

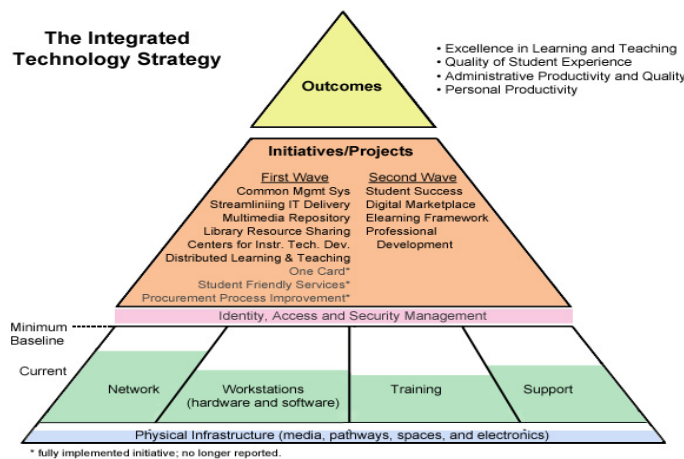
Essay III: Superior Knowledge and Learning-Enabling Resources

Believing in the wise use of new technologies in learning and teaching, we will continue to provide the technology, the related training, and the support needed to create high-quality learning environments both inside and outside of the classroom.

The CSU Integrated Technology Strategy

During the last decade, the California State University has engaged in planning and implementing initiatives centered on an integrated technology strategy (ITS) illustrated in the pyramid below. The strategy framework is depicted as a pyramid with the four desired outcomes at the apex, five technology infrastructure pre-requisites at the base, and initiatives and projects linking them in the middle.

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The overall goal of the ITS is to enable all CSU students, faculty, and staff to communicate to anyone, from any place, at any time, through access to the full range of national and international resources needed in the learning and teaching experience. First-wave initiatives included excellence in learning and teaching, quality of student experience, personal productivity, and administrative quality and productivity.

The CSU, Chico IT Planning

CSU, Chico's information technology efforts have built upon the ITS program to deliver and further develop high-quality learning and administrative services in support of the campus strategic plan. The first campus Information Technology plan, [Target 2000](#), identified five goal areas, including instructional support, curriculum development support, faculty/staff/student training as well as institutional support and communication systems. The high level of faculty involvement in developing this and subsequent technology plans proved to be essential to the success of the initiatives. In addition, the provost personally led a faculty Academic Technology Advisory Committee from 2000 to 2004, which directly addressed the mechanics of how to best integrate technology into the curriculum, and he repeatedly addressed issues related to technology and teaching in his [communications](#) with the faculty. In 2000, the new university technology plan, [Beyond 2000](#), envisioned an enhanced technological environment that would make significant contributions to excellence in teaching and learning. It outlined specific tasks in the areas of teaching and learning, electronic resources, electronic learning infrastructure, and integrated administrative systems and timelines to effect implementation. This tradition of collaborative and detailed planning continued with the most recent campus technology plan, [Aligning with the Future](#), accompanied by an [Enterprise Technology Roadmap](#). This *IT Strategic Plan* establishes a comprehensive and dynamic planning process that further focuses our resources on achieving a vision of high-quality learning environments supported by effective business processes.

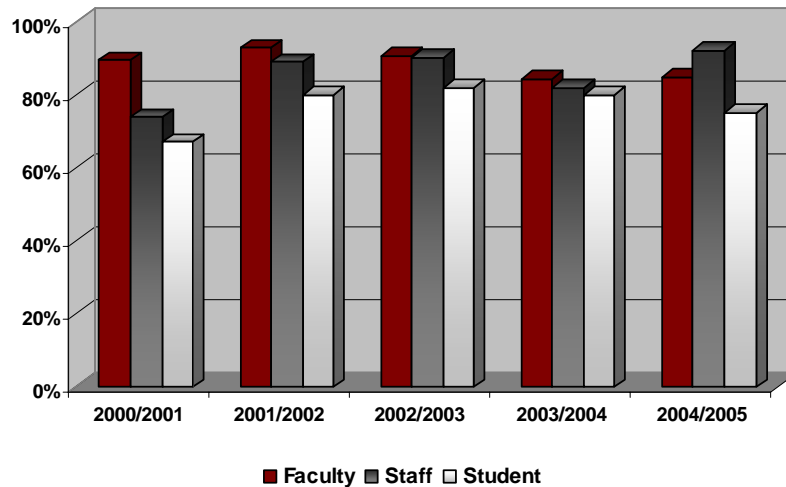
Access to Information and Instructional Technology

The effective use of technology requires a baseline infrastructure for work stations, network connectivity, training, and support. At CSU, Chico, capacities in each of these areas have been enhanced over time through a combination of CSU ITS program efforts and campus investments.

