



California State University, Los Angeles

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Information Technology Services

Strategic Plan 2008 – 2013



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Managing information technology within the higher education world is much like navigating a space mission. We cannot stop our work to appreciate meeting our planned objectives because a different and technologically more diverse horizon is already appearing. As we execute our mission to provide critical baseline technology, it must be done with care to ensure security and information assurance. We must prepare and test our plans for responding to possible emergencies we can anticipate, and we also must be able to react quickly to unknown, unanticipated threats. And we simply cannot fail in our mission to provide an effective, yet flexible, infrastructure upon which is built the teaching and learning tools required by our students and faculty.



Peter Quan, Vice President for ITS and Chief Technology Officer

Introduction

Information technology in the 21st century has become the unseen, yet strategic underpinning for any organization. But it is much more complex than the telephone and electronic communications now so common in our daily work and study routines that we simply expect continual availability and reliability of the latest technological trend.

For Cal State L.A., information technology has become critical to the achievements and success of the campus itself. Without this inherent technology, our students would not be able to apply to multiple campuses remotely and simultaneously; register and pay for classes from the comfort of home; communicate with professors at any time of day; receive campus notifications and communications targeted by student discipline, class, or interest; participate in online courses; and securely view grades online. The use of technology in education is supporting and changing how our faculty teach, our students learn, and our staff and administrators work. Information technology does not simply function as a service or utility, but rather advances the campus teaching, research, and public service mission.

The greatest challenge that Information Technology Services will face over the next five years is not technology-related. Our most difficult challenge will be to do more with what we have or possibly with less. Cal State L.A. must remain in alignment with the University strategic directions and goals; meet accreditation requirements; anticipate and proactively react to the fast changing technological future; satisfy shifting expectations; take on unfunded mandates – and do all this while facing a reduction in state budget funding. The CSU budget is tied directly to state resources, so as the state's economy fluctuates, so does campus funding. The current California economy is not promising a prosperous outlook for the next five years.

It is time for the entire CSU entity to develop new strategies to mitigate the adverse impact of budget fluctuations. These strategies must be explored and implemented as a compliment to this Cal State L.A. strategic plan because without new strategies, successful execution of this plan becomes uncertain. The CSU must:

Leverage the strengths of campuses, systems, and consortiums. If we look at the 23 campuses, we see strengths on some campuses that are not possible on others. The CSU must evaluate these strengths to determine how they can be leveraged for the greater good of all campuses. The CSU needs to act more as a single unit, and not 23 individual campuses. Sharing systems and resources, and utilizing consortiums can work toward successfully holding down costs for the CSU at large. The CSU should continue to leverage on past successes with the Common Management System (CMS) and the Information Technology Refresh Program (ITRP) by improving them and revising the CSU model for efficiency.

Place renewed emphasis on self-service. High quality self-service should be viewed as a CSU strategy that can maintain service levels standards for students while allowing campus faculty, staff, and administrators to focus on other tasks. All business processes must be streamlined for efficiency and effectiveness, and self-service applications incorporated wherever feasible. Hand-in-hand with this must be a robust information technology infrastructure that supports and integrates both academic and administrative activities.

Align information technology investments with both the campuses' and CSU's strategic goals and objectives. This become critically important as the CSU looks to support new modes of instruction. This can occur only if campus information technology continues to be funded as a critical infrastructure component, and on a sustained basis. The funding must also anticipate demand, and provide for scalable data center and network services.

Nurture collaboration among all CSU constituents. Collaboration is a vital key to success. Campus divisions must work together toward common information technology achievements. Multi-campus and system-wide exchanges can elevate and stabilize the information technology planning, execution, technical knowledge, remediation, and training for all campuses.

In closing, I believe that in order to succeed, we must be dedicated to a new model – one of a single CSU entity that places importance on leveraging strengths and promoting collaboration among all campuses, and views funding for information technology as a strategic priority. Our investment in the Integrated Technology Strategy has soundly guided the course of our achievements to date, but Information Technology Services must remain dedicated to reaching its promise of anytime, anywhere access for all.

Peter Quan, Vice President for Information Technology Services and
Chief Technology Officer

ITS Vision Statement

Information Technology Services strives to provide all students, faculty, and staff with anywhere, anytime electronic access to information resources in support of the teaching/learning mission of the University.

ITS Mission Statement

It is Information Technology Services' mission to provide the technology infrastructure, support services, and resources that support the University's Strategic Directions and Goals and to ensure that information security assurance remains an institutional priority.

The CSU Planning Process

In 1996, the Integrated Technology Strategy (ITS) was adopted as the official policy framework for the system by the California State University Board of Trustees. The CSU developed the strategy framework and baseline requirements necessary to utilize technology to improve: the personal productivity of students, faculty, and staff; the quality of learning and teaching; the quality of the student experience; and administrative productivity and quality. This remains the model for our campus to address technology needs of students, faculty, and staff, and for developing initiatives to take advantage of emerging technology. Staying this course is a crucial part of our strategic planning.

For Information Technology Services, progress toward meeting full Baseline requirements for hardware (workstations), software, network access, training, support, 24-hour access, and security continues, but the vision of providing anytime, anywhere access remains unfulfilled. Success has been strongest in the area of workstations, where all full-time faculty and staff have computers or laptops that meet both hardware and software Baseline standards and are refreshed every three years. Support for part-time faculty is expected to meet these same standards in 2008. But by 2007/2008, only slightly more than 50% of general lecture classrooms were permanently equipped to accommodate computer-based, multimedia presentations, although the use of 30 mobile units increased the percentage to 63%.

Cal State L.A. is one of five campuses in the CSU that has not integrated its learning management system (LMS) and student administration system (GET). The campus has performed significantly better in providing a state-of-the-art technology network with Gigabit backbone services, fully switched 100 Mbs service to the desktop and into every instructional space. Our campus is one of only three in the CSU system that has more ports fully compliant than was defined in the Baseline documents. However, the campus must continue to sustain this existing infrastructure, refresh components, and provide redundancy for 24/7/365 availability.

The campus has implemented 100% of all Baseline-recommended policies and practices for providing technology training for faculty, staff, administrators, students, and IT professionals. The challenge remains to provide training support and services during timeframes that better align with user needs and availability. The ITS Help Desk expanded its hours of user support from 49 to 61 hours per week during 2007, but this still falls short of two campus goals for weekend coverage and for 24/7 coverage.

Security, which is the foundation for all Baseline components, presents ever-changing and often unanticipated challenges and unplanned expenditures. Homeland Security, new federal and state laws and regulations on information security, pending FERPA modifications, new Chancellor's Office Executive Orders, CSU policies, and e-discovery are only a few of the issues to which the campus must respond. While the campus has been successful in securing its technology infrastructure, new threats emerge daily and ITS must remain positioned to upgrade or add to the existing security arsenal. Software applications need revision or upgrades to meet new legal language and requirements. Additional equipment must be procured to retain electronic evidence and records if required to do so. And students, faculty, staff, and administrators all require ongoing information security awareness training with differing topics.

See Appendix B, Evaluation of CSULA Measures of Success for 2006/2007, for a full assessment of Cal State L.A.'s Baseline achievements. This summary report is based on the more extensive *Measures of Success* report prepared for 2006/2007.

The Campus Planning Process

The most influential guide for ITS planning remains the *2008-2013 Strategic Plan for California State University, Los Angeles*. The campus Strategic Plan serves as the overarching definition for where the institution is going, how it is going to get there, and how it will know if it got there or not. Subsequently, divisional Strategic Plans establish the divisions' supporting priorities, and campus resources are then allocated accordingly. The campus plan is authored by the University Strategic Planning Coordination Committee (SPCC), which is comprised of twenty-one members, with representation from the vice presidents, deans, directors, faculty, the Academic Senate, and Associated Students Inc. (ASI). Consultation and communication occurs throughout the writing process with all stakeholders in the campus community at-large.

While the campus Strategic Plan lays out the course, executing the plan requires institutional alignment to ensure not only that all employees of the institution are working toward these strategic goals, priorities, and core values, but that business processes and resources are also so directed. In response to this challenge, the following action plan was developed in 2004.

- Vice presidents required all Management Personnel Plan (MPP) employees in their respective divisions to develop an annual work plan in support of the division and campus strategic plans.
- Process mapping was adopted and subsequently all business processes required mapping in order to identify any processes, both inter- and intra-divisional, that needed to be eliminated, enhanced, or re-engineered.
- Processes were evaluated to ensure they were user friendly, added value, and aligned with institutional values and priorities.
- Vice presidents were assigned the responsibility to evaluate specific divisional alignment and assess whether appropriate alignment was achieved and identify resulting problems.

- In spring 2005, the President conducted a mandatory Town Hall Meeting on institutional alignment for all MPPs, the Strategic Planning Committee, Academic Senate leadership, and Associated Students Inc. The Town Hall agenda centered on a presentation of campus strategic goals, priorities, and core values by each divisional vice president, and afternoon breakout sessions focused on progress toward information security as an institutional priority.

The ITS Planning Process

In addition to the CSU *Integrated Technology Strategy* and the *2008-2013 Strategic Plan for California State University, Los Angeles* discussed above, the insight to identify and prioritize needs is guided by a number of other drivers that are explained in detail in Appendix A, Planning Drivers. These drivers are diverse and include accreditation requirements; State of California agreements; California State University initiatives, frameworks, and Executive Orders; the campus Strategic Plan; student surveys; and Information Technology Services business processes and management standards. Together these drivers establish a minimum baseline for the technology infrastructure (hardware, software, network services, training, support, and security), outline academic technology needs, identify critical Chancellor's Office initiatives in progress or pending, and present expectations for campus technology achievements.

In reality, no matter how creative an organization is, its achievements still will be constrained by its available resources. Infrastructure, personnel, budget, security, and support services must be allocated in a manner that does not disrupt the existing need to continue business functionality while undertaking pending projects. Therefore, ITS must thoroughly evaluate what is required for success and prioritize its plan based upon current budget, new funding sources, its strengths and weaknesses, and available technological and human resources.

But there is one additional element that must be factored into the planning process – strategic challenges. Discussed in detail in the following section, the need to address these challenges determines how systems must be designed, protected and delivered to users; how technology must interact with its users; how to manage the electronic availability of information assets; and how to shape the campus culture to accept and understand its role in the use and protection of technology and information.

Strategic Challenges

Challenges surround the realm of technology from many aspects. Given campus-wide budget challenges, ITS must guide and encourage users to leverage technology in new ways: how can existing technology be utilized in new ways to enhance services, reduce human intervention, or cut operational expenses; how well do users accept or even thrive with ever-changing technology; what happens if technology isn't a perfect match for their immediate needs; and what about those who fear change. And of course, technology requires a steady flow of funds to maintain the status quo, replace obsolete systems, and invest in new technology that could advance the campus's ability to support the teaching/learning model. But there are other challenges as well. ITS has identified the following five areas as strategic challenges that both ITS and the campus must address in order to strengthen the campus's core technology foundation.

Appropriate Use of Technology Resources

- State and federal regulations regarding technology and personal information are blossoming. The campus collectively must acknowledge its compliance role as it installs, accesses, distributes, archives, and destroys its systems and data.
- Illegal downloading of music, videos, and games carries heavy violation penalties and is broadly publicized in the media. But illegally loading unlicensed software on computers or posting others' copyrighted materials as one's own on the campus Web site are often not viewed as the violations that they are.
- The convenience of portable technology (laptops, notebooks, flash drives, CDs, and e-mail) has expanded work capabilities for both the traveler and the work-at-home force. This brings new security concerns to light regarding who, when, and what type of work should actually leave the secure campus environment, and how it should be transported, displayed, and secured while off-campus.

Roles of Technology in Teaching and Learning

- ITS must produce better data warehouse capability so Institutional Research and other administrative offices can access timely, pertinent statistics, (e.g., filled and unfilled classes, high enrollment subjects, additional class section needs) that can be used by faculty and administrators to make sound decisions and ultimately reduce student time to graduation.
- The campus must look beyond its geographic border to increase non-traditional instruction, e.g., evenings, Fridays, weekends, summers, distance learning, and off-site.
- ITS must play an active role in ensuring students graduate with technology and information competence.
- ITS must begin to pilot and "enterprise" class Learning Management System (LMS) that is integrated with the CMS student administration system.
- Training and user support must be in place to accommodate users unfamiliar or wary of technology's role in teaching.
- Adequate support must be in place for faculty to explore and integrate emerging technologies into development of creative, applicable, interactive curriculum.

Shaping Behavior and Attitude

- Information assurance must be established as an institutional priority, with executive level endorsement. In 2005, Cal State L.A.'s President James M. Rosser proclaimed this endorsement and devoted an entire Town Hall Meeting to the information security topic.
- The mistaken belief that only the technology department must enact security measures needs to change. Today, information security is everybody's responsibility.
- Social engineering, a collection of techniques used to manipulate people into performing actions or divulging confidential information, is on the rise. From phony bank and credit card notices to letters purporting to be from foreign governments, these trickeries can easily gather confidential information from unsuspecting victims.
- To mitigate risk and build a stronger campus awareness of potential dangers, policies, best security practices, and service standards must be created and made readily available to the campus.

- Establishing collaborative relationships between ITS and other campus constituents becomes more imperative as technology, once housed exclusively in protected computer centers, is now located campus-wide. Investigation of computer crimes requires collaboration between University Police, ITS, and local electronic crimes task forces. All divisions must be united to ensure standardized protection for users and computers from virus attacks, hackers, and the loss of confidential, personal information.
- Supporting feedback processes from constituents must be in place to determine if ITS is responsive to user needs.

Homeland Security Requirements

- New federal laws requiring the retention of electronic evidence, if subpoenaed, creates many challenges for ITS. Current business practices are modeled for disaster recovery and retain short-term backup data for system recovery only. Budget constraints make the acquisition of additional equipment to meet this objective difficult at best.
- Protecting the privacy of all students, faculty, and staff must be incorporated into the work culture and become a daily, practiced behavior of every person on campus.
- Domestic and international threats on campus networks and computers are increasing and becoming more sophisticated. Attempts to stay ahead of these criminals are costly and require continual monitoring and updating of network and computer security measures.
- Given the public access nature of the campus environment, inappropriate use of University computers by visitors in areas such as the Library or wireless access points on campus is of concern.

