

California State University, Sacramento

Strategic Plan for Information Technology

April 14, 2009

Strategic Planning for the University & Planning for Information Technology

“At the state level, the years now in view will be a time characterized by population growth and demographic change, rapidly changing technologies, and workforce transition....And these years will be a time of sweeping change for all of higher education, as technology will continue to expand capacity to meet new populations and to change traditional ways of doing the work of teaching, research, and service.”¹

This statement from *Access to Excellence*, the California State University’s long-range strategic plan, highlights the critical role played by technology as part of both the context and solution for meeting the strategic needs of the University. Sacramento State’s own institutional Strategic Plan² begins by noting rapid global technological change as one of the four major contextual forces affecting our campus, while the university’s strategic vision itself highlights the importance of utilizing ‘the best in teaching and learning technology’ for our faculty and students.

Keeping up with these global changes in technology, coupled with the goal of enhancing the use of technology for the core teaching and learning mission of the campus, will be a significant challenge. The steady decline in state resources as a proportion of higher education funding, along with the current economic recession, only add to this challenge. It will be necessary for all of us to plan together carefully and strategically to ensure information technology can respond effectively to these critical issues.

Sacramento State has never before created a strategic plan for the use of information technology, despite the fact that information technology is now embedded in nearly every endeavor of the university. From recruitment of students, to effective teaching of students, to support of student success in learning both in and out of the classroom, to our administrative and auxiliary functions, information technology is essential to meeting the strategic needs of the campus. Information technology has thus become a resource that’s as critical to the university as its staffing, facilities, and budget.

The intent of this *Strategic Plan for Information Technology* is to be proactive rather than reactive in planning for use of our limited information technology resources. This plan will begin by establishing a mission, vision, and core set of principles and values for the use of information technology, followed by definition of perceived strengths and weaknesses of IT at Sacramento State. Finally, the plan will define a set of sixteen broad

strategic goals for information technology, with each such goal comprising a set of more specific objectives that can be implemented within the next one to three years.

Mission, Vision, and Core Values

Our Information Technology Mission

California State University, Sacramento will use its information technology resources for furtherance of the university's strategic mission, ensuring a continual focus on support of access to education, excellence in teaching and learning, the quality of the student experience, and effective administrative services.

Our Vision for Information Technology

California State University, Sacramento will be known throughout the CSU system, and increasingly throughout the nation, both for its effective use of information technology for support of its core educational mission and for improving the efficiency and effectiveness of its business processes.

- Sacramento State will be known for its effective planning and use of information technology resources for the recruitment, retention, and graduation of its students and for enhancement of both excellence in teaching and learning and faculty/student scholarship.
- We will increasingly provide the best in teaching and learning technologies to our faculty and students both in and outside our classrooms and will also provide the support and training required to use those technologies.
- We will continuously assess our use of information technology resources and will then adapt our use to meet the changing needs of our state and our student, faculty, staff, and auxiliary populations.
- Sacramento State will be recognized for its efficient and effective use of administrative technology for the improvement of business processes for its students, prospective students, faculty, and staff, as well as for the provision of support and training for use of those technologies.
- We will shift our emphasis from merely managing IT hardware and services to managing information and its effective application to our strategic needs.

Core Values for Information Technology

Using feedback from a campus-wide survey of values for information technology³, the Information Technology Steering Committee developed the following core values for information technology. In order to prevent those values from being mere platitudes, the Committee also developed a set of related actions to suggest what Sacramento State will do as a result of holding these values.

