: in place
3. 3. Developing and implementing management control processes: in place
4. 4. Projecting the budget: in place
5. 5. Analyzing risks: in place
6. 6. Establishing standards by which effectiveness can be measure: to be formalized
7. 7. Evaluating and reporting on project after completion: to be formalized.

E-Government

A number of initiatives are underway to implement e-business in the UTSA and UT-System environment. The University has redesigned the network to protect the administrative intranet and secure it through use of firewalls and similar filters so that Internet-based transactions will be protected.

At that time two-way transmission of forms and other business transactions has been enabled. An continuing effort is made to use effective methods of authentication and encryption to enhance the security transactions and communications into and out of the protected intranet. One such exchange is already possible through the use of PKI to submit budget documents to UT-System administration offices in Austin.

Additionally, UTSA has been successful in working with a third party vendor to implement collection of fees in Banner, the Web-based student information system, as well as adopting Web-based enrollment, application for admission and similar student services and communications.

Change Control.

The University adheres to strict standards for change control, encompassing separation of duties, full documentation and oversight. There is a separate test environment for the development and testing of programs. In the production systems code is recompiled before promotion to production through a software interface and the compiled module moved into production under the same automated system. Audit trails of all changes to the systems are kept. No programmer can update either production data or programs. All changes are subject to testing and review before presentation to the end-user, who must approved the results and sign off on the project before the move takes place.

Configuration management is in the hands of systems administrators and programmers under the supervision of the Directors of each section.

Both of these processes are reviewed periodically by auditors and are being expanded to function within the new Banner environment.

Security

UTSA has achieved increased levels of compliance with the published standards, having completed and documented a Security Risk Analysis, which is continually being updated, and put various hardware and software controls into place. Other steps toward compliance include the redesign of our network, now completed, an enhanced training and awareness program and ongoing policy development. The efforts to implement digital signatures and authentication will also strengthen compliance with DIR standards and should be in place throughout the TriCampus during the next biennium.

Geographic Information Systems

The University will investigate the use of GIS during the next year.

Disaster Recovery/Business Continuity Planning

UTSA bases its disaster recovery plans on risk assessments of critical processes, and is continuing to develop business continuity plans and emergency response plans.

The replacement of the mainframe and installation of the new student information system has made it necessary to reconfigure the disaster recovery provisions that have been in place. The University will propose that the backup site be located at the Downtown campus, approximately 15 miles from the central processing site and that vendor

contracts be adjusted to supply equipment. In some instances the site can mirror the critical application and eliminate the need for a hot site.

UTSA uses fiscal and human resources systems located at and shared with the University of Texas at Austin. A separate disaster recovery agreement is planned to cover those systems.

Contract/Consultant

The policies and procedures for use of contract workers and consultants are the same across all components of the University of Texas System and can be found at <http://www.utsystem.edu/BPM/43.htm>. These policies apply to all information resource contracted services. The contracts are monitored by the Office of Financial Services.

Information Sharing

Within the limits of Federal law, data are shared with Texas state agencies on a case by case basis. The approval of an Executive Officer is sought before the information is released. External entities may have limited access to data for financial transaction or similar purposes. UTSA abides by all provisions of the Open Records Act and considers each external request on the basis of merit.

Training and Continuing Education

The Offices of Information Technology works with the campus department of Human Resources to specify educational background for each position. Certain standards are also set at the UT-System level for generic job descriptions. Tracking for training received is included in the annual evaluation process. Additionally all training through the University training program is recorded on a central database.

Data Center Operations

Because the University is currently moving to a client-server based systems, no plans for migration to the West Texas Disaster Recovery and Operations Center have been planned. As the changeover takes place the University will take suitable action to contract for services or to apply for a waiver.

Procurement

The policies and procedures for procurement of information technologies by the campus are rigorously observed and monitored by the Office of Purchasing. Procedures involving the various purchasing methods are audited regularly and any lack of compliance is reported to the Compliance Committee of the University. The bulk of the transactions involving desktop purchases are conducted by the Office of Information Technology on behalf of the departments and are evaluated in terms of leasing vs. purchasing. All other purchases will be reviewed in a similar manner.