Fiscal Provisions for Technology Dependency

- Maturing systems require replacement. Often these replacements require upgrades of supporting infrastructures and peripheral equipment as well, raising annual costs well above those of the replaced system.
- Savvy users expect the latest technology to be delivered rapidly; however, adequate funding sources may not be available. Often technologies that serve unique needs remain unfunded because of needs to serve the greater number of constituents.
- Redundancy requirements are critical to support no-fail provisions, but often this requires access and new cabling to unprovisioned areas or duplication of costly equipment.
- Refresh requirements for desktop replacements are currently scheduled for a 36-month cycle. However, fluctuations in future budgets may impact the campus's ability to meet this requirement.
- Increasing technology on campus requires the ability to add additional support staff to maintain it. Given recent budget patterns, new positions are not ranked as a priority for budget allocations.

The Current ITS Environment

Before any planning can occur, the current technology environment must be evaluated and assessed against the division's ability to complete future projects. Sustaining the existing infrastructure requires support from many points. Some technology requires protected, environmentally controlled rooms, which translates to additional costs to sustain the air conditioning, fire protection, water and temperature sensors, and humidity controls. Monitoring a 24/7 operation that provides uninterrupted e-mail, network, and administrative system access requires round-the-clock technical staffing. Disaster preparedness and recovery entails redundancy both in equipment and network cable, as well as backup fiber, generators, Universal Power Supply (UPS), off-site media storage, multiple call carriers, satellite telephones, and redundant Internet access points. Better user support is predicated on specialized software applications and additional staff to cover traditional non-business hours, up-to-date training programs that are available to meet users' varied timetables, and maintaining a University Web presence that is reliable, well presented, and accessible to every person.

In order to successfully meet its strategic planning objectives, Information Technology Services first performed an internal assessment of its current baseline from which all future accomplishments can be measured. In 2007, all ITS Directors were interviewed, and the data compiled and organized into five categories – Organization, Technology, Training, Support, and Security. The following represent those ITS strengths and weaknesses that impact both current ongoing production and pending Strategic Initiatives and Goals.

Strengths The ITS division possesses many inherent strengths that support such a complex technological environment. Among the most important are:

Organization

- The ITS division is organized into four well-balanced, well-directed units – CMS and Enterprise Systems, IT Infrastructure, IT Security and Compliance, and Financial and Support Services. Although functionally separated, staff at every level of each unit interacts with staff from the other three units through integrated project teams.

Technology

- Through the Telecommunications Infrastructure Initiative (TII), the campus implemented an updated \$6 million infrastructure, including Cat 5E cable providing 100 mb to every desktop and a new all-fiber 1 gb backbone network.
- Enhanced network and administrative system security measures are in place including triple-level anti-virus, spam filter, external and internal firewalls, VPN, and encryption at rest and transport for the student administration system.
- By December 2008, the campus will be served by the CENIC network, which provides redundant CENIC backbone campus entry points for reliability, and access to all CSU campuses, the Chancellor's Office, and Internet 2.
- The wireless network is successful and hot spot deployment continues toward the goal of full on-campus coverage by winter 2009 quarter. Wireless communications for student housing was completed in fall 2008 quarter.

- New, more reliable e-mail systems for students, faculty, and staff were implemented. E-mail data storage capacity increased to 2 gb for faculty and staff, and 100 mb for students.
- By the end of fall 2008 quarter, 171 general lecture rooms will be converted to Technology Enhanced Classrooms (TECs) to facilitate teaching and learning. In addition, there are six Open Access Labs (OALs) available for students in all disciplines for University-related work.
- The Common Management System (CMS) provides efficient, effective, and high quality service to students, faculty, and staff utilizing a best practices approach to support human resources, financials, student services administration, and contributor relations functions.

Training

- Approximately 575 courses are offered yearly through the ITS Training Program. This program teaches students beginner- through advanced-level applications necessary for their collegiate success. The current satisfaction responses indicate 85 to 90 percent of students are satisfied or extremely satisfied.

Support

- ITS maintains a comprehensive Web site that provides 24/7 information regarding ITS procedures, online documentation, how-to information, FAQs, problem troubleshooting, and contact information, as well as providing downloads of popular software such as anti-virus upgrades and Virtual Private Network (VPN) access.
- An ITS Help Desk, located strategically in the Library Palmer Wing (PW) lobby, offers face-to-face technical assistance to students, faculty, staff, and guests. Services include assistance with student e-mail accounts and passwords, training information, wireless network access, password resets, hands-on assistance for faculty online grading, and technical troubleshooting.

Security

- IT Security developed an incident response plan, installed forensic software, and trained security analysts to perform in-house forensic investigations.
- Campus-wide information security risk and vulnerability assessments are conducted on a regular basis.
- Information security is visibly endorsed by the University President, is viewed as a campus priority, and all employees campus-wide are expected to perform work with security best practices in mind.

Weaknesses However, there are weaknesses that affect the division's ability to support its current operations and, if not remediated, will strategically alter the division's ability to meet future objectives. These weaknesses must be addressed as an integral part of this strategic plan. The most impacting weaknesses include:

Organization

- ITS has inadequate technical staffing to maintain existing production environments, handle current projects, and undertake mandated CSU initiatives and projects.
- Many staff are nearing retirement and years-of-service thresholds, which could result in an enormous loss of experience, history, and institutional memory. Additionally, it is difficult to attract new, experienced technical staff and managers given the lower CSU salary ranges that are not competitive with private industry.

Technology

- The technology environment is very complex. There are multiple parallel systems in many areas with a variety of administration and platform models. There are a large number of servers and operating systems that can be costly to maintain and the staff to manage these systems is disproportionately small.
- Only 71% of general lecture classrooms have been upgraded to smart classrooms and very few of the remaining suitable specialty classrooms, labs, and conference rooms used for instruction have been upgraded. Adequate funding and staffing are required to upgrade 100% of these classrooms. The estimated cost to upgrade the remaining classrooms is approximately \$1.5 million, and installation is limited to evenings, weekends, and during short quarter breaks to avoid construction interrupting instruction.
- The PBX and voice mail systems are over eight years old and the campus must plan for replacement within the next couple years.

Training

- Student training is successful, but success increases demand. Therefore ITS must provide additional trainers and more classroom space, identify changing training needs, offer evening and weekend courses, and increase the current curriculum.
- Staff campus-wide are at different proficiency levels with commonly used Microsoft desktop applications. ITS is currently not meeting the Baseline requirement for this type training.

Support

- The goal of 24x7, anytime, anywhere technology support has not been met.
- There is inadequate technical support to maintain the existing infrastructure.

Security

- Homeland Security has introduced unexpected budget challenges for the University. New federal and state requirements require all organizations, including universities, to turn over all electronic records if subpoenaed to do so. ITS does not have the additional systems required to capture and maintain records currently archived only briefly to restore systems in the event of a disaster.

The Future ITS Environment

In planning for future objectives, Information Technology Services has organized all its initiatives into three categories – business continuity operations, mandates, and enhancements. Category one, business continuity operations, are those infrastructure operations that must be maintained, replaced, refreshed, protected, and upgraded in order to provide mission-critical services to the campus. Initiatives in category one cannot be delayed or postponed without a serious impact on the University's ongoing ability to conduct business. Category two, mandates, includes all mandatory, written directives from external sources that require the campus to initiate action, generally within a very specific timeframe. Mandates can include Executive Orders, CSU Initiatives, new federal or state laws, or Presidential directives. Category three, enhancements, includes upgrades to the existing infrastructure or services, continuation toward Baseline standards, campus-driven initiatives, and in some cases may include non-mandatory portions of mandates. It should be noted that enhancements are not less critical, but there is more flexibility to allow for completion of these goals based on available funding, time to completion, and human resources.

It must be repeated that all business continuity projects must be implemented if the University is to maintain its mission-critical operations. Further, delaying or not implementing the mandates may result in lost funding to the University and/or sanctions being applied. And, if the University is unable to implement the enhancements, it will not be able to improve the reliability and security of its technology infrastructure and services or make more effective use of technology to support teaching and learning.

Category 1 - Business Continuity Operations

- 1. Information Technology Refresh Program 2 (IRTP2) – Continue meeting the baseline refresh requirements for the campus network infrastructure.*
- 2. Disaster Recovery and Business Continuity – Mandated by CSU Executive Order 921, provides Cal State L.A. with an Emergency Management Program.*
- 3. Wireless Network Expansion – Continue implementation of the wireless network to provide hot spots to all campus areas in support of student, faculty, staff, and visitor network access.*
- 4. Web Content Management – Monitor and maintain Web content so it remains up-to-date, accurate, and relevant.*
- 5. Refresh the existing Voice Mail system.*
- 6. Part-time faculty workstations – Provide faculty workstations to meet baseline and continue a 36-month baseline refresh of all workstations.*
- 7. Upgrade the existing PBX phone system – Implement Fixed Mobile Conversion (FMC) technology to allow users the flexibility to select their cell phone, desk phone, notebook, laptop or desktop computer, or other similar technology as their primary method of campus communications.*
- 8. Sustainability Program – Redesign the Data Center by implementing a virtual server farm for enhanced space and energy utilization, and replace the UPS, power distribution, and air flow systems for energy efficiency.*
- 9. Participate in Internet2 technology – Employ this dynamic, innovative, and cost-effective hybrid optical and packet network to conduct science, to engage in research, to educate, and to bring diverse communities together in new ways.*

Category 2 – Mandates

- 1. Common Management System (CMS) – Continue system upgrades, prepare for the State's new payroll system, and migrate to the new CSU data center.*
- 2. CSU Common Control Framework and Information Security Compliance – A broad-scale CSU program that complies with current CSU Executive Orders: EO 999, Illegal Electronic File Sharing and Protection of Electronic Copyrighted Material; CSU Information Security Policy; and CSU E-mail Retention Policy.*
- 3. Data Warehouse – Common Management System (CMS)-mandated requirement for all campuses to house a centralized data warehouse or depository.*
- 4. Conversion from quarter to semester system – Required for the CSU-mandated conversion to a semester system intended to have all campuses operating within a synchronized academic year.*
- 5. Accessible Technology Initiative (ATI) – Required by state and federal law, and mandated by CSU Executive Order 926, provides technology accessibility to all students, faculty, staff, and visitors.*

6. *Electronic Records Management System – Required by EO 1031, System-wide Records/Information Retention and Disposition Schedules Implementation for campus electronic records storage, the campus must incorporate e-mail and electronic documents into its records management system.*

Category 3 – Enhancements

1. *Redundant Internet Access Points – Install an additional fiber pathway for redundant Internet access in the event of a primary access point failure or disaster.*
2. *Software Upgrades – Upgrade the campus to Windows Vista and Office 2007, install Visio on all staff computers, and full Adobe on all faculty and staff computers.*
3. *Identity Management – IdM is a core function required to shorten the time required to grant and revoke access to electronic information and resources, simplify user access, integrate multiple University processes, and add additional security for confidential and sensitive information.*
4. *New Technology-Enhanced Classrooms (TEC) – Complete conversion of all remaining general lecture rooms to technology classrooms; convert remaining suitable specialty classrooms, labs, and conference rooms used for instruction.*
5. *Learning Management System (LMS) – Implement a secure, ADA-compliant enterprise-wide infrastructure of Web and database servers to support LMS software applications.*
6. *Emergency Notification System – As an enhanced campus security measure, implement and maintain a new communications systems to alert students, faculty, and staff of emergency situations.*
7. *Distance Education and Online Courses – Implement hardware and software to provide on-campus and off-campus broadcasts, and assist with administrative system modifications to address curriculum transformation.*
8. *Digital Marketplace – Implement a secure, ADA-compliant enterprise-wide infrastructure of Web and database servers to support the Digital Marketplace.*
9. *ITS Campus Training Program – Expand the training program by offering new application workshops, expanding the number of sections of popular workshops, and offering more evening and weekend sections.*
10. *User Support Expansion – Expand the existing hours of user support available to all campus constituents.*
11. *Student Union Lab – Provide furniture, computers, printers, and server for the new lab, in addition to ongoing equipment refresh to maintain minimum Baseline.*
12. *Housing Wireless Expansion – Implement wireless and Internet capabilities for residential students.*
13. *Radio Redundant Fiber Alternative – Install a new fiber pathway to provide redundancy in the event of a network failure or disaster.*
14. *Student Union Training Lab – Provide furniture, computers, printers, and server for the new training lab, in addition to ongoing equipment refresh to maintain minimum Baseline.*

Funding Requirements to Meet Current and Future Needs

Current Budget Requirements

During fiscal year 2007/2008, Information Technology Services operated with a total annual budget allocation of \$10.16 million. While requirements to support and upgrade the infrastructure, implement new technology enhancements, and comply with mandates have continued to grow over the years, the annual allocation has steadily declined. Since 2003, the annual ITS allocation has decreased by \$1,488,506, or roughly 15%.

In 2007/2008, Information Technology Services required an annual operating budget of \$8.86 million, approximately 87% of the total ITS budget allocation, to support the existing infrastructure, administrative systems, operating expenses, and salaries. These annual operating costs are not included in the Future Budget Requirements below.

The remaining \$1.3 million, or 13%, difference between the entire ITS budget allocation and the annual operating budget represents funds available to support upgrades, one-time procurements, emergency expenditures, business continuity expenses, mandates, and enhancements. To the degree possible, ITS will fund its share of the following business continuity, mandates, and enhancements as outlined below [in green] from the 13% discretionary allocation.

Going forward, ITS will require an anticipated 4.5% yearly increase to cover annual escalating expenses for these items. Neither the \$8.86 million base budget for current operations nor the 4.5% inflation requirement is included in the Future Budget Requirements below. As stated earlier, all ITS infrastructure, personnel, budget, security, and support services resources must be sustained in order for all strategic plan goals to reach fulfillment. Failing that capability, projects cited in the mandates and enhancements categories may be re-prioritized or delayed.