We Value...	We Will Therefore...
...using information technology to solve educational problems, not just using technology for its own sake.	<i>..focus on proven uses of technology, where evidence gives us confidence the technology is likely to solve our strategic educational problems.</i>
...focusing our information technology resources on the primary mission of the university.	<i>...consistently use our IT resources to support excellence in teaching, learning and research.</i>
...strategic planning and being fully supportive of shared institutional strategic goals.	<i>...focus our resources on the key shared goals of improving recruitment/retention/graduation, evidence- based decision-making, and improvement of campus-wide engagement .</i>
...consideration of localized needs for diverse, unique, and innovative information technology applications.	<i>...consider local needs in our planning and be mindful of the innovations, unique solutions and needs of distinct campus units.</i>
...inclusiveness in IT planning.	<i>...plan collaboratively with faculty, staff, and students in a coordinated team approach, seeking input from across our campus and valuing careful listening to feedback.</i>
...working collaboratively to promote increased efficiency and effectiveness	<i>...carefully coordinate our resource planning for information technology campus-wide, in order to avoid unnecessary duplication and cost and improve efficiency and effectiveness of services.</i>
...effective customer service in the provision of information technology to our campus.	<i>...make it easy for faculty, staff and students to understand and use information technology, while being attentive and responsive to user needs.</i>
...equitable minimum standards for all in the availability of information technology resources.	<i>..work together to ensure there are not haves and have-nots on our campus in the availability of essential baseline IT resources.</i>
...use of information technology to enhance communications campus-wide.	<i>...enhance the email, web, learning management, and portal services that are needed to improve campus-wide engagement.</i>

...use of effective methods of self-assessment for continuous improvement.	<i>...develop methods for assessing satisfaction with IT services, while also using that customer feedback to continuously improve IT services.</i>
...providing accessibility to information technology services.	<i>...provide equally effective access to all campus users of information technology by effectively implementing Accessible Technology Initiative plans for Instructional Materials, Web Development, and Procurement.</i>
...protecting the confidentiality, security, and privacy of the information entrusted to us.	<i>...implement information security and privacy policies that will protect the identity and confidential data of our faculty, staff, and students.</i>
...sustainable uses of information technology.	<i>...encourage 'green' IT practices campus-wide that will foster conservation and reduction in energy consumption, waste, and costs.</i>
...providing effective and efficient campus administrative technology.	<i>...work together to both identify inefficiencies and to find more effective means to meet the needs of our students, faculty, and staff.</i>

Scanning Our Information Technology Environment

Effective strategic planning is dependent on a clear understanding of the context in which such planning operates. The aforementioned CSU *Access to Excellence* plan and Sacramento State's own campus-wide *Strategic Plan* provide the most important contexts for institutional planning. Both plans were consulted in detail during preparation of this document, to ensure our information technology planning is aligned with both CSU and campus strategies.

Two other documents provided more specific contextual information about the use of information technology at Sacramento State. The *Gap Analysis for Information Technology*⁴ was developed in 2007 by the Chief Information Officer as a quick environmental scan of the state of information technology on campus. That document also summarized the outcomes of several studies of information technology at Sacramento State, including three external studies, two CSU-wide studies, and one internal campus study.⁵ The *Gap Analysis* is too lengthy to be summarized in this document and can be found for review at www.csus.edu/irt/strategicplanning.

In addition, in 2008, the IT Steering Committee promulgated a campus-wide survey of faculty and staff at Sacramento State to define specific perceived strengths and weaknesses for information technology, at the same time the survey of IT values noted above was completed. A complete review of those strengths and weaknesses can be found in documents at the same IT strategic website under "IT Surveys", including a complete listing of specific comments provided by faculty and staff.⁶

Key strengths of information technology identified by faculty and staff in the survey include:

- The campus recognizes the pivotal role played by information technology
- We have a student body that is strongly interested in using information technology to improve learning
- Our faculty is widely interested in using technology for teaching
- The campus has high quality IT staff, provides good localized IT support, and recognizes the need to use IT for unique local needs
- The campus is working to make technology accessible for all, and
- Growing strengths of IT at Sac State include:
 - The use of technology to communicate a campus identity
 - Use of technology to improve business processes
 - Using technology for program assessment, and
 - Enhancing the privacy of information.