Personal Computer Replacement Schedule

UTSA has had a replacement program for six years. Funding is supplied on a yearly basis to replace as many computers as possible, and the specifications for replacement are defined. The program is in compliance with the DIR PC Life Cycles guidelines.

Standards

The DIR standards have been adopted at UTSA and are in full implementation. The only exception is the Directory standards, and UTSA is initiating a project to install LDAP services as a follow-up to the implementation of the Banner student records system.

The University of Texas at San Antonio

Databases and Applications

Database Name	CAIRSS
Database Description	Research, Articles on Music Therapy, Users include Facility, Staff and Students.
Database System	Marc
Estimated Physical Storage Requirements	
GIS Data Classification	N/A
Sharing	Available to anyone over the web
Future	N/A

Database Name	Chauer
Database Description	Biographical References, Users include Facility, Staff and Students.
Database System	Marc
Estimated Physical Storage Requirements	
GIS Data Classification	N/A
Sharing	Available to anyone over the web
Future	N/A

Database Name	Graduate Students
Database Description	Database of student inquires about UTSA graduate programs
Database System	Access
Estimated Physical Storage Requirements	47.4MB
GIS Data Classification	N/A
Sharing	UTSA Colleges
Future	None

Database Name	Candidate for Graduation Tracking database
Database Description	To process and monitor candidates for graduation, prepare diplomas, etc.
Database System	Access
Estimated Physical	

Storage Requirements	
GIS Data Classification	No
Sharing	No
Future	None

Database Name	Enrollment Management Action System
Database Description	Recruiting database
Database System	FoxPro
Estimated Physical Storage Requirements	
GIS Data Classification	N/A
Sharing	N/A
Future	Researching upgrades, no commitments at this time

Database Name	Datacard
Database Description	Database for the UTSA ID card, personal info and images of all UTSA ID card holders
Database System	Oracle
Estimated Physical Storage Requirements	43.7MB
GIS Data Classification	N/A
Sharing	None
Future	N/A

Application Name	Endeavor 2000
Application Type	Client Server
Application Description	Manage Library System. Includes Catalog, Acquisition, Serial Controls, Public Catalog modules. Users include Facility, Staff, and Students.
Database System	Oracle
Development Language	N/A
Sharing	N/A
Future	N/A

Application Name	ISIS (Replaced by SCT Banner - August 31, 2002)
Application Type	Mainframe
Application Description	Student Records. The primary modules include academic history, course scheduling, registration admissions, financial aid, tuition and fee records, and institutional reporting. Through mainframe-based, the system has been upgraded to three-tiered client-server, with a presentation layer o the WWW.
Database System	ADABAS
Development Language	Natural, Visual Basic
Sharing	N/A
Future	Replace the existing system with a Client Server environment.

Application Name	SCT Banner
Application Type	Client-Server
Application Description	Student Records. The primary modules include academic history, course scheduling, registration admissions, financial aid, tuition and fee records, and institutional reporting.
Database System	Oracle
Development Language	N/A

Sharing	N/A
Estimated Physical Storage Requirements	150G
Future	

Application Name	Applicant Tracking System
Application Type	Database
Application Description	Maintain a database of qualified applicants
Database System	Access
Development Language	N/A
Sharing	N/A
Future	N/A

Database Name	ITC Photographic Catalog (In Process)
Database Description	Catalog of photographic materials from ITC for access by faculty, students, staff and anyone with access to the Internet
Database Type	Uses the Endeavor System – Oracle database containing MARC records which will eventually have links to photographic digital images.
Estimated Physical Storage Requirements	This will be a continuously growing database. We are starting with space for about 40,000 records but it has the potential of growing to more than 1 million.
GIS Data Classification	N/A
Sharing	Sharing between the ITC and the UTSA Library. Since both are part of UTSA I don't know if this is really considered as sharing but these two entities are administered separately.
Future	Intention is to convert the "vertical file" records. Provide links to jpg images so that customers may see the image and then request an order for the image. The ITC Library has literally millions of slides, photographs, negatives, and transparencies. At the moment there is limited access to these collections as no information has been online. This catalog will be the basis for the organization and bibliographic control of these collections. This will also assist in some preservation since the photos will not get repeated handling. It is not the intention of this project, however, to create a digital archival collection.