Future Budget Requirements

What follows is a summary of additional technology (hardware, software, maintenance) and personnel (staff, consulting services, student assistants) funding requirements needed to mitigate weaknesses identified in the current environment and meet the business continuity operations, mandates, and enhancements outlined in the future environment. The detailed explanation of the expenditures listed below, including yearly steps, responsible parties, and links to the Campus Strategic Plan goals is attached in Appendix C. For clarity, color highlights below are repeated in Appendix C.

The following represents projected costs over the five-year period. See Appendix C for detailed requirements, year-by-year expenditures, and summaries.

Category 1 - Business Continuity Operations

Description	Funding Source		
	Division Supported	One-time Allocation	Permanent Budget Augment
<i>Technology Costs</i>			
Information Technology Refresh Program (ITRPx)	\$310,000	\$98,812	\$40,307
Disaster Recovery and Business Continuity	\$40,000	\$120,000	\$100,000
Wireless Network Expansion	\$295,000	\$0	\$0
Web Content Management	\$349,546	\$0	\$0
Refresh the existing Voice Mail system	\$168,463	\$0	\$0
Part-time faculty workstations	\$125,000	\$0	\$55,000
Upgrade existing PBX To Fixed Mobile Convergence (FMC) technology	\$57,000	\$115,000	\$0
Sustainability Program	\$45,000	\$0	\$0
Participation in Internet2 technology	\$0	\$200,000	\$56,000
Technology Subtotal	\$1,390,009	\$533,812	\$251,307
<i>Personnel Costs</i>			
Information Technology Refresh Program (ITRPx)	\$0	\$60,000	\$0
Personnel Subtotal	\$0	\$60,000	\$0
Total for all Business Continuity Operations	\$1,390,009	\$593,812	\$251,307

2-19-09

Category 2 - Mandates

Description	Funding Source		
	Division Supported	One-time Allocation	Permanent Budget Augment
<i>Technology Costs</i>			
CSU Common Control Framework and Information Security Compliance	\$618,297	\$74,000	\$0
Data Warehouse	\$200,000	\$0	\$0
Accessible Technology Initiative (ATI)	\$0	\$100,000	\$0
Electronic Records Management System	\$0	\$850,000	\$0
Technology Subtotal	\$818,297	\$1,024,000	\$0
<i>Personnel Costs</i>			
Common Management System (CMS)	\$0	\$2,073,771	\$0
Data Warehouse	\$443,301	\$0	\$0
Conversion from quarter to semester system	\$0	\$200,000	\$0
Accessible Technology Initiative (ATI)	\$0	\$0	\$300,000
Personnel Subtotal	\$443,301	\$2,273,771	\$300,000
Total for all Mandates	\$1,261,598	\$3,297,771	\$300,000

2-19-09

Category 3 - Enhancements

Description	Funding Source		
	Division Supported	One-time Allocation	Permanent Budget Augment
<i>Technology Costs</i>			
Redundant Internet Access Points	\$50,000	\$0	\$0
Software Upgrades	\$0	\$0	\$0
Identity Management (IdM)	\$275,974	\$0	\$0
New Technology Classrooms (TEC)	\$898,000	\$70,000	\$187,500
Learning Management System (LMS)	\$365,000	\$0	\$0
Distance Education/Online Courses	TBD	TBD	TBD
Digital Marketplace	TBD	TBD	TBD
ITS Campus Training Program	\$308,705	\$40,000	\$0
Student Union Lab	\$58,400	\$0	\$0
Housing Wireless Expansion	\$225,269	\$0	\$0
Radio Redundant Fiber Alternative	\$98,000	\$368,460	\$0
Student Union Training Lab	\$15,450	\$0	\$0
Technology Subtotal	\$2,294,798	\$478,460	\$187,500
<i>Personnel Costs</i>			
Identity Management (IdM)	\$523,134	\$0	\$0
Learning Management System (LMS)	\$0	\$0	\$92,653
ITS Campus Training Program	\$0	\$0	\$142,486
Housing Wireless Expansion	\$55,256	\$0	\$0
Personnel Subtotal	\$578,390	\$0	\$235,139
Total for all Enhancements	\$2,873,188	\$478,460	\$422,639

2-19-09

A detailed spending plan is contained in Appendix C.

Managing and Prioritizing the Strategic Plan

The Planning Organization

Technology planning for the University is centralized under the Vice President for Information Technology Services and Chief Technology Officer. This centralization allows the campus to leverage infrastructure, resources, and projects, and reduces redundant efforts. It also allows for better control of the planning process and linkage of all campus IT projects to budgetary allocations.

To be effective, the CTO must have a cohesive, participatory planning structure in place that allows a broad representation of campus constituents to have a voice in the review and prioritization of ongoing projects. Previously, the Baseline Committee served in a sole capacity to review and prioritize Baseline expenditures and monitor the division's progress toward full campus Baseline achievement. Complexities created by increasing CSU mandates, new learning and teaching technologies, and legal and regulatory information security requirements require this existing committee be redefined and reconstructed. ITS will begin using the following committee structure to better manage and prioritize objectives.

ITS Advisory Committee ITS is currently in the process of adopting a new committee framework that will provide a venue for the exchange of technology plans, priorities, goals, and progress. One option being considered is an ITS Advisory Committee, comprised of member representatives from various sectors across the campus, and chaired by the Vice President for ITS. It is expected that participants will represent each college, the Library, major administrative offices, and Associated Students Inc.: Members would include deans, administrators, faculty, staff, and students. While the process is still under development, it is anticipated that meetings would generally be held to:

- Inform, discuss, and solicit input regarding the status, impact, and constituent communications for all ongoing ITS projects and CSU Initiatives affecting technology and information security.
- Review Baseline expenditures, planned modifications to Baseline equipment and software standards, and monitor campus progress toward minimum and full Baseline standards.
- Participate in re-prioritization of ITS projects when necessitated by unplanned mandates, project delays, staffing insufficiencies, or changes in funding sources.
- Review and approve pending technology and information security policies and User Guidelines prior to executive review.
- Review and endorse the initial ITS Strategic Plan and all subsequent revisions prior to executive review and approval.

Academic Information Resources Subcommittee (AIRS) This subcommittee of the Educational Policy Committee, is comprised of one member from each college elected for staggered three-year terms, one liaison member selected annually by the Educational Policy Committee from its own membership, the Provost and Vice President for Academic Affairs, two students selected

annually by the Board of Directors of the Associated Students, Inc., and the Director of the Center for Innovation and Excellence in Teaching and Learning (CIETL). The academic information resources charged to this subcommittee include all instructionally related technology such as course management software, in-classroom equipment (computers, video recorders, digital video disk players, overhead projectors), and support services related to such technology. The subcommittee meets twice monthly to:

- Recommend policy to the Educational Policy Committee on all issues related to the use of academic information resource services;
- Participate in the long-range and intermediate planning of the University as it affects academic information resource services;
- Assist in developing priorities for academic information resources in support of curricular activities;
- Consult with the Fiscal Policy Committee on subcommittee recommendations bearing on fiscal issues; with the ITS Advisory Committee on subcommittee recommendations bearing on issues of compatibility with other academic information resources acquired by the campus and with the Faculty Policy Committee on subcommittee recommendations bearing on faculty research, scholarly, and creative activity issues, prior to submitting subcommittee recommendations to the Educational Policy Committee.

Executive Officers and Vice Presidents Two separate weekly meetings are held with the vice presidents and the president and vice presidents. These are forums for the Vice President of ITS to:

- Discuss the impact of current and pending projects on the campus as a whole.
- Solicit cooperation for cross-divisional projects.
- Understand other divisional plans and projects, and determine how new technology can be applied or existing technology must be modified to meet these needs.
- Begin top-down communications and executive endorsement for projects requiring campus constituent involvement or cooperation.
- Elicit feedback on ITS timeliness, suitability, and achievement toward campus strategic goals and core values.

Information Technology Consultants Council The Council is chaired by the Assistant Director of Baseline Services and is comprised of non-ITS Information Technology Consultants from all colleges and administrative disciplines. These ITCs provide direct, daily technical support to the faculty and staff within their disciplines and serve as ITS ambassadors for the deployment of new technology projects to the campus. The purpose of this group is to allow the free exchange of ideas about operational issues, service improvements, and enhancements between field personnel and the ITS division. Additionally, if appropriate, members of the council may be included in ITS project teams for input on the operational planning, testing, and implementation of campus projects.

GET Leadership Team Chaired by the Director of CMS and Enterprise Systems, the Leadership Team is comprised of data stewards, ITS programmer/analysts, and high-level technical staff from the Registrar's Office, Financial Aid, Administrative Technology (Human Resources and Student Financials), and Contributor Relations. The team is focused on the technical aspects of the Common Management Systems (CMS), including system patches and fixes, new module implementation, version upgrades, CSULA-specific feature modifications, user training development, and the myCSULA student Web portal. Weekly meetings ensure the coordination of activities remain on track in the very fluent CMS environment.

ITS Directors and Managers The ITS Directors (Director of CMS and Enterprise Systems, Director of ITS Infrastructure, Director of IT Security and Compliance, and Director of User Support Services) is a high-level divisional planning group that meets weekly with the Vice President for ITS to discuss current projects and staffing status, report on operational issues that affect projects, re-prioritize pending projects when necessary, and discuss budgetary planning. Directors provide weekly status reports to the Vice President, which serve as ongoing measurement documents recording progress toward goals.

The ITS Managers are comprised of Management Personnel Plan (MPP) employees at various levels within the ITS organization who provide project and planning input to Directors. In addition, they also meet with the Vice President for ITS weekly to participate in round table discussions. These meetings are intended to inform managers of all projects concurrently taking place within the organization and alert others of future pending projects that may require their participation. These discussions serve as a checkpoint for resource availability and ensure that project planning remains on schedule.

Campus Security Incident Response Team (CSIRT) While the primary responsibility of this committee is to prepare for and respond to information security and technology incidents, it is none-the-less an integral part of the ITS planning process. This committee is chaired by the Director for IT Security/Compliance/Information Security Officer (ISO), and is comprised of two distinct teams – a technical team and an incident response team. The technical team consists of specially-trained security analysts, senior network analysts, operations specialists, and desktop specialists from ITS. The incident response team includes the technical team as well as representatives from Public Safety, Public Affairs, University Counsel, and representatives from any affected division(s). The technical team provides planning feedback directly to the Vice President for ITS regarding changing legislative requirements for information security; hardware and software requirements for intrusion detection and intrusion prevention; user awareness training; and forensic tools. In addition, members of the technical team participate in all ITS projects to ensure information security compliance and security best practices are incorporated during the planning and implementation phases.

Communicating Progress of the Plan to the Campus

The ITS division provides ongoing communications regarding its project development and status through various mediums.

- An ITS Newsletter is published annually that allows the Vice President to outline the upcoming year's projects and their impact on the campus community. These discussions are at a high level, describing the impetus, initiative, or strategy for undertaking the project, and providing clarity on the outcomes and user benefits.
- All four ITS units have dedicated Web pages, and directors are expected to develop and maintain summaries of ongoing and pending projects that inform interested readers of what they can expect to see in the future.
- Each ITS project manager is required to prepare communications to all project stakeholders, generally in the form of a project status/responsibility report, on a weekly to monthly basis. These communications present project outcomes and benefits, delineate and assign specific responsibilities, explain user actions that may be required, and develop and monitor the project timeline.
- As projects near the production roll-out date, ITS utilizes its communication team to develop appropriate campus-wide communications including user procedures, Web pages, User Guidelines (best practices policy), and live and online training applications. Where appropriate, stakeholders may also participate in the communications process by utilizing their departmental or divisional communications vehicles or providing specialized user training to their constituents.
- The Web-published ITS Strategic Plan is updated annually if needed to incorporate course and tactical changes to the Plan. The Web site also allows readers a link to the ITS Vice President's office to submit questions or comments. The ITS 2008-2013 Strategic Plan can be found at www.calstatela.edu/its and click on *About Us*.

Measuring our Success

ITS Internal Review

The Vice President for ITS and unit directors review and assess the Strategic Plan quarterly, making course and tactical changes as required by changing technology, security, learning environments, personnel resources, and annual budgetary guidelines as defined by the Governor and CSU Chancellor.

To ensure all ITS management is in alignment with the plan, all ITS directors and managers are required to prepare a yearly Administrative Work Plan that parallels goals and objectives outlined in the Strategic Plan and expands on measures each unit will undertake to meet respective priorities. Managers continually update individual plans as accomplishments are achieved and submit them quarterly to the Vice President for review. Performance evaluations and merit salary increases are directly tied to individual and unit accomplishments toward meeting planned goals.

To further promote success, ITS utilizes a CCCDSAFE technology management model that is loosely based on an International Organization for Standardization (ISO) model. This model serves as a foundation and template for all technology-related projects, procedures, policies, position descriptions, individual work plans, and performance evaluations. CCCDSAFE is an acronym for the following eight critical planning components: Customer Service Management; Configuration Management; Change Management; Disaster Recovery/Business Continuity Management; Security Management; Accounting Management; Faulty Management; and Efficiency/Effectiveness Management.

External Review

In conjunction with this Plan, ITS is currently in the process of adopting a new framework that will provide a venue for the exchange of technology plans, priorities, goals, and progress. Among the options being considered: an ITS Advisory Committee to discuss and approve course and tactical changes that impact critical provisions; formal technology updates on the agenda of Executive Officer meetings; periodic status reports of progress toward goals delivered to the Academic Senate Executive Committee; and an annual written progress report submitted to the President at fiscal year-end.

Measuring Success

Also under development is a Cal State L.A. Annual Technology Survey, modeled on the CSU Measures of Success, which is no longer carried out. This technology-specific survey mirrors the priorities, goals, and objectives outlined in the ITS Strategic Plan. It will monitor achievement toward baseline objectives, project performance, operational performance, progress of academic technologies, training, user satisfaction, and ITS professional development.

Viewing the Plan

The ITS Strategic Plan is maintained by the Office for the Vice President for Information Technology Services and Chief Technology Officer, LIB PW 1070. Written copies can be obtained by calling 323-343-2700. In addition to the published document, the ITS Strategic Plan is posted on the University Web site at www.calstatela.edu/its and click on *About Us*.