Key perceived weaknesses of information technology at Sacramento State include:

- Inadequate planning for replacement of IT equipment and weak processes for acquisition of IT hardware and software
- IT resources have not been aligned with pedagogy, including:
 - Inadequate technology and support in classrooms, and
 - Undersized student technology facilities
- Communication about IT is lacking on campus and there is a resulting lack of awareness about information technology services, with many on campus not knowing where to go for IT help
- IT resources are not adequately aligned with constituent needs
- Insufficient attention to diverse local IT needs, possibly due to spotty and inequitable distribution of IT resources
- Little previous planning for IT and little coordination and collaboration in that planning, with no clear focus on IT outcomes

Finally, in early 2009, the IT Steering Committee informed the campus that the draft *IT Strategic Plan* was available for review, solicited written feedback from across campus and held a series of well-attended open forums on the draft plan. Documents detailing both the feedback received and the Steering Committee response to that feedback can also be found at www.csus.edu/irt/strategicplanning. Of particular interest are the two documents *Institutionalization As An Organizational Model for IT* and *Frequently Asked Questions*, as these items provide the Committee viewpoint on a number of key issues raised.

Strategic Goals for Information Technology At Sacramento State

The primary purpose of our strategic planning is to identify and prioritize a key set of strategic goals for implementation within a three to five year time-frame. As noted by

the Strategic Planning Council (SPC), priorities for such goals tend to emerge naturally from environmental scans, such as those provided by the Gap Analysis and SWOT analysis noted above. As the SPC defines the process for using the results of such analyses:

“The overlap of internal weaknesses and external threats shapes the organization’s highest priorities, directing resources toward situations that, if not addressed, could threaten the organization. The ability to leverage internal strengths against external opportunities creates a second set of priorities that, if addressed expediently, should benefit the organization.”⁷

The resulting sixteen strategic goals in three broad categories are not intended to address all the possible applications of information technology on campus. They are rather supposed to identify the IT priorities that are most likely to either leverage the current strengths of information technology that are exceptionally promising or address extant weaknesses that are exceptionally threatening.

Under each of the strategic goals identified in each category (i.e., 1,2,3...), the IT Steering Committee has also identified more specific priority objectives targeted for implementation over the coming one to three years (i.e., a,b,c...). These objectives will be reviewed and revised by the IT Steering Committee on an annual basis.

I. A Focus on Teaching and Learning & the Student Experience

“The highest and best use of academic technology is to help faculty provide a quality education that focuses on the student and enables the learning, teaching, research, and creative scholarship that quality education requires.”⁸

“...IT resources that are unique to teaching and research programs require special attention. Therefore, the CIO must work with deans, department chairs and faculty to ensure support for these resources is integrated into the Information Technology Plan.”⁹

The above planning principles cited by the CSU-wide Academic Technology Planning Committee and Information Technology Advisory Council (ITAC) together summarize the first major tenet of strategic planning for information technology. That is, information technology should be effectively integrated with pedagogy to promote excellence in both teaching and learning and the quality of the student experience. Key strategic goals for information technology in these two critical sub-categories are listed below.

A) Excellence In Teaching and Learning

- 1) An ongoing process should be implemented to identify, prioritize, and address academic technology needs at all levels**

- a. Multiple methods for collecting data from faculty, staff and students will be established to determine the needs and uses of academic technology, with those data used to adapt and improve academic technology services.
- b. The results of annual assessments of faculty and student needs should be clearly communicated to all campus units.
- c. Metrics should be developed for the regular assessment of satisfaction and effectiveness of academic technology services for teaching and learning, with results clearly reported campus-wide.
- d. Methods should be identified to assist faculty and students with the use of experimental and innovative methods for the use of information technology to enhance teaching and learning.

2) A reliable, scalable, and well supported system for delivery of learning resources should be provided

- a. Our campus-wide course management system (i.e. SacCT) should be enhanced to facilitate broader access to learning materials and more flexible use of varied teaching methods.
- b. Faculty and students should be provided anytime and anyplace access to instructional and learning materials through wireless and remote access systems.
- c. The campus should develop technically flexible options for course offerings that, as appropriate, take advantage of emerging hybrid and fully on-line approaches to learning.
- d. The campus should develop accessible institutional repositories of local, regional, and international digital content for instruction, learning, and scholarship and provide ubiquitous access to that content.
- e. Systems for delivery of teaching materials to faculty and learning resources to students should be developed that are flexible, based on universal design principles, and that allow use by those with varied teaching and learning styles.