In [2005](#), even after several years of budget reductions, 85 percent of faculty workstations, 92 percent of staff workstations, and 75 percent of lab computers met or exceeded ITS baseline standards, i.e., had been purchased three years prior to the end of the reporting period (see [Figure 3.1](#)).

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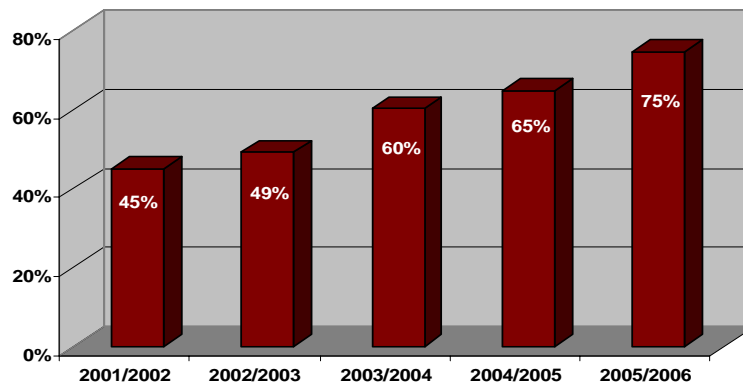
Figure 3.1
Percentage of Faculty/Staff/Student Workstations Exceeding or Meeting Standards



In 2005, 83 percent of the faculty and 92 percent of the staff indicated general [satisfaction](#) with their desktop workstations. Chico is confident that it can reach 95 percent satisfaction rates as it continues to invest in standard refresh cycles.

Appropriate access to informational and instructional technology also required digital media upgrades to all lecture spaces. Chico's "[Smart Classroom](#)" program has upgraded classrooms with computers, Internet connections, visual presenters, projectors, screens, DVD, and sound systems since 2000. As shown in [Figure 3.2](#), Chico is at a point where approximately 74 percent of classrooms are "[smart](#)." The most recent smart [classroom survey suggests](#) that users are quite experienced and have a high degree of satisfaction with the hardware and software installed in the rooms.

Figure 3.2
Percent of Lecture Spaces that are "Smart" Classrooms



Over the last five years major strides were made in building a common learning infrastructure. A significant evolution in use of technology was the creation of a [campus enterprise portal](#) which brings together administrative and academic services in a common Web location. This integration of activities such as course enrollment and advising combined with a list of WebCT courses—all courses are in WebCT—has a dramatic effect on the use of a [Learning Management System](#). By 2005, over 90 percent of the students have at least one course on [WebCT](#) and more than 60 percent of faculty are using WebCT for at least one course.

The rise in learning management system usage has required an increase in the capacity of the learning management system to meet the campus's growing technical and functional needs. A [Strategic Review](#) process, conducted in spring 2005, engaged the entire campus community in the decision-making process for this cornerstone of our learning technology infrastructure. After extensive faculty and staff input, [WebCT VISTA](#) was chosen and installed.

Teaching and Learning

Faculty training and development in technology has been based on a continuous partnership between the Center for Excellence in Learning and Teaching ([CELT](#)) and the Technology and Learning Program ([TLP](#)). Two specific areas of collaboration are the [Learning Productivity Grants](#) and the [Exemplary Online Instruction Awards](#). The Learning Productivity Grant program and other [CELT grant programs](#) are designed to provide faculty with the resources to try out new and innovative approaches to teaching. The grants are competitive and reviewed by the CELT director, Technology and Learning Program staff, and several faculty members. Another key partnership is the Exemplary Online Instruction Awards that are given each year at the CELT conference. These awards are based on an evaluation of online curriculum against the [Rubric for Online Instruction](#), which is continually being revised by a [committee](#) of 13 faculty, four support staff, two administrators, and one student. The Rubric for Online Instruction has been recognized nationally and internationally as an assessment tool that enables faculty to review their courses against best practices in online instruction.

The synergy of an effective learning infrastructure and faculty development will be demonstrated in one of CSU, Chico's educational effectiveness review projects. The project integrates technology into the redesign of large general education courses.

Meriam Library Resources

The [Meriam Library](#) supports the mission and strategic priorities of the campus. Services to students include a 24/7 real time online reference, email reference and traditional face-to-face reference. The Library [ReSEARCH](#) Station forms the gateway to information and guides, online tutorials, image collections, interlibrary loan services and the internet in addition to books, journals and other information resources. Library collections are increasingly [electronic](#) while still supporting text-based materials that are not available or easy to use electronically. The full-text [electronic journals and databases](#) are the most utilized library resource.