Appendix A – Planning Drivers

Information Technology Services operations, project planning, and prioritization is guided by a number of federal, state, CSU, Chancellor’s Office, campus, and divisional drivers. The following lists these drivers, describes how they affect the information technology environment on the campus, and describes the requirements they place on the University and ITS that must be addressed in the ITS Strategic Plan.

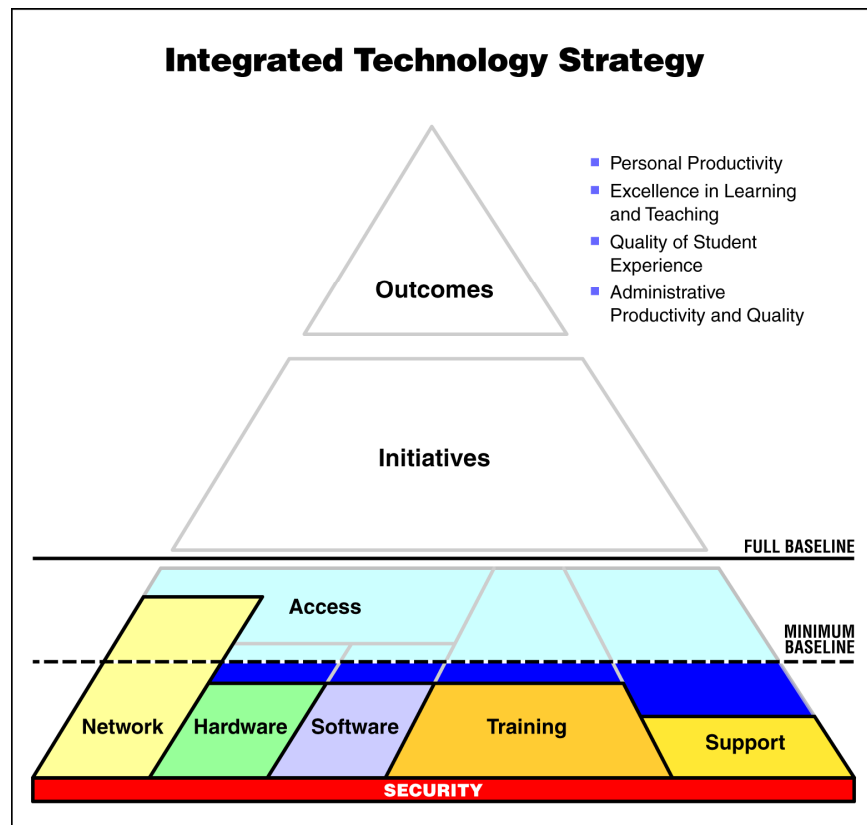
Western Association of Schools and Colleges (WASC) (2006)

The Western Association of Schools and Colleges last reaccredited Cal State L.A. in 1999. The current reaccreditation process began in January 2006 and will be completed in 2010. To facilitate this process, the WASC accreditation team proposed a “special themes approach” to the reaccreditation process. Based on campus-wide input on issues, the following themes were identified as important across the campus. The over-arching theme represented by the WASC report was “becoming a teaching and learning community by supporting student success and student outcomes.” To that end, the following four themes were targeted specifically for Cal State L.A.’s reaccreditation review.

- Supporting Students to Reach Academic Goals:
 - Improving academic support services,
 - Improving advisement,
 - Strengthening faculty and staff effectiveness in monitoring student progress.
- Enrollment and Resource Management:
 - Establishing and attaining enrollment goals,
 - Ensuring sufficient personnel,
 - Strengthening internal management practices and processes.
- Promoting Student Learning Outcomes and Success:
 - Supporting students, faculty and academic processes toward the goal of student success in GE and program-level outcomes.
- Being a Teaching and Learning Community:
 - Demonstrating campus growth in becoming a learning-centered organization,
 - Showing institutional and faculty responsibility for student learning.

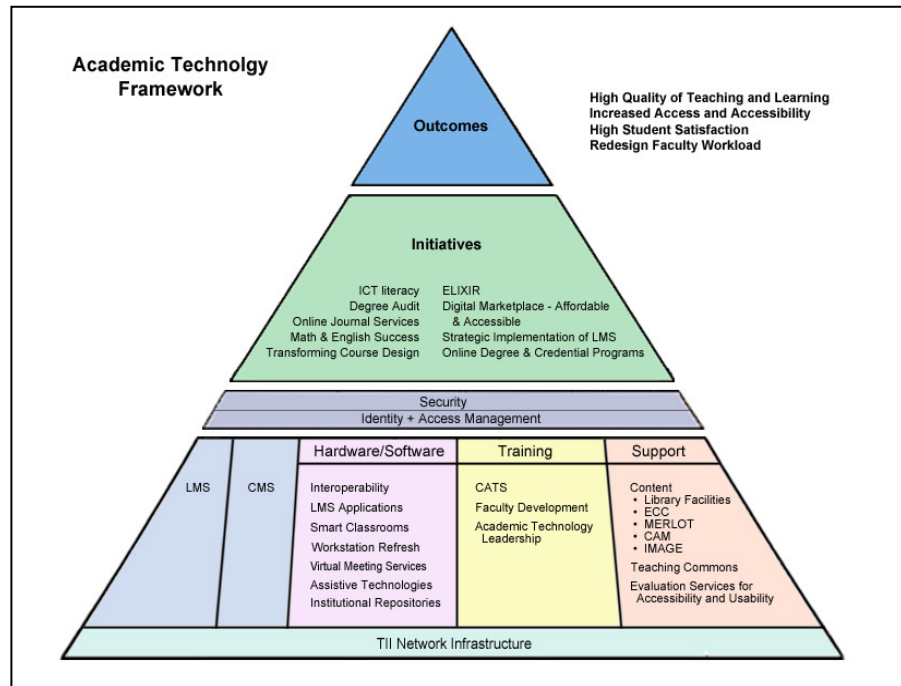
CSU Integrated Technology Strategy Framework

Without a minimum Baseline technology infrastructure on every campus, the benefits of ITS initiatives could not accrue to all students, faculty, and staff. In 1996, the Integrated Technology Strategy (ITS) was adopted as the official policy framework for the system by the California State University (CSU) Board of Trustees. It still remains the model for addressing technology needs of students, faculty, and staff, and for developing new initiatives to take advantage of emerging technologies. The Integrated Technology Strategy contains three major components: academic goals and initiatives, administrative goals and initiatives, and the technology infrastructure, which is the enabling mechanism that permits implementation of those initiatives and achievement of their goals.



CSU Academic Technology Framework

An additional pyramid for academic technology was developed to illustrate the evolving nature of the Integrated Technology Strategy. This new pyramid below shows the outcomes specific to academic technology, the initiatives in progress, and the infrastructure required to support them.



CSU Baseline Access, Training, and Support Initiative (BATS) (1996)

The BATS initiative seeks to improve personal productivity of all CSU faculty, staff, administrators, and students with a baseline quantity and quality of computing and network technologies, and of related training and support services. Through this initiative campuses have received additional resources for assistance in upgrading the quality of computer workstations and network connectivity and for expanding availability of technical support and technology training services.

CSU Board of Trustees "22 Initiatives to Facilitate Graduation" (2005)

In December 2005, the CSU Board of Trustees released its *Action Plan for Implementing the CSU Board of Trustees 22 Items to Help Enrolled Students Progress Toward the Degree*. The Plan focused on six areas:

- Efficiency in Academic Program Design – Reducing the required units for graduation from 124 to 120 semester units in programs that could be reduced.
- Supporting Students in Choosing an Efficient Pathway to the Baccalaureate – Supporting graduation from the moment of student orientation to mitigate uncertainty and procrastination about career choices.
- Tools to Keep Students on Efficient Pathways to the Baccalaureate – Providing roadmaps to the degree that outline course-by-course student study needs.

- Strong Advising Strategies and Practices – Utilizing sophisticated student data systems that accumulate and disseminate student progress information on-demand to students and advisors.
- Campus Monitoring and Feedback – Devising “dashboard” indicators from the student data systems that provide frequent, current summaries of student statistics.
- Assuring the Priority of Facilitating Graduation – Reporting accountability toward the goals by delivering scheduled progress reports to the Board of Trustees.

State of California and CSU “Compact” (2005)

During a period of state fiscal instability, Governor Arnold Schwarzenegger and CSU Chancellor Charles B. Reed reached agreement on a six-year “Compact” intended to ensure quality, access, and affordability to students at the CSU system. Recognizing the overwhelming demand for student access and the importance to the state economy to produce graduates for the workforce, the Governor committed to fund annual enrollment growth through the 2010/2011 academic year, provide a General Fund increase, and during the final four years, increase the base budget for salaries, health benefits, maintenance, and inflation. In exchange for the commitment of funds, the CSU agreed to a series of accountability measures. These measures included: efficiency in graduating students, including number of degrees and time-to-degree; utilization of system-wide resources such as student/faculty ratio and change in employee salaries; student-level information, including student proficiency levels and progress on achieving community colleges course articulation agreements; and capital outlay, including five-year plans with priorities by campus.

Chancellor’s Office Executive Order 921 (2004)

In November 2004, the Chancellor’s Office issued Executive Order 921 – the California State University Emergency Management Program. The purpose of the Executive Order is to maintain an emergency management system on each campus that will be activated when a hazardous condition or natural disaster reaches or has the potential for reaching proportions beyond the normal management and staffing capacity of routine operations. Beyond the ITS disaster recovery plans for campus-critical systems and technology services already in place, the ITS division must create and maintain a business continuity plan that encompasses mitigation, response, and recovery. The elements key to ITS operations include:

- Identifying the functions and assets that are critical to operational continuity and support the campus mission.
- Evaluating critical needs and prioritizing business requirements;
- Determining budgetary limitations and requirements, which are key factors in determining the time frames to restore services;
- Training personnel;
- Testing and auditing the plan annually.

Chancellor's Office Executive Order 926 (2004)

In December 2004, the Chancellor's Office issued Executive Order 926 – The California State University Board of Trustees Policy on Disability Support and Accommodations. Disability support and accommodation is a significant component of the CSU academic mission. This order mandates information technology resources and services be accessible to all CSU students, faculty, staff, and the general public regardless of disability. The executive order was followed in February 2007 with Academic Affairs coded memorandum AA-2007-04, Access to Electronic and Information Technology for Persons with Disabilities, which established priorities, plans, and timelines for achieving accessibility compliance. The key information resources and technology elements identified include:

- Computer and network access and services;
- Learning Management Systems (LMS) Web sites that provide computer-delivered or enhanced instruction;
- Library electronic information resources, online catalogs, and homepages;
- Access to the Internet and its resources, including Web sites, Web applications, and digital content;
- Computer-delivered or assisted administrative services;
- Voice and video programs and services.

Compliance with ADA standards requires significant effort beyond creating and maintaining accessible Web sites and technology services. Given the dynamic nature of technology and the Web with its continuously changing content, ITS must provide the following:

- Well-defined campus policies;
- Technology and Web implementation procedures;
- Auditing, monitoring, and remediation tools to identify and correct critical Web sites;
- A training plan for those who develop, maintain, and author Web content;
- An evaluation process to measure effectiveness of the technology and Web business process;
- Incorporate accessibility standards into the ITS Procurement Approval process for all hardware, software, Web applications, telecommunications, multimedia, and self-contained products like copiers, fax machines, kiosks, etc.

Campus Strategic Plan (2008-2013)

The Strategic Planning Coordination Committee, comprised of academic and administrative members from across the campus, was chartered to develop and implement a campus strategic plan that reflects the University Mission. The five-year plan is reviewed and updated annually. The plan ranks initiatives, identifies budget resources, identifies strategic divisions and responsible individuals, and objectives. The Campus Strategic Plan outlines the following Strategic Directions:

- Strengthen and develop excellent programs for the local, regional, and global communities.
- Create a culture where decisions and actions are openly made.
- Establish Cal State L.A. as a nationally recognized institution for supporting the transformation of students into well-educated, highly competitive graduates.
- Make the University a thriving place to learn, work, and live.
- Expand the campus population of diverse, well-qualified students, faculty, staff, and administrators.
- Significantly increase University resources above state funding.

Cornerstones Principles – Access to Excellence (2008)

Cornerstones is a CSU-system wide strategic planning effort focusing on the intersection of the CSU with the economic, political, and social environment of the State of California, anticipating what the people of the State will need from the CSU in the next decade, and how best to position the institution to meet those needs. A decade after the first Cornerstones report, these four fundamental commitments remain pertinent:

- The CSU must continue to provide education excellence in a teaching-centered, collegiate institution.
- The CSU must provide access to the growing population needing higher education in California, without sacrificing excellence and with a public resource base that is not growing as rapidly as demand.
- The CSU must be able to show itself and others evidence about its effectiveness, thus demonstrating accountability to the public it serves.
- The CSU must learn how to link more efficiently and effectively its post-baccalaureate programs to the rapidly changing needs of our state for highly trained professionals.

In 2008, three new fundamental priorities were added:

- The CSU must increase student access and success.
- The CSU must meet State needs for economic and civic development, through continued investment in applied research and meeting workforce and other societal needs.
- The CSU must sustain institutional excellence through investments in faculty, innovation in teaching, and better access to undergraduate student research and services.

Student Needs and Priorities Survey (SNAPS) (2006)

Developed and conducted by the Cal State L.A. Office of Institutional Research, the SNAPS survey provides important student feedback on topics such as the importance and quality of current student services, obstacles to reaching education goals, quality of instruction and course offerings, satisfaction with the educational experience, and perceived campus climate. Student-cited strengths and weaknesses, and the disparity between the importance and perceived quality of specific student services provides important data for institutional strategic planning, academic affairs planning, and information technology planning.

The 2006 survey cited the following action items:

- Review and improve course offerings (e.g., availability, scheduling of courses);
- Review and improve advising centers in departments and colleges;
- Review and improve admissions, records and registration, and financial aid services;
- Provide more student information and services online (e.g., degree audit, registration, courses);
- Utilize CSULA e-mail for official communications (e.g., policies, deadlines, changes);
- Regularly ask students for feedback, listen to what they have to say, and take action.