3) Effective teaching and learning spaces should be created for both students and faculty, with particular attention to the effective and flexible use of academic technology in classrooms and computer labs

- a. A practical five year plan should be developed for the design, enhancement, maintenance and support of flexible technology-assisted learning spaces, including identification of funding sources.
- b. A practical five year plan for the provision of effective computer lab resources for faculty and students should be developed and funding identified.

- c. All plans for new and renovated buildings and rooms should include plans for incorporation of enhanced teaching and learning technologies and learning spaces.
- d. A plan should be developed for the provision of enhanced student learning spaces for study outside the classroom.

4) A distributed and connected system of instructional technology support shall be defined, based on recognized best practices, with coordination of services both centrally and with all campus units

- a. Support and training for faculty use of technology for teaching should be enhanced through development of specific programs designed to flexibly meet identified faculty needs.
- b. Support and training for student use of technology for learning should be enhanced through development of specific programs designed to flexibly meet identified student needs, with special attention to development of services through a student technology center.
- c. Faculty, staff and students should be provided with a single place to report information technology problems and to be connected with seamless services from both institutional and local support.

B) Quality of the Student Experience

“Reared in a digital age, many of today’s students have an approach to learning that differs dramatically from norms of even ten years ago.”¹⁰

[Among four overarching goals we want to ensure] “high levels of student satisfaction with both the education they receive and the student services that support instruction....”¹¹.

1) An ongoing process should be implemented to identify, prioritize, and address student technology needs at all levels

- a. Multiple methods for collecting data from students and faculty regarding student technology needs should be conducted and plans developed for translating those needs into effective IT services.
- b. Plans for addressing such identified needs should be revisited on an annual basis and results of that analysis communicated back to students.
- c. Plans should be developed to both assess student satisfaction with the administrative processes they use and to improve those processes.
- d. Metrics should be developed for the regular assessment of satisfaction and effectiveness of student technology services and the results clearly communicated to all campus units.

- e. When appropriate and effective, the use of experimental and innovative methods for student use of information technology to enhance learning and student life should be emphasized.

2) We will provide technology services to students that support student preparedness in learning skills and study skills

- a. Emphasis should be placed on implementation of information technology services for students that can positively influence recruitment, retention and graduation rates.
 - We will work across divisions to develop specific services to assist students with academic processes such as orientation, registration, financial aid, fee payment, and employment services.
- b. Services should be enhanced to support student use of computer labs, classrooms, and other spaces for learning.
- c. Students should be provided with increased access to both general use and discipline-specific software for learning.
- d. Specific training opportunities and increased availability of trained staff should be provided to support student use of technology for learning.
- e. Equal access to technology should be provided to all students through ADA 504 and 508 compliant accessibility of all learning resources.

3) Improve communications and collaboration between faculty, staff and students and between students and other students both within and beyond the classroom

- a. Capability should be provided for students, faculty and staff to send messages targeted at specific groups, with special emphasis on communications related to both teaching and learning and student life.
- b. Our student web portal should be enhanced to offer a single point of entry and interaction with the priority academic and student life resources needed by our students.
- c. Communication tools for students should increasingly provide interactive, real time, group-oriented, and high touch services.
- d. Targeted access should be provided to coordinated campus calendars, with information on both academic and co-curricular activities.

4) Provide increased access to technology resources for all students anytime and anyplace

- a. Students should have access to instructional materials, personal files, email, learning management systems and other learning resources via the Internet on a 24/7/365 basis.
- b. Global awareness and communication by students should be supported through access to learning resources both inside and outside the

classroom and through access to appropriate campus resources from anywhere in the world.

- c. All instructional materials, web resources, and information technology resources should be accessible to all students on an equal basis, including provision of equal access to services for all and elimination of barriers to the use of information technology.
- d. Information technology resources should be provided to support student learning across the breadth of the student experience, including student life activities, recreation, clubs, organizations, etc.