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A major electronic resource initiative is to make our [research collections](#) accessible via the internet. The Library has an active digitizing program to convert historic maps, text and photographs so that these resources may be used by students, researchers and others. The [Dorothy Hill](#) California Native American Legacy and Tradition collection, for example, was given to the Meriam Library so that it could be preserved and made widely accessible to Native American tribes as well as researchers. The cultural sensitivity of some of the material was balanced with the desire for making Native American traditions and cultures more widely known and appreciated.

Information Literacy

The library coordinates the information literacy efforts of the University, reaching out to every college and department through tours, workshops, and course related instruction. Librarians offer more than 250 course related workshops to over 6,000 students annually and, in collaboration with department faculty, have made significant gains towards embedding information literacy into the curriculum of UNIV101, POLS330, [CMST 131 & 132](#), and the School of Nursing. Realizing the importance of assessment, in 2004/2005 we participated in Phase I and Phase II of the [ETS ICT Literacy Assessment](#), an assessment tool to measure students' skills and abilities in applying technology to solve problems. In the spring of 2006 we participated in the [LibQUAL](#) library service quality survey to measure how our users perceived our services, including our

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information literacy efforts. The data we have collected from both of these will be used to improve service and learning. We will continue efforts to integrate information literacy into department curriculums and assess our progress.

University-Wide Information and Knowledge Management Systems

The purpose of the administrative initiatives under ITS 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. To achieve this, the goal of the Common Management System ([CMS](#)) is to have all campuses and the Chancellor's Office use Oracle/PeopleSoft in full production mode, supported by a consolidated data center by 2007.

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As of [spring 2006](#), CSU, Chico is running all three modules for Human Resources, Financials, and Student Administration functions and has replaced its legacy administrative systems. [Chico CMS](#) functions are supported by campuswide planning and [support teams](#). The keystone of our service delivery strategy is bringing together multiple functions within the [campus portal](#). Our first portal was launched in 2002 (Campus Pipeline) and was replaced by our current open source (uPortal) system in 2005. This enterprise portal provides single sign-on capability for services such as student self-service access to PeopleSoft records and registration, WebCT learning management system, faculty self-service access to PeopleSoft for submission of grades and viewing real-time class rosters, faculty and staff self-service access to Human Resources employee data via the portal, faculty and staff access to campus announcements via the portal in cooperation with the Office of Public Affairs and Publications, and student voting in elections via the portal in cooperation with Associated Students

In addition to our ERP administrative systems, other integrated campuswide initiatives, labeled "Enterprise" systems, were included as part of the campus implementation. These "Enterprise" systems included licensing the Oracle suite of software, development of a campus portal, licensing Brio Broadcast Server for reporting from financials databases, bringing the financials data warehouse and student administration data warehouse to campus to manage, and a pre-applicant tracking tool, Sequitor, for tracking prospective students.

Assess the Effects of Technology

By the mid-1990s, the leadership of CSU, Chico realized that emerging information technologies could offer significant opportunities for improved student and organizational learning. Our first wave of technology initiatives focused on building and assessing an information infrastructure that supports learning. The capacity to deliver electronic information was analyzed along with the effectiveness of specific e-learning strategies and tools (see [Learning Productivity Projects](#)). We also developed our first data warehouses for both student and financial information that provided both planning and operational data to support institutional effectiveness (e.g. [Academic Planning Office](#), Enrollment Management). Now that first-wave initiatives have been accomplished, CSU, Chico is embarking on a second wave of initiatives under the general umbrella of "knowledge and information management systems." The goal is to take a comprehensive, systematic approach to the information assets of the University by identifying, capturing, collecting, organizing, storing, retrieving, and sharing them. The vision is to make the collective knowledge, information, and experiences of the University available to all campus constituents for their use in planning and decision making and to motivate them to contribute their knowledge to the collective knowledge and information. A [Knowledge Management project](#) is underway to develop a new warehouse structure and associated business intelligence tools that will support continuous improvement in the assessment of educational and institutional effectiveness.

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Summary

CSU, Chico has demonstrated an institutional commitment to support academic and administrative technology as part of its strategies to implement its vision, mission, and priorities. Indeed, Chico has a rich history of leadership in information and academic technology and will continue to strive for excellence in infrastructures and services that enhance its learning and working environments. The campus has consistently supported [IT strategic planning](#) because it is fully aligned with its strategic plan. This intentional alignment has resulted in effective planning, implementation, and use of technology in support of the purposes of the University.