Common Control Framework and Information Security Plan

The CSU is currently developing and implementing a new system-wide information security plan, designed to provide a high level of information security while preserving and enhancing system usability. With expected adoption in 2009, the plan will establish how CSU information systems, data, and network resources are used and provided to the CSU community members. The plan also defines how the CSU will protect and maintain the confidentiality, integrity, and availability of its information systems, data and network resources.

CCCDSAFE

Created and implemented in 2003 by Cal State L.A.'s Information Technology Services division and loosely based on an International Organization for Standardization (ISO) management model, this technology business process serves as the foundation and template for all technology-related projects, procedures, policies, position descriptions, individual work plans, and performance evaluations. CCCDSAFE is an acronym for the following eight critical planning components:

Category	Definition
Customer Service Management	All the methodologies, strategies, online services, and technological capabilities that allow the members of an enterprise to have the needed information, guidance, and services to meet their needs.
Configuration Management	Controlling the identification and documentation of all the characteristics of a system, product, or process (including how the documentation will be stored and accessed), and any changes to those characteristics; and verifying the validity and integrity of the configuration.
Change Management	The process used to implement changes, including the notification process to those that the change will affect.
Disaster Recovery/Business Continuity Management	The mechanism by which disruption, failures, faults, stoppages, etc., are anticipated and recovery planned, including the roles and responsibilities of those who are authorized to test and implement any such plans.
Security Management	The control of user access to a network or application, and the use and handling of information; the procedures and processes designed, implemented, and maintained to ensure the integrity of an infrastructure or system; the protection of networks and systems from unauthorized access by individuals, acts, or influences; the control of the distribution of information; and the authorization of access, rights, and privileges.
Accounting Management	The process by which metrics regarding a network, procedure, and/or system are gathered, recorded, tracked, and analyzed; the determination of costs for the use of said network, procedure, and/or system.

Category	Definition
Fault Management	The control of a system or process that uses alarms and/or traps to detect a fault in this system, isolates problems and defects, acknowledges such alarms, and predicts when problems will occur in the infrastructure based on historical information.
Efficiency/Effectiveness Management	The determination, control, and monitoring of standards of performance relating to systems, networks, applications, processes, and/or services in order to maintain or exceed those standards.

While specific tasks, steps, controls, or information may vary depending upon the project, document, or plan undertaken, the outcomes remain constant throughout the ITS division – system reliability, accountability to the campus, proactive planning, smarter decision making, and enhanced customer satisfaction.

Information Technology Baseline/24 Hour Access Plan

The Baseline Plan supports the California State University (CSU) mission to provide “Californians affordable, accessible, and quality higher education by using technology to improve administrative and student services as well as instruction delivery.” The CSU-developed Integrated Technology Strategy, adopted by the Board of Trustees in 1996, utilizes technology to improve:

- The personal productivity of students, faculty, and staff;
- The quality of learning and teaching;
- The quality of the student experience; and,
- Administrative productivity and quality.

The Baseline Plan includes seven major deliverables that guide Cal State L.A. in reaching its Baseline environment:

- A basic information competency program;
- A campus-wide training program;
- A campus-wide Help Desk function;
- A set of foundation support services appropriate to the campus mission and programs;
- Local area networking and remote access capabilities;
- A campus e-mail system;
- An ongoing planning process, including addressing 24-hour (anytime/anywhere) access.

Appendix B – Evaluation of CSULA *Measures of Success* 2006/2007

04/09/08

Context

As part of The California State University (CSU) system, California State University, Los Angeles (CSULA) is an active participant in implementing information technology through the Integrated Technology Strategy (ITS). The ITS was adopted by the CSU Board of Trustees in 1996 as the official policy framework for addressing the technology needs of students, faculty, and staff across the CSU and for developing new initiatives to take advantage of emerging technologies. In 2004, all 23 CSU presidents recommitted to the goals and objectives of the ITS and agreed to maintain their collective leadership of information technology. Also in 2004, CSU leaders made academic technology a major policy priority of the system, and as a result launched a new wave of initiatives under the ITS, including promoting expanded use of Web-based learning management tools/applications, developing a Digital Marketplace, and making information technology accessible to all CSU students, faculty, staff and the general public.

Implementation of the ITS has been and continues to be a major undertaking. Its goals place CSU in a leadership position in higher education nationally in the implementation and use of information technology. Costs for implementing leading-edge technologies and services across the largest system of higher education in the nation makes it highly visible, not just in the higher education community, but also to California's government and taxpayers. The overarching assumption which led to the development, adoption, and implementation of the ITS was that the CSU could leverage the size and resources of the 23 campuses in the system, and thereby both increase the return on individual campus investments in information technology and narrow the technology gaps among the campuses. The CSU and its campuses have adopted a "culture of evidence" in order to test this overarching assumption, measure its own progress, and report its findings internally and to the California legislature. An extensive report, *Measures of Success (MOS)*, has been submitted to the legislature each of the last nine years. The most recent report, *MOS 2006/07*, was submitted in November 2007. It shows that the CSU has made substantial progress toward implementing the original initiatives of the ITS, placing the system among the nation's leaders in the use of information technology to support its educational mission.

Because of state budget reduction requirements and campus enrollment shortfalls, CSULA budget guidelines specified that there would not be any new initiatives undertaken in instructional or administrative technology during the three consecutive fiscal years of 2003/04 through 2005/06. As a result, CSULA had fallen slightly behind system averages in some areas of implementing the ITS when *MOS 2006/07* was being prepared. For example, CSULA was able to convert only about six classrooms to smart classrooms each year during this period of restricted funding. However, during this period a mobile strategy was adopted and 30 mobile units were deployed. These mobile units are not accounted for in the MOS survey. The campus restriction on new initiatives was lifted in 2006/07, and CSULA aggressively began to catch up.

Evidence

The *MOS* report is a systemwide report; it provides aggregated information about all 23 campuses in the CSU. However, the report is based on data sets for each campus, and each campus annually receives a report from the Chancellor's Office providing a comparison of how its implementation of the ITS compares with that of the system totals and averages. CSULA's report, *Los Angeles 2006-2007 CSU Annual Technology Survey* (the *Survey*) gives CSULA an evidence-based measure of its progress in meeting its goals for information technology compared to the rest of the campuses. A copy of the *Survey* is included as Attachment A.

A detailed analysis of CSULA's performance/status as given in the *Survey* is included as Attachment B.

Additionally, the Chancellor's Office provides each campus a copy of the spreadsheets it develops for analyzing the data as part of preparing the *MOS* report to the legislature. The spreadsheets provide systemwide totals, averages, and medians for all data gathered through the reporting process over the last nine years as well as the individual campus' ranking within the CSU on a number of the items. The Chancellor's Office provides the spreadsheets to the campus on a CD which is included with this report as Attachment C (and is referenced in the report as "the *Spreadsheet CD*").

2006/07 Status

The ITS contains three major components: academic goals and initiatives, administrative goals and initiatives, and the technology infrastructure, generally referred to as the Baseline, which is the enabling mechanism that permits implementation of those initiatives and goals achievement. This section discusses CSULA's status as of the 2006/07 survey in implementing these initiatives by comparing its responses with those of its sister campuses in the CSU. The ITS set the bar very high, and, in general, CSULA is doing well.

- *Academic Goals and Initiatives: Excellence in Learning and Teaching.* The ITS academic initiatives seek to improve academic quality, increase student access, and contain costs. The CSU and its campuses have made major investments to increase the usage of information technology-based learning materials by assisting faculty with the development of online course materials, implementing learning management systems and other Web-based tools, and developing delivery mechanisms such as smart classrooms on campus and distance learning support for off campus.

CSULA has established a Center for Innovation and Excellence in Teaching and Learning (CIETL) to assist faculty who wish to use technology to enhance their teaching and their students' learning experience. Because of the three-year period of restricted funding, it has not been able to support the academic initiatives at the level typical for other campuses in the CSU. CSULA invested only about a third as much in personnel to support the development of technology-mediated materials as compared to the systemwide average in 2006/07 [ref: *Survey*, sec. 1.b – 1.e], and its total state-funded support for technology-mediated production ranked it fifteenth in the

system during that year¹. CSULA also had fallen behind systemwide averages in equipping and supporting smart classrooms compared to the extent other campuses had by 2006/07. Less than 50% of CSULA's classrooms were permanently equipped by 2006/07 to accommodate computer-based, multimedia presentations. If the 30 mobile units were included, it would increase to 60%. Systemwide, more than 80% of all classrooms were so equipped [ref: *Survey* sec. 6.2.j]. CSULA moved aggressively in this area during 2007/08, equipping 26 of its remaining general lecture rooms as smart classrooms and refreshing all those already equipped that needed updating. However, there remain areas that need to be addressed: CSULA is one of 5 campuses in the CSU that has not integrated its learning management system (LMS) and student administration system [ref: *Survey* sec. 2.h1]; it is not using a Web-conferencing system to support education while half of the other campuses do [ref: *Survey* sec. 2.i1]; and it is one of 6 campuses that have not implemented an ePortfolios system [ref: *Survey* sec. 2.j]. The primary reason is that CSULA has been evaluating open systems LMS packages as opposed to the current, closed proprietary system (WebCT 6.2). CSULA intends to implement a new open systems LMS within in the next two years as well as leverage Web and Web portal technologies to enhance student access to information.

As a result, there was a lower level of participation in the development and use of technology-mediated instructional materials by the faculty at CSULA than was the average for the other campuses. Approximately 50% of faculty participated directly in the development of such materials during 2006/07 while systemwide participation was close to 90%. Only slightly more than 1,000 course sections actually used Web-based course management tools. Less than a third of CSULA's faculty actually taught in one of those sections, while the systemwide number was close to three-quarters. As a result, there were only 20,000 student registrations in those sections [ref: *Survey* sec. 2.a, b, c].

- *Administrative Goals and Initiatives: Administrative Productivity and Quality.* The purpose of the administrative initiatives is to increase the accessibility and utility of major administrative information systems to students, faculty, and staff while improving the efficiency and quality of administrative services. The CSU as a whole is very close to completion of the major initiatives in this area: creating a shared data center for use by all the campuses for their major administrative processing and implementing the Common Management System (CMS). CMS consists of standardized implementations of the Oracle/Peoplesoft finance, human resources, and student administration applications at the consolidated data center. As reported in *MOS 2006/07*, 21 campuses have implemented the finance application, all 23 the human resources application, and 13 the student administration application. Almost all CSU students use the system for registration and grade information.

CSULA is a leader in this area. It already was a user of the Peoplesoft finance and human resources applications prior to the initiation of the CMS project and was able to begin implementation of the CSU versions in the first phase of the project, helping to establish an implementation road map for the other campuses. CSULA now has implemented all three of the

¹ *Spreadsheet CD*, Sheet "Instr. Tech Dev", Campus Profile: Total Direct Support for Instruction Technology Development

major applications and is participating in the development of data warehousing applications to enhance management reporting. As of the end of February 2008, CSULA has upgraded to the latest versions of the human resources and student administration system (now a combined application) available from CMS (i.e., CMS HCM 8.9). The latest version of CMS Financials (9.0) became available to the campuses during March 2008, and CSULA will be upgrading to that version by December 2008.

- Technology Infrastructure: Personal Productivity. Information technology permeates every important facet of the modern university, academic and administrative. The CSU recognized at the outset of the ITS that a robust technology infrastructure is a prerequisite for both quality and productivity in the digital age. Therefore, the ITS was predicated on implementing a set of “Baseline” facilities and services to support its other goals and initiatives. As described in *MOS 2006/07*, the Baseline facilities and services were identified as hardware (workstations), software, network access, training, and user support sufficient to meet the CSU’s vision of providing “students, faculty, and staff with anywhere, anytime electronic access to information resources in support of the teaching-learning mission of the University.” Most of the CSU campuses’ information technology organizations, including CSULA’s central Information Technology Services, have adopted some variant of this vision statement as part of their own vision or mission statements.

This project has been a systemwide success, and CSULA has participated in that success. A current-technology network is installed on the campus, providing Gigabit backbone service and fully switched 100 Mbs service to the desktop as well as into every instructional space [ref: *Survey* sec. 9.a]. Every network port on the campus meets this standard, and CSULA is one of only three campuses in the system that has more ports fully compliant than was defined in the Baseline documents. In fact, CSULA has implemented about 25% more fully compliant ports than is called for in the Baseline, whereas systemwide only about 80% of ports meet CSU performance standards [ref: *Survey* sec. 14.2]. On the downside, CSULA has the least amount of wireless coverage of any campus in the CSU.² For every type of space or area (instructional, library, residence hall, open space, and student centers), it provides less than half the coverage reported as the system averages [ref: *Survey* sec. 9.d]. However, the limited campus deployment resulted in some significant advantages for the campus. The Aruba wireless standard used by the campus was subsequently adopted by the CSU as a systemwide standard. Consequently CSULA has been playing a leadership role in the systemwide deployment. When completed in 2008/09, CSULA will be the first campus to fully implement all of the Aruba wireless security products.

CSULA’s comparative success in providing faculty, staff, and student access to computer workstations is good. It provides more workstations for the full-time faculty than there are full-time faculty members (i.e., it provides 6 workstations for every 5 full-time faculty members). Furthermore, 100% of those workstations meet both hardware and software Baseline standards (basically a workstation less than three years old hosting a currently supported operating system and applications) because CSULA is maintaining its 3-year refresh program for full-time faculty

² *Spreadsheet CD*, “Sec 9 Wireless Ntwk”, 2006-07 Campus Profile: Wireless Network Access by Space Type

workstations, whereas less than 90% systemwide met the hardware standards and 95% met the software standards during 2006/07 [ref: *Survey* sec. 6.1]. CSULA made 1 workstation per 13 students generally available on campus during 2006/07, whereas the systemwide average was 1:14. Also, almost 100% of those student-accessible workstations met Baseline standards, whereas only 85% to 90% met standards systemwide [ref: *Survey* sec. 6.1]. The campus did particularly well in providing adaptive technology. CSULA had 95 students who were eligible to use adaptive technology, and the campus provided 295 workstations equipped with adaptive technology. Systemwide, there were only 3,488 adaptive technology workstations available for 6,538 eligible students [ref: *Survey* sec. 15.a, b]. Although, CSULA appeared to fall slightly behind CSU averages in providing both numbers of workstations and workstations that meet current standards for part-time faculty and staff/administrators [ref: *Survey* sec. 6.1], in actual practice part-time faculty and staff/administrators have the equipment they need.