II. Ensure Further Alignment With Our Campus-wide Strategic Goals

“The question here no longer concerns if information technology has a role to play in campus conversations and public discussions about assessment and outcomes. Rather, the issue before us...concerns when college and university IT leaders will assume an active role, a leadership role...bringing IT resources and expertise – bringing data, information, and insight – to the critical planning and policy discussions about institutional assessment and outcomes that affect all sectors of U.S. higher education.”¹²

This second set of goals will be met through the provision of comprehensive data warehousing and business analytic functions, with self-use tools disseminated widely across campus through easy-to-use interfaces and data dashboards. Specifically:

- 1. Data warehousing and analysis resources will be effectively deployed to support enhancement of recruitment, retention, and graduation rates**
 - a. Comprehensive data warehouse tools for support of the collection, data warehousing, reporting, and analysis of key data elements correlated with recruitment, retention, and graduation will be implemented.
 - b. Procedures will be developed to provide these tools and the training required for their effective use to the President, Strategic Planning Council, Futures Initiative, divisions, departments, the faculty, staff and other planning groups involved in the enhancement of recruitment, retention and graduation.
 - c. Enrollment reporting and analysis tools should be provided broadly to divisions, colleges, departments, faculty and staff.
 - d. Data to facilitate student self-management of their academic and campus service needs should be provided directly to students.

- 2. Information technology resources will be effectively aligned with campus-wide strategic goals for evidence-based decision-making**
 - a. Data warehouse and business analysis tools for budgeting and program planning will be provided to decision-makers throughout the campus.

- b. Information technology tools will support institutional assessment; in particular, data handling tools will be provided for comprehensive assessment of learning and program outcomes.
- c. Information technology will provide data services that will facilitate analysis leading to more seamless pathways between high schools, community colleges, and Sacramento State.

3. Sacramento State's information technology resources will be used to improve campus-wide communication and engagement

- a. Supplementing the student web portal noted above, specialized versions of that portal will be provided for both faculty and staff and for recruitment of students.
- b. Campus electronic communications will be made more reliable and consistent through consolidation and coordination of email communications, further development of text messaging and web messaging, and development of personalized communications tools.
- c. A campus-wide web steering committee will be established to enhance campus web communications, supported by a web advisory group to ensure inclusiveness and partnerships in web development.
- d. Campus-wide emergency communications systems will be further enhanced.

III. Efficient and Effective Use of IT Resources

"It is recommended that all [information technology] resources should be acquired within the context of the Information Technology Plan, and operated and maintained in accordance with campus and System standards and practices."¹³

Information technology resources form a critical and growing part of the daily work of most units on campus, making information technology a critical campus-wide strategic resource. Our strategic goals must thus ensure that we:

1) Implement a sustainable, campus-wide budget and funding model for information technology.

- a. Planning and budgeting for information technology should be coordinated at the institutional level to ensure alignment with strategic planning, the minimum amount of duplication and the greatest efficiency in the use of limited resources.
 - Institutional coordination of planning and budgeting should occur for all funding sources including All University Expense accounts, applicable auxiliary accounts, and capital funding.

- b. A plan should be developed and funding identified for campus-wide refresh of all IT infrastructure at appropriate intervals.
 - Baseline refresh of technology should be complemented with consideration of campus-wide needs for more advanced technologies.
- c. IT staffing and training resources should be coordinated campus-wide to ensure both alignment of such staffing with campus strategic goals and alignment of staffing levels with CSU, peer, and Educause standards.

2) Implement sustainable assessment processes for monitoring and evaluation of business processes to ensure effective IT-based customer services and provide mechanisms for using feedback to improve those processes and services.

- a. Work across all divisions to assess priority business process needs for information technology on an annual basis.
- b. Review priorities for customer service enhancements for those identified business processes with the IT Steering Committee on an annual basis and develop a prioritized list of service improvement projects.
- c. Emphasize increases in online self-help services, as well as training and support for priority business process and customer service needs.
- d. Assess satisfaction with resulting customer services on an annual basis.