CSULA is the only campus³ that has implemented 100% of all Baseline-recommended policies and practices for providing technology training for faculty, staff/administrators, students, and IT professionals [ref: *Survey* sec. 7.0, 7.1]. It has implemented almost 90% of the recommended policies and practices for providing technical support, placing it among the top 6 campuses⁴ in the system on this measure [ref: *Survey* sec. 8.0]. However, CSULA was able to provide only 49 hours/week of Call Center access to technical support during 2006/07. The CSU average for faculty and staff/administrators was 60 hours and 68 hours for students [ref: *Survey* sec. 8.1.b]. During 2007/08, CSULA has been able to expand Call Center/Help Desk coverage to 61 hours/week, bringing it up to CSU averages.

An area that continues to increase in importance and has been added to the ITS Baseline is the requirement to protect all of these assets and the people who use them through Access and Identity Management. This is an area where CSULA has been particularly aggressive. It is one of 14 campuses with a campus Information Security Officer and dedicates twice the amount of staff FTE to information security as the systemwide average [ref: *Survey* sec. 16.b]. It currently is involved in a major internal assessment of its compliance with security best practices.

Overall, CSULA is successfully implementing the CSU's Integrated Technology Strategy, placing it in a leadership position nationally in using information technology to support the mission of the University.

WASC Themes

CSULA is in the process of updating its strategic plan for information technology. Essentially, because the Integrated Technology Strategy is so all encompassing, CSULA can focus its information technology strategic planning on implementing the initiatives under the ITS and be assured that it is implementing information technology that supports the goals of the campus strategic plan as well as the WASC themes that have been targeted specifically for CSULA's reaccreditation review.

³ *Spreadsheet CD*, "Sec 7 Trng", 2006-07 Baseline Policy and Practices

⁴ *Spreadsheet CD*, "Sec 8 Support", Policy and Practices 2006-07

The draft information technology strategic plan establishes strategic directions for the use and management of information technology along with goals associated with each specific direction. A number of these strategic directions are infrastructure-focused: under their rubrics, CSULA has established goals to ensure that the physical infrastructure exists on the campus to support the mission of the University. These goals include providing basic communications services (voice, data, video, and multimedia), expanding the capacity and redundancy of the network, securing the network and information available over it and from the University's records from unauthorized access and use, and enhancing the existing campus infrastructure to accommodate technology convergence. It could be argued that because implementing any goal from the draft information technology strategic plan would advance and support the mission of the University, and advancing and supporting the mission would show conformance with the themes, that every goal has a relationship with some theme. However, in this section, a goal was identified only if there is a strong and direct relationship between it and one of the WASC reaccreditation themes.

- *Supporting Students to Reach Academic Goals.* This theme calls for improving academic support services, improving advisement, and strengthening faculty and staff effectiveness in monitoring student progress.

The Common Management System (CMS) provides significant functionality across academic support services, including degree audit and other tools which are allowing improvements in advising. CSULA will continue to remain current on releases of the CMS software and ensure that process improvements that become available through that software are rolled out to the campus. For example, a new CMS feature now enables faculty and authorized staff to send e-mail messages to students directly from class roster pages. CSULA is highlighting this capability on its Information Technology Services home page. The draft strategic plan establishes a strategic direction for the campus to examine and improve technological methods of gathering and sharing student information to provide consistently accurate and timely data, to improve decision making, and to decrease student time to degree. CSULA has established goals for leveraging Web and Web portal technologies to enhance student access to information and for implementing the CMS data warehousing functionality for campus access to standard reporting. As part of pursuing its strategic direction for utilizing opportunities provided by technology to improve learning and enhance collaboration, CSULA also plans to implement a replacement for its WebCT learning management system (LMS) by summer of 2010. Modern LMS software provides the faculty with a number of tools for monitoring student progress.

- *Enrollment and Resource Management.* This theme calls for establishing and attaining enrollment goals, ensuring sufficient personnel, and strengthening internal management practices and processes.

One benefit of all CSU campuses using the same administrative software is that each campus can strengthen its internal management practices and processes by learning from the experiences of all the other campuses, even to the point of helping the campus to determine what an appropriate staffing level is. Going further, in its draft information technology strategic plan, as part of promoting infrastructure readiness, reliability, availability, accessibility, and security as a

strategic direction, the campus has set a goal to update and test Disaster Recovery and Business Continuity Plans to ensure critical systems and information are available anytime, anywhere. In general, such activities are opportunities for reviewing and updating the underlying business practices and ensuring their maximum effectiveness.

As part of its strategic direction to utilize opportunities provided by technology to improve learning and enhance collaboration, the campus has established a goal to integrate additional distance education and online courses into the curriculum. Greater availability of distance education and online courses increases enrollment opportunities for place-bound and schedule-constrained students.

As part of its strategic direction to build and promote a central Information Technology Services organization culture of quality service based upon collegiality with all those who are served by its technology, Information Technology Services has established a goal in the draft information technology strategic plan to participate in the discussion of possible campus conversion from a quarter to a semester system.

- Promoting Student Learning Outcomes and Success. This theme calls for supporting students, faculty and academic processes toward the goal of student success in GE and program-level outcomes.

The draft information technology strategic plan includes setting a campus direction to build and support an information literacy program for students, faculty, and staff that ensures all are prepared to explore and use technology to fully meet their needs. It establishes a goal to develop and administer new students' technology training so incoming students can acquire the foundational knowledge and skills crucial for academic and career success. The draft plan also sets a strategic direction to utilize opportunities provided by technology to improve learning and enhance collaboration. CSULA has established goals in this area, including implementing a new learning management system and integrating additional distance education and online courses into the curriculum. Providing course materials and instructional modules using technology allows students flexibility in scheduling their time for school work and the opportunity to review materials as often as necessary to ensure they understand it.

To support the implementation of these goals, CSULA also has established goals as part of this strategic direction to complete the conversion of all remaining classrooms with ten or more students to smart classrooms and to complete one new Student Union technology lab and one new Student Union training lab. As part of its general direction to develop and maintain technology infrastructures that promote and enhance communications and access to information for anytime, anywhere teaching, advising, learning, and decision making, CSULA has established goals in the draft strategic plan to expand the existing wireless network to cover all buildings and open areas as well as to refresh the campus network on a three-year cycle. Successful implementation of the information technology strategic plan will ensure that faculty and students have the resources, in terms of online course materials and the physical infrastructure to access them anytime/anywhere, for student success.

- *Being a Teaching and Learning Community.* This theme calls for demonstrating campus growth in becoming a learning-centered organization, and showing institutional and faculty responsibility for student learning.

As part of its direction to build and promote a central Information Technology Services organizational culture of quality service based upon collegiality with all those who are served by its technology, CSULA has established goals in the draft information technology strategic plan to enhance and expand Help Desk services, shorten response times, and work toward 24x7 service provisions; and to collaborate with academic and administrative departments to understand service expectations and requirements, and model service offerings to campus needs. As part of its strategic direction to utilize opportunities provided by technology to improve learning and enhance collaboration, CSULA has set goals to implement the ITS Digital Marketplace Initiative to control costs to students (particularly for text books) and to implement the ITS Assistive Technology Initiative to provide technology accessibility to all students, faculty, staff, and visitors.

Implementing these goals along with others already mentioned, such as implementing a new LMS providing more course materials online (which will provide new tracking and assessment tools to assist faculty support student learning), are part of what makes CSULA a learning-centered organization and shows institutional and faculty responsibility for student learning.

There is a high level of correspondence between the strategic directions and goals identified in the draft information technology strategic plan and the four themes identified by the campus for its WASC reaccreditation review. The over-arching theme identified by the campus was “becoming a teaching and learning community by supporting student success and student outcomes.” It is clear that implementing the draft information technology strategic plan will play a significant role in creating this teaching and learning community.

A cross-reference table showing where there is a strong and direct relationship between one of the WASC reaccreditation themes and one of the goals from the draft information technology strategic plan is included as Attachment D.

Capability

The CSU began active implementation of initiatives under the Information Technology Strategy framework in 1999/2000. Nine years of continuous effort to implement the most aggressive information technology implementation in the nation has exacted a toll on all the campuses in the CSU. These initiatives are resource intensive, particularly personnel intensive. Although CSULA has been a successful participant in implementing the ITS, it has faced the additional stress of reduced funding due to campus enrollment shortfalls in addition to the general state budget reduction requirements during fiscal years 2003/04 through 2005/06. A campus moratorium on new instructional or administrative technology initiatives during that period was lifted in 2006/07, and more funding has been allocated for implementing the infrastructure and services called for by the ITS initiatives. The draft information

technology strategic plan further accelerates these implementations. The campus must ensure it has the management and budgetary capability to be successful.

- Management Capability. Implementing the Information Technology Strategy to date has placed tremendous stress on campus resources. The new initiatives will increase that stress. Identifying and providing best-practice information security may be as large a project as the installation of the network or the implementation of the administrative software. The Assistive Technology Initiative also is huge because it encompasses behaviors across the entire University, including making faculty and staff aware of its requirements in the three areas of Web accessibility, instructional materials, and procurement. To continue to be successful will require all stakeholders on the campus to move forward on a common path. CSULA is positioned to do that. Following the best practices outlined in the *CSU Strategic Planning Study of Best Practices*, the campus created the position of Vice President for Information Technology Services and Chief Technology Officer in 2003. The Vice President and CTO reports directly to the President and is a sitting member of the President's Cabinet, a strategy that avoids silo governance and promotes integration of technology across all University divisions.

Note that in a number of areas, CSULA is more centralized in its management of information technology than is typical in the CSU. For example, almost all servers on campus are under central management and server standards are enforced. Hardware/software installation, upgrade, maintenance, and repair are centralized while on most campuses these are more shared responsibilities. There is only one wide area network on campus. This simplifies the implementation of the infrastructure initiatives. However, moving forward in the directions established in the draft information technology strategic plan requires collaborative participation by all segments of the campus. The draft plan establishes a direction for the central Information Technology Services organization to build and promote an in-house culture of quality service based upon collegiality with all those who are served by its technology. Goals included in the draft plan for moving forward in this direction include collaborating with academic and administrative departments to understand service expectations and requirements, and modeling service offerings to campus needs; and, gathering, analyzing, and applying statistical data to measure progress toward optimal service provisions and availability.

It is clear that the campus is organizing for success: it has implemented both the leadership responsibility that must be in place and the collaborative planning and implementation that must take place in order to move forward.

- Budget Capability. The draft information technology strategic plan identifies the campus' directions in the use of information technology and its five-year goals in support of those directions. The campus recently lifted a moratorium on new instructional and administrative technology initiatives and has already increased or committed to increasing spending in several areas:

- During 2007/08, the central Information Technology Services office increased the weekly hours when the Call Center/Help Desk is available from 49 to 61 hours. It plans to increase coverage to 24x7.
- During the three-year moratorium on new initiatives, the campus was able to convert only about six classrooms per year to smart classrooms. During 2007/08, it converted 26. If it can sustain this level, it will be able to meet its goal of converting all remaining classrooms seating ten or more students to smart classrooms in three years.
- CSULA plans to replace its current, proprietary learning management system (LMS), WebCT 6.2, with an open systems LMS, such as Moodle or Sakai. It has committed to funding a pilot project for faculty to test and compare the available products, including funding to provide faculty with incentives to participate in the pilot. Additional funding will be required to convert existing course modules and to build new ones and to integrate the LMS with other applications such as the CMS Student Administration module and Web portal products.
- CSULA has committed the funding to build out its wireless network during 2008/09 to cover 100% of campus buildings and open areas where technically feasible. It also has committed to allowing faculty to select laptops rather than desktop computers since the 2006/07 refresh cycle.

Beyond these commitments and their follow-on expenses, CSULA faces significant new expenditures to support the refresh of the original ITS initiatives, such as the Common Management System and the Technology Infrastructure Initiative (the “Baseline” project), as well as the newer ITS initiatives, such as the Accessible Technology Initiative, IT Security and Assurance, Records/Information Retention and Disposition, the Digital Marketplace Initiative, and the Access and Identity Management Initiative.

In 2005, the State of California and the CSU reached a “Compact” in which the Governor committed to fund annual enrollment growth through 2010/11, provide a General Fund increase, and, during the final four years, increase the base budget for salaries, health benefits, maintenance, and inflation. In exchange, the CSU agreed to a series of accountability measures. However, for Fiscal Year 2008-09, the Governor has proposed a \$312.9 million cut to the CSU budget approved by the CSU Board of Trustees. This translates to over \$12 million reduction for Los Angeles. Until the Fiscal Year 2008-09 budget is finalized, it is uncertain whether there will be sufficient funds available for CSULA to attain the goals it has identified in its draft information technology strategic plan over the next five years. It is expected that the current economic downturn in California will result in significantly reduced revenue to the state, at least during Fiscal Year 2008/09. If the state experiences only a mild and short-term downturn in revenue, it is possible that attainment of the goals in the draft strategic plan will only have to be set back a year. However, if the state suffers a deeper or longer-term economic downturn resulting in significant budget reductions to the campus, even those commitments made during 2007/08 and identified above will have to be reassessed.

Assessment

The campus is well positioned organizationally to continue its successful implementation of the Integrated Technology Strategy and implement the draft information technology strategic plan over the next five years. CSULA is effective in using information technology in support the campus in “becoming a teaching and learning community by supporting student success and student outcomes.” However, uncertainty about the health of the economy and the potential for reduced state revenues resulting in budget reductions to the CSU and CSULA may limit the amount of progress the campus can make on implementing its information technology strategic plan.

Attachment A: How CSULA Compares to the Rest of the CSU
A Detailed Analysis of the Data from the
Los Angeles 2006-2007 CSU Annual Campus Technology Survey

The *Los Angeles 2006-2007 CSU Annual Campus Technology Survey* (the *Survey*) is included as Attachment A. It shows CSULA’s responses to the *MOS 2006/07* survey instrument compared to CSU systemwide totals and averages. In the **Status** section of the information technology WASC report, as well as in the body of this attachment, CSULA’s activities were compared with CSU averages.

In a ranking of the 23 CSU campuses by FTES from smallest to largest, CSULA ranks thirteenth. If the Maritime Academy (a special-purpose campus with less than a 1,000 FTES) is not counted, CSULA ranks twelfth out of 22.

If the average is computed by dividing the total by 22 (i.e., leaving out the Maritime Academy, which does not fully participate in all programs), then the average is 4.54%.

Full-time faculty headcount	4.82%
Full-time faculty FTE	4.82%
Part-time faculty headcount	5.26%
Part-time faculty FTE	5.23%
Total faculty headcount	5.04%
Total faculty FTE	4.94%
Full-time staff/administrator headcount	4.32%
Full-time staff/administrator FTE	4.25%

Part-time staff/administrator headcount	2.12%
Part-time staff/administrator FTE	2.27%
Total staff/administrator headcount	4.14%
Total staff/administrator FTE	4.16%
Student headcount	4.84%
Student FTES	4.60%

From these figures it appears that the systemwide average is a good approximation of what CSULA's measure should be if CSULA is making equivalent progress in implementing the ITS as are the other campuses in the CSU in aggregate.

It is important to remember that the initiatives under the ITS framework represent the largest coordinated information technology project in the history of higher education in the United States; the ITS goals are at the highest, most aggressive level in the U.S.; and systemwide progress has stayed on-schedule and on-budget. Being "average" in implementing the ITS within the CSU system means being in the forefront as a national leader in providing information technology services in higher education.

The numbered sections below match the numbered sections in the attached *Los Angeles 2006-2007 CSU Annual Campus Technology Survey*.

Excellence in Learning and Teaching

The ITS academic initiatives seek to improve academic quality, increase student access, and contain costs.

- 1. Campus Support for Producing Tech-Mediated Materials.** CSULA invests only about one third the personnel resources in supporting the production of technology-mediated course materials as the system average. This short-fall is across the board in faculty, staff, and student assistant time assigned to assist faculty in producing materials and in release time for faculty to produce materials. It also invested no campus funding in acquiring equipment, software, consulting services, products, or other non-personnel items to support the production of materials. However, one must be careful when looking at the numbers reported in the Survey. Although from systemwide averages it would have been reasonable to expect the campus to spend more than \$90,000 per year (the systemwide average) for facilities upgrades, the systemwide median⁵ was only \$13,000, indicating that a few campuses made large investments in expanding their materials production facilities and thereby inflated the average. However, CSULA still should be spending some funds every year to increase

⁵ The system medians come from spreadsheets developed by the CSU Chancellor's Office and distributed to the campuses to show how the Chancellor's Office developed its reports back to the campuses and to the legislature. These spreadsheets are included with this report as Attachment C and referenced as *Spreadsheet CD*. The particular reference for the medians given in this paragraph is *Spreadsheet CD*, "Instr. Tech Dev.", Fig. 6D.2 & 3 – System Profile: Support for Instructional Technology Development, 2007 Campus Survey

and/or maintain the currency of its production facilities. The *Survey* also showed an average of \$425,000 in funding for production from grants, contracts, revenue, and other non-state sources. Again, a few campuses must have received sizable grants or generated significant revenue during 2006/07 to drive up the average because the median was only about \$6,600.⁶

Even though the median values do not indicate CSULA is lagging the CSU in general in the production of technology-mediated materials the way that the systemwide averages do, CSULA did invest only the ninth least amount of state resources in producing such materials during 2006/07 and has invested only the sixth least amount of state resources over the nine years that the *MOS* has been produced. This clearly is the result of the three years of restricted funding, and the 2006/07 data actually indicates that CSULA is beginning to rectify the situation. However, the legacy result is that only slightly more than 50% of the CSULA faculty participated in the production of technology-mediated materials during 2006/07 while systemwide almost 90% of the faculty participated. More personnel support for faculty needs to be provided and additional faculty incentives developed (currently, release time for faculty is the only incentive) at CSULA. In addition, CSULA should explore additional funding through grants and revenue opportunities.

- 2. Development of Distributed Learning Environments.** The CSU has invested and continues to invest significant resources into developing distributed learning environments, both to support students in traditional face-to-face coursework and distance learners. For example, as identified in *MOS 2006/07*, it has worked with the major vendors to develop advantageous license agreements for the campuses to acquire learning management systems, led the development and operation of the MERLOT online information resource repository containing over 17,000 learning materials, and is developing the CSU Digital Marketplace which a U.S. Congressional subcommittee in 2007 identified as the leading innovation to reduce the cost of textbooks.

During 2006/07, CSULA reported only 1,050 course sections as using Web-based course management tools/applications. Based on systemwide averages, one might expect CSULA to be mounting twice that number of course sections. However, this is an area where it is difficult to interpret systemwide reporting. Because course sections may be counted if any part of the section uses Web-based course management tools/applications, it is possible that some campuses are reporting course sections that only use a learning management system to support class section e-mail distribution while other campuses may choose not to report a course section as technology-mediated unless actual learning materials and/or classroom activities are included in the course modules. Regardless of how the other campuses may have measured their usage, CSULA still does not appear to use Web-based course management tools/applications as much as the system average. It also has not provided as much support for students taking courses mounted under the learning management system. It provided only 40 hours/week of user support for its learning management system (LMS), WebCT 4.1, during 2006/07 compared to an average of 60 hours/week in LMS Help Desk support for students

⁶ *Spreadsheet CD* gives individual campus data for all campuses, but does not label any campus' data other than CSULA's in the copy provided to CSULA (i.e., the Chancellor's Office maintains a level of confidentiality between the campuses). This makes it difficult to identify which specific campus(es) might have had spikes in spending that would throw off the systemwide averages.

and faculty for the system as a whole. Even the systemwide average of 60 hours/week probably does not meet the needs of students who may be working on class materials late at night. And CSULA has not integrated its learning management system with the CMS student administration application, which 18 of the campuses have done. Further, CSULA has not implemented a Web-conferencing system, which 11 of the campuses have done, or ePortfolios, which 17 of the campus have done.

There has been a great deal of churn in the LMS marketplace over the last few years, with mergers, vendors leaving the market, open-systems offerings and user consortiums entering it, and a number of opinions being developed over what should be included in an LMS, what products should be integrated with it, and how dependent a campus should be on an LMS. It has not been a period when a campus facing funding restrictions could afford to make major investments in this area. However, CSULA recognizes that it now must move forward more aggressively in distance education and online course support. The CSULA Office of Academic Affairs has identified

- integrating additional distance education and online courses into the curriculum;
- implementing the infrastructure to support ADA-compliant learning management systems; and
- implementing the infrastructure to support a secure, ADA-compliant Digital Marketplace

as goals included in the CSULA information technology strategic plan currently under development. In parallel with the systemwide LMS requests for proposals process that will result in Master Enabling Agreements⁷ being reached with a few vendors, CSULA is in the process of evaluating options to WebCT 6.2. It particularly is interested in establishing a strategic direction for LMS that is based on open systems as opposed to the current closed, proprietary system. CSULA currently is performing a technical evaluation of Moodle and Sakai to determine if they meet certain technical thresholds (e.g., can the system be available 7x24, even during backup). Once the technical evaluation is complete, there will be an open call to the faculty to participate in piloting one or two of the open systems (Moodle and/or Sakai). CSULA anticipates being fully migrated to the new LMS by summer of 2010. It has committed to funding the pilot and providing the necessary incentives for faculty to grow the new LMS.

3. Automatic processing of requests to borrow materials from other libraries.

It is not possible to compare CSULA's automated interlibrary borrowing to the other campuses'. For most years that the *MOS* reports have been produced, CSULA reported total interlibrary borrowing, non-automated as well as automated because there was some confusion regarding what information the survey actually was requesting. The numbers reported for 2006/07 are for Pharos/RSS interlibrary loan transactions only. Use of Pharos/RSS was discontinued in December 2006, and the campus began using ILLIAD in January 2007. The campus does not keep statistics on its use.

Administrative Productivity and Quality

⁷ A Master Enabling Agreement (MEA) is a contract with a vendor that spells out the terms and conditions that apply if a campus chooses to purchase goods or services from that vendor. It is not an agreement of exclusivity.

The purpose of the administrative initiatives is to increase the accessibility and utility of major administrative information systems to students, faculty, and staff while improving the efficiency and quality of administrative services.

- 4. Replacement of legacy by Common Management administrative information systems.** Collection of campus data on the Common Management System (CMS) implementation was eliminated from the survey instrument during 2004. However, CSULA had been a first-wave campus in the implementation of CMS, helping establish a road map for other campuses in the implementation of these critical systems. CSULA continues this leadership role, participating as one of the first-wave campuses for implementing new releases of the software.

Even though the CMS project is no longer tracked as part of *MOS* reporting, CSULA is actively involved in improving its use of administrative information. It has established a direction in the draft information technology strategic plan to examine and improve technological methods of gathering and sharing student information to provide consistently accurate and timely data, to improve decision making, and to decrease student time to degree. Specific goals are to

- leverage Web and Web portal technologies to enhance student access to information; and
- implement the student administration data warehouse for campus access to standard reporting.

- 5. Data center resources required to support administrative information systems.** Collection of campus data on administrative data center expenditures was eliminated from the campus technology survey instrument in 2002. Systemwide, the Chancellor's Office estimates the campuses save an aggregate \$17 million/year through using a shared data center for CMS rather than each campus operating its own data center for administrative applications.

Personal Productivity

The ITS was predicated on implementing a set of "Baseline" facilities and services to support its other goals and initiatives. The Baseline facilities and services were identified as hardware (workstations), software, network access, training, and user support sufficient to meet the CSU's vision of providing "students, faculty, and staff with anywhere, anytime electronic access to information resources in support of the teaching-learning mission of the University."

- 6. Faculty, staff and student access to a computer workstation.** The CSU established a goal of providing a workstation to every full-time faculty member and to every two part-time faculty members as part of its Baseline initiatives. CSULA meets these targets, and actually exceeds the target for full-time faculty. Furthermore, every workstation provided to full-time faculty is fully compliant with Baseline standards (i.e., roughly hardware less than three years old running a currently supported operating system and applications), one of only 7 campuses in the system to

be 100% compliant.⁸ CSULA also reported on the 2006/07 survey that it met the requirement to provide one workstation per two part-time faculty members but that none of these workstations met Baseline standards. CSULA is maintaining a three-year refresh cycle for workstations for full-time faculty. When a workstation has been in service for three years with a full-time faculty member, it is passed down to a pair of part-time faculty members. Sufficient full-time faculty workstations are passed down each year to meet 75% of the total requirement for part-time faculty. Therefore, almost all part-time faculty have access to a workstation that is only one year out of date. These machines seem effective in meeting the needs of the part-time faculty even if officially they are not in compliance with the hardware standards. Because they are mostly only four years old, most, if not all, of them also run currently supported versions of the operating system and applications, although CSULA chose to report zero software compliance based on the hardware age.

The initiative also calls for every staff member and administrator who needs a workstation in order to perform his or her duties to have one. CSULA meets this target.⁹ In 2006/07, 80% of these workstations met the Baseline standards for hardware and software, compared to a systemwide compliance rate of 88% for hardware and 92.5% for software. It appears that CSULA is slightly behind systemwide averages in providing current-technology workstations to staff/administrators. However, not every staff member needs a computer at the latest technology level to perform his or her job functions, and CSULA does not believe it is under-equipping its employees.

CSULA primarily has provided almost all faculty and staff/administrators with desktop computers rather than providing laptop computers to faculty and staff/administrators whose job functions might be supported better using a laptop than by using a desktop. Desktops cost less than comparably powered and equipped laptops, and it was difficult to spend that extra amount during times of tight funding. This is an area of concern that is not addressed by the ITS initiatives, and is not part of the Baseline standards. However, CSULA intends to allow faculty members whose computers are being refreshed during 2008/09 to have a laptop rather than a desktop if they want one. It is expected that between 100 and 150 faculty members will request laptops.

CSULA workstations are generally available to students at a student-to-micro ratio of 13:1. This was better than the systemwide average of 14:1. Also, almost 100% of these workstations met the Baseline standards, whereas only 85% met the hardware standards and 90% the software standards systemwide. Although CSULA is in a relatively good position, it has established a goal in the draft information technology strategic plan to complete one new Student Union open access technology lab and one new Student Union training lab by fall quarter 2008, which will improve these figures.

CSULA is fortunate in that it is able to maintain a more centralized server environment than is typical in the CSU. In 2006/07, 92% of all campus servers were located centrally, whereas only 46%

⁸ *Spreadsheet CD*, "Sec 6 Fac", Percent of Workstations Meeting Meeting Hardware Stds (%FTFhdst) and Percent of Workstations Meeting Software Stds (%FTFsfst)

⁹ There is an error in the *Survey*: the Chancellor's Office divided staff by micros rather than micros by staff, reporting that CSULA was at 99.0% compliance rather than its correct measure of 103.3%.

are systemwide. One consequence is that CSULA can keep its servers at current technology standards more easily, with almost 70% of all campus servers being compliant with the campus currency standards. This compares with only 15% of servers meeting currency standards across the 10 campuses that had established standards by 2006/07.

CSULA's most serious problem in this area has been a lack of smart classrooms. Only 46% of CSULA's general lecture rooms had been permanently equipped to accommodate computer-based, multimedia presentations by 2006/07. This compared with a systemwide average of 83%. Also, CSULA spent slightly less than average for new installations during 2006/07, less than half as much for refresh, and only about 15% as much for support for its smart classrooms than was reported as the average for the other campuses. This was a direct result of the three years of restricted funding for instructional and administrative technology initiatives, during which time the campus could afford to equip only about six rooms per year. However, in 2007/08, CSULA has equipped 26 additional classrooms as smart classrooms and refreshed all existing smart classrooms that needed updating. This leaves less than 75 general lecture rooms on the campus that are not equipped yet. However, CSULA has 30 mobile carts that allow any classroom to be used as a smart classroom with a little set-up. The campus has included a goal in the information technology strategic plan currently in draft to "Complete conversion of all remaining classrooms with ten or more students to technology classrooms."