3) Provide resources to support both mandated CSU system IT implementations and CSU mandated audit and reporting requirements.

- a. Plan with the Chancellor's Office to minimize the burden of CMS and similar upgrades on campus resources and provide institutional resources for both training and mandated work that exceeds existing campus resources.
- b. Provide institutional resources to meet mandated requirements for CSU-wide IT audits and annual reporting.

4) Create a seamless CSU-wide experience for users of our campus information technology by providing network, web, and account processes that are ubiquitous, based on accepted best practices, and not limited by organizational boundaries.

- a. Provide access to all CSU information technology resources for faculty, staff and students through a single, secure user account and password and a single seamless network.
- b. Provide seamless transitions in the use of IT resources for new and departing students, faculty, and staff.

- c. Coordinate web services campus-wide through provision of equitable access to advanced staff expertise, training, content management systems, web templates, standards, and web accessibility services.

5) Provide shared institutional IT resources that will take advantage of best practices and economies of scale and standardization, while also providing tools for differentiated local management of IT service components.

- a. Provide equitable campus-wide access to resources for support of information security and the accessibility of technology.
- b. Provide institutional coordination of IT software and hardware acquisition, to lower both procurement and life-cycle costs for all.
- c. Provide institutional server and application management services, including robust access to both virtual server environments and tools for local management and control of institutionally managed resources.
- d. Provide enterprise quality storage systems and processes with robust security and backup services for faculty, staff and students, including access to management tools that allow local management of storage.
- e. Provide institutional coordination of desktop support services, ensuring local controls and equitable coverage based on CSU, peer, and Educause staffing standards.

Conclusion

A strategic plan should be a living document, subject to review and revision on an ongoing basis. This plan will thus be revisited annually by the Information Technology Steering Committee and its associated Academic and Administrative Computing advisory committees. Input from the campus on both the plan and its implementation is always welcome and can be provided at any time by emailing to itfeedback@csus.edu.

¹ Board of Trustees of the California State University, "Access to Excellence, A Strategic Plan for the California State University" (Long Beach, CA, May, 2008), p. 5.
<http://www.calstate.edu/accesstoexcellence/>

² Strategic Planning Council (SPC), Sacramento State, "Strategic Plan" (Sacramento, CA, December, 2007), p. 1-2. < http://www.csus.edu/acaf/2007CSUS_StrategicPlan.pdf>

³ See <http://www.csus.edu/irt/strategicplanning/surveys.stm>

⁴ Larry C. Gilbert, "Gap Analysis for Information Technology at Sacramento State: A Self-Study" (Sacramento, CA, February, 2008).
<http://www.csus.edu/irt/strategicplanning/documents/GapAnalysisForInformationTechnology.pdf>

⁵ The three external studies were WTC (2007), Nicolson (2005) and Thomasen (2004). In addition, a CSU-wide IT funding gap study was completed by the Information Technology Advisory Committee in 2004 and a survey of CSU faculty on all campuses was conducted and reported by an ad hoc Academic Technology Planning Committee in 2004. The internal report on academic technology was done by the Academic Information Technology Committee of the Faculty Senate in 2004.

⁶ See <http://www.csus.edu/irt/strategicplanning/documents/ITSurveyComments.pdf>

⁷ SPC, p. 4.

⁸ CSU Academic Technology Planning Project, "Academic Technology Planning Principles" (January, 2003).

⁹ David Ernst, "Organization of Information Technology On Campuses," Report from the CIO of the California State University to the Executive Council of Presidents of the CSU, (March, 2005).

¹⁰ Access to Excellence, P. 17.

¹¹ CSU Academic Technology Planning Project, "Status Report #1, November, 2002, p. 1.

¹² Green, K.C., "Bring Data: A New Role for Information Technology After the Spellings Commission," EDUCAUSE Review, Vol. 41, n0. 6 (2006, November/December), p. 47.

¹³ Ernst, p.1