7. **Technology training for faculty, staff/administrators, students and IT professionals.** CSULA is the only CSU campus¹⁰ that has all end-user training policy and practices defined for Baseline support in place. Significantly fewer faculty and staff/administrators participated in training during 2006/07 than average, but it is unclear how well one campus' program can be matched to another's. For example, on average, the campuses spent 40% of their staff/administrator training dollars on CMS training. Because CSULA was an early implementer of CMS, most of its staff/administrators already had received training prior to 2006/07. However, it seems clear that the disparity on faculty training support is due to the relatively lower amount of support and effort that CSULA puts into bringing up course sections on its LMS. On average, campuses spent about 40% of their faculty training effort on workshops and other training support for learning management systems. Because CSULA will be implementing a new LMS over the next two years, it will expand its faculty training support as part of that project.

CSULA is at systemwide averages for providing training for students. However, it still has established a goal in its draft information technology strategic plan to expand its current programs by developing and administering new students' technology training so incoming students can acquire the foundational knowledge and skills critical for academic and career success.

CSULA is the only campus¹¹ in the CSU that had all professional development policy and practices defined for Baseline support in place. It was only slightly under systemwide averages for participants and expenditures in the area of training for information technology professionals.

¹⁰ *Spreadsheet CD*, "Sec 7 Trng", 2006-07 Baseline Policy and Practices

¹¹ *Spreadsheet CD*, "Sec 7 Trng", 2006-07 Baseline Policy and Practices

8. **Access to Baseline technical support policy and practices.** CSULA is ranked sixth in the CSU¹² in having all Baseline technical support policy and practices in place. It lacks only establishing a mechanism for measuring satisfaction with the technical support provided to faculty and staff/administrators to be able to join the four campuses in the system that are already at the 100% compliance level.

CSULA provides telephone (Call Center), walk-in (Help Desk), and e-mail/Web access to technical support for faculty, staff/administrators, and students. However, the Call Center was available only 49 hours/week during 2006/07, whereas systemwide, call centers were available an average of 60 hours/week for faculty and staff/administrators and 68 hours/week for students. During 2007/08, CSULA increased its Call Center/Help Desk coverage to 61 hours/week, bringing it up to system averages. CSULA provides Level 2 technical support, as does all other campuses in the system. It also provides Level 3 technical support, as does all but one of the other campuses in the system. One thing the *Survey* does not track is how these services are provided. Like many campuses throughout the nation, there are technology support personnel who work in various academic departments and administrative offices across the campus and who do not report to the central Information Technology Services. CSULA has established a direction in its draft information technology strategic plan to build and promote a culture of quality service based upon collegiality with all those who are served by its technology. Specific goals are to

- enhance and expand Help Desk services, shorten response times, and work toward 24x7 service provisions;
- collaborate with academic and administrative departments to understand service expectations and requirements, and model service offerings to campus needs; and
- gather, analyze, and apply statistical data to measure progress toward optimal service provisions and availability.

9. **Faculty, staff and student access to the network.** As part of the ITS Technology Infrastructure Initiative (TII), CSULA was one of the first campuses to install a fully Baseline-compliant network with a Gigabit backbone and 100 Mbps to the desktop. CSULA has installed 125% of its allocation of Baseline-compliant ports, one of 8 campuses¹³ in the system that exceeds 100% of its allocations, whereas the systemwide average is only about 80%. Every workstation on the campus is attached to the backbone network via a fully compliant port. The network is highly reliable with both best-month and worst-month statistics for planned and unplanned downtime beating systemwide averages. The network can be expected to continue meeting the campus' needs reliably into the future because CSULA is prepared to participate in the CSU's 36-month technology refresh program. The campus also has established its own local goals as part of the draft information technology strategic plan to

- upgrade the existing gym, stadium, and baseball field communications systems;
- install a radio fiber network to ensure redundancy and availability;
- install redundant Internet access points;

¹² *Spreadsheet CD*, "Sec 8 Support", Policy and Practices 2006-07

¹³ *Spreadsheet CD*, "Sec 14 Outl", Fig 7F – Campus Profile: Percent of Outlets Meeting Standards

- enhance the existing infrastructure to accommodate technology convergence of voice, data, video, and multimedia applications; and
- replace the existing PBX with new Voice over IP (VoIP) technology; and replace the aging voice mail system.

The major campus problem area has been supporting wireless communications. CSULA's campus wireless coverage was well below 50% of systemwide averages for all types of spaces (instructional, library, residence hall, open, and student center) during 2006/07, making CSULA the campus with the least wireless communications coverage in the CSU.¹⁴ The campus has committed the funds to build out coverage to 100% (to the extent technically feasible) of all buildings and open spaces on campus during 2008/09, placing it among the leaders in the CSU.

- 10. Installation, Upgrade, Maintenance and Repair of Hardware.** It is typical in the CSU for these services to be a shared responsibility of the central information technology organization and personnel located in the academic departments and administrative offices. CSULA provides these services centrally.
- 11. Installation, Upgrade, Maintenance and Repair of Software.** It is typical in the CSU for these services to be a shared responsibility of the central information technology organization and personnel located in the academic departments and administrative offices. CSULA provides these services centrally.
- 12. Management of Version Migration for Baseline Technologies.** The Chancellor's Office no longer collects these numbers. It is standard practice at the CSU campuses to manage version migration.
- 13. Establishment and Maintenance of Data Network Standards.** All 23 campuses have adopted a common architecture and protocol for data network electronics. Compliance is almost 100% across the system, and it is 100% at CSULA.
- 14. Minimum Baseline Infrastructure Construction Standards.** The purpose of this *Survey* item is to track how many additional ports have been added to the campus network as a result of new construction. This allows the tracking of total network ports for systemwide budgeting purposes as part of the technology refresh program.
- 15. Accessible Technology.** In December of 2004, the CSU Board of Trustees and the Chancellor issued Executive Order 926 which established that "It is the policy of the CSU to make information technology accessible to all CSU students, faculty, staff and the general public regardless of disability." In order to implement this policy, the Accessible Technology Initiative was added to the ITS in 2006/07 to fully implement Web accessibility, instructional materials accessibility, and accessible electronic and information technology procurement by 2011/2012. Progress on the initiative now is tracked through the annual *MOS* survey. CSULA is doing well. In 2006/07, it provided 295 accessible technology workstations even though it had only 95 students eligible to

¹⁴ *Spreadsheet CD*, "Sec 9 Wireless Ntwk", 2006-07 Campus Profile: Wireless Network Access by Space Type

use them. This compared very well with system totals where there are a total of 3,488 AT equipped workstations for 6,538 eligible students. CSULA also has established a full-time, permanent staff position with the incumbent serving as the campus point person on accessible technology, something only 14 of the campuses have done. The campus has identified as a specific goal in its draft information technology strategic plan to provide technology accessibility to all students, faculty, staff, and visitors as well as explicitly identifying the need for ADA-compliance in its goals for learning management systems and the Digital Marketplace.

16. Information Security. This is an area where CSULA has been particularly aggressive. Since May 2005, the President and the Vice Presidents have established a semi-annual town hall meeting on Institutional Alignment. Through that process, information security and assurance have been established as one of the institutional priorities. It is one of 14 campuses with a campus Information Security Officer and dedicates twice the amount of staff FTE to information security as is the systemwide average. It currently is involved in a major internal assessment of its compliance with security best practices. The campus has established directions in the draft information technology strategic plan promoting information assurance and ensuring the safety and security of all campus information and data containing confidential information as institutional priorities. Specific goals are to

- implement Access and Identity Management to cut time required to grant and revoke access to electronic information and resources;
- develop and deliver information technology security and information assurance training programs for students, faculty, staff, and visitors;
- provide anytime, anywhere access to information technology security and information assurance best business practices;
- implement and promote the Common Control Framework and Information Security Plan into all student services and administrative processes campus-wide; perform routine compliance reviews of access control methodologies; and
- perform Information Security Assessment Reviews as requested by campus departments.

The campus central information technology division, Information Technology Services, also has established goals to promote infrastructure readiness, reliability, availability, accessibility, and security, including to

- update and test Disaster Recovery and Business Continuity Plans and ensure critical systems and information are available anytime, anywhere;
- implement and maintain a campus-wide emergency notification system to protect the safety of all students, faculty, and staff; and
- execute change management and fault management best practices.

CSULA is a leader in the CSU in its implementation of the Common Management System and the campus network. It trailed systemwide averages in some areas of support for instructional technologies in 2006/07 due to prior budget constraints, but now is addressing those issues. It is moving forward effectively in the implementation of the CSU's Information Technology Strategy, placing it nationally in the forefront of providing higher education information technology infrastructure and services.

Attachment B: WASC Reaccreditation Themes and CSULA Information Technology Goals

This attachment provides a quick cross-reference showing where a strong and direct relationship exists between one of the WASC reaccreditation themes identified by the campus and one of the campus goals included in its draft information technology strategic plan.

Theme 1: *Supporting Students to Reach Academic Goals.* This theme calls for improving academic support services, improving advisement, and strengthening faculty and staff effectiveness in monitoring student progress.

Theme 2: *Enrollment and Resource Management.* This theme calls for establishing and attaining enrollment goals, ensuring sufficient personnel, and strengthening internal management practices and processes.

Theme 3: *Promoting Student Learning Outcomes and Success.* This theme calls for supporting students, faculty and academic processes toward the goal of student success in GE and program-level outcomes.

Theme 4: *Being a Teaching and Learning Community.* This theme calls for demonstrating campus growth in becoming a learning-centered organization, and showing institutional and faculty responsibility for student learning.

Themes				Directions and Goals
1	2	3	4	
				Direction 1. Build and promote an Information Technology Services (ITS – the central IT organization) culture of quality service based upon collegiality with all those who are served by its technology.
				Goal 1.1 Enhance and expand ITS Help Desk services, shorten response times, and work toward 24 by 7 service provisions.
				Goal 1.2 Upgrade the existing gym, stadium, and baseball field communications systems.
				Goal 1.3 Participate in the campus conversion from a quarter to semester system.
				Goal 1.4 Collaborate with academic and administrative departments to understand service expectations
				Goal 1.5 Gather, analyze, and apply statistical data to measure progress toward optimal service provisions and availability.
				Direction 2. Examine and improve technological methods of gathering and sharing student information to provide consistently accurate and timely data, to improve decision making, and to decrease student time to degree.
				Goal 2.1 Leverage Web and Web portal technologies to enhance student access to information.
				Goal 2.2 Implement GET SA data warehousing for campus access to standard reporting.
				Direction 3. Utilize opportunities provided by technology to improve learning and enhance collaboration.
				Goal 3.1 Implement mandated EO 926, Assistive Technology Initiative, to provide

Themes				Directions and Goals
1	2	3	4	
				technology accessibility to all students, faculty, staff, and visitors.
				Goal 3.2 Complete conversion of all remaining classrooms with ten or more students to technology classrooms.
				Goal 3.3 Complete one new Student Union technology lab and one new Student Union training lab.
				Goal 3.4 Integrate additional distance education and online courses into the curriculum as defined by Academic Affairs.
				Goal 3.5 Implement the infrastructure to support ADA-compliant Learning Management Systems as defined by Academic Affairs.
				Goal 3.6 Implement the infrastructure to support a secure, ADA-compliant Digital Marketplace as defined by Academic Affairs.
				Direction 4. Build and support an information literacy program for students, faculty, and staff that ensures all are prepared to explore and use technology to fully meet their needs.
				Goal 4.1 Develop and administer new students' technology training so incoming students can acquire the foundational knowledge and skills critical for academic and career success
				Direction 5. Through teaching and example, promote information assurance as an institutional priority.
				Goal 5.1 Develop and deliver information technology security and information assurance training programs for students, faculty, staff, and visitors
				Goal 5.2 Provide anytime, anywhere access to information technology security and information assurance best business practices.
				Goal 5.3 Implement and promoter the Common Control Framework and Information Security Plan into all student services and administrative business processes campus-wide.
				Direction 6. Through departmental collaboration, ensure the safety and security of all campus information and data containing confidential information.
				Goal 6.1 Perform routine compliance reviews of access control methodologies.
				Goal 6.2 Perform Information Security Assessment Reviews as requested by campus departments.
				Direction 7. Develop and maintain technology infrastructures that promote and enhance communications and access to information for anytime, anywhere teaching, advising, learning, and decision making.
				Goal 7.1 Implement Identity Management to cut time required to grant and revoke access to electronic information and resources.
				Goal 7.2 Expand the existing wireless network to cover all buildings and open areas.
				Goal 7.3 Install a radio fiber network to ensure redundancy and availability.
				Goal 7.4 Install redundant Internet access points.
				Goal 7.5 Perform 36-month technology refreshes as outlined in IRTP 2 program.
				Direction 8. Promote infrastructure readiness, reliability, availability, accessibility, and security as an Information Technology Services priority.
				Goal 8.1 Update and test Disaster Recovery and Business Continuity Plans to ensure critical system and information are available anytime, anywhere.
				Goal 8.2 Implement and maintain a campus-wide emergency notification system to protect the safety of all students, faculty, and staff.

Themes				Directions and Goals
1	2	3	4	
				Goal 8.3 Execute change management and fault management best practices.
				Direction 9. Explore methodologies for the convergence of voice, data, video, multi-media applications, and wired and wireless technologies to deliver business value and enhancement to the campus.
				Goal 9.1 Replace the existing PBX with new Voice over IP (VoIP) technology.
				Goal 9.2 Enhance the existing infrastructure to accommodate technology convergence.
				Goal 9.3 Replace the aging voice mail system.

Note: The wording and numbering on the directions and goals are from the draft strategic plan as it existed in April 2008 when this review was performed. These directions and goals have been recast in the final version of the Strategic Plan, but all the planning elements remain the same.