

INTRODUCTION

This *Measures of Success* annual report is the final edition in a ten-part series based on an accountability agreement between the California State University (CSU) system and the California Department of Finance. The series reports to the legislature on the progress of the Integrated Technology Strategy. This final report presents no new quantitative data; however new interviews are included. It is a summary of the previous studies and an overall assessment of the role of information technology in the CSU from the standpoints of strategic planning and outcomes measurement.

This summary report is therefore an opportunity to look both back and forward. It is a statement of successes and of lessons learned from a multi-year system commitment to information technology planning, implementation, and measurement.

This report does the following:

1. Provides a brief background statement on the importance of the Integrated Technology Strategy (ITS), as well as the strategies underlying the Measures of Success (MOS) report series and its methodology.
2. Outlines policy and technical shifts in information technology for the past decade from a national, statewide, and CSU institutional perspective.
3. Identifies the major CSU trends in academic, administrative, and networking technology at the institutional level, and changes in user behavior and attitudes documented in MOS data.
4. Describes findings from qualitative interviews with CSU presidents and Chief Information Officers (CIOs) on the impact of the ITS, and IT generally, and from systemwide conferences designed to assess IT goals and challenges. Part of that process traces the evolution of the systemwide ITS before and during the MOS reporting, and the concomitant patterns in IT organization, governance, and campus strategic planning.
5. Points to some of the unresolved issues from the MOS research and unmet needs from a fiscal perspective, both of which suggest areas for potential study in the future.
6. Examines options governing the future state of IT accountability reporting in the CSU in terms of moving from input to outcome measures while institutionalizing a “culture of evidence” across the system.

It should be noted that the MOS served two purposes, external and internal. The former fulfilled the reporting requirements to the state legislature. The latter provided the CSU campuses and Chancellor’s Office with information useful for strategic planning and for operational management of initiatives within the ITS. There was not always a perfect fit between these functions, so the data collection process was adjusted over the years to reflect the changing needs of both.

Integrated Technology Strategy (ITS)

Since the mid 1990s, CSU leaders, particularly campus presidents, saw the emergence of digital technologies and increased student and faculty demand for them, as an opportunity to use information technology as a strategic resource within the CSU. They recognized that to seize this opportunity, a way must be found to update the system and campus technology infrastructures at a rate more in keeping with the pace of technological change than was possible under prevailing processes. They concluded this could only be accomplished by adopting a collaborative approach.

Planning for the ITS began in 1994 as an iterative process involving all major CSU stakeholders. Constituent input made clear that without a minimum baseline technology infrastructure on every campus, the benefits of the ITS initiatives could not accrue to all students, faculty, and staff. In March 1996, the CSU Board of Trustees approved the ITS framework for leveraging technology as a tool to achieve CSU academic and administrative goals.

The four outcomes of the ITS are depicted in Figure 1 as the apex of the pyramid. They have remained constant from 1996 to the present and result from the strategic application of information technologies in support of the core programs and operations of the university. The infrastructure prerequisites for using technologies effectively are shown as the broad component at the base of the figure (the Technology Infrastructure Initiative, or TII). These have evolved to make more explicit the need for middleware tools for managing access to and interaction between hardware and software.

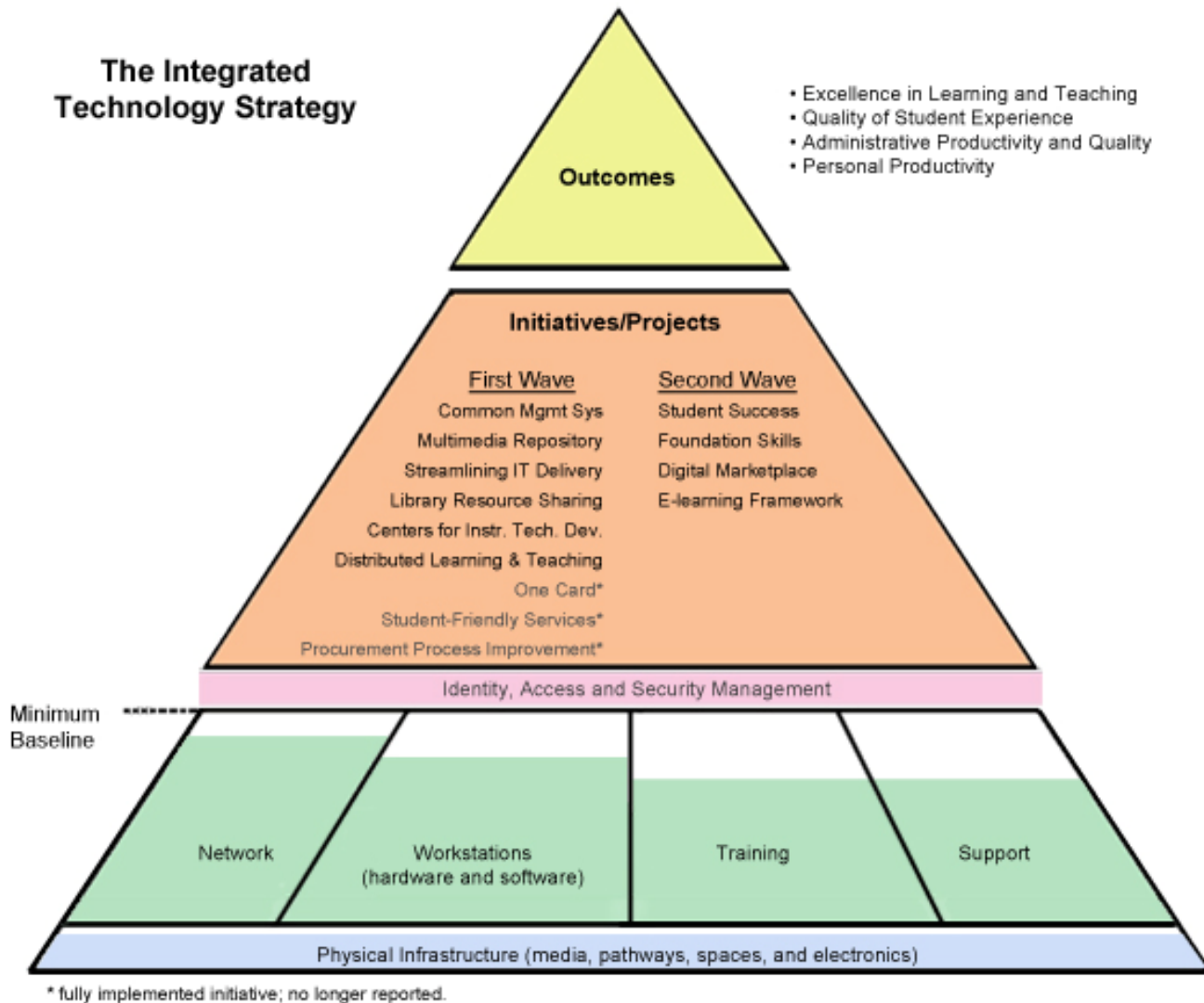


Figure 1

Specific initiatives, shown in the center of the pyramid, were designed to achieve improvements in academic and administrative areas of priority concern. They have changed and will continue to change as they mature. For example, two of the first-wave initiatives were institutionalized prior to the inception of the Measures of Success. These included a student One Card initiative for simplifying admissions, financial aid, purchasing, and other administrative functions, and a centralized procurement process for large, systemwide needs. Reporting about a third initiative, Student Friendly Services, was discontinued in the 2004 MOS because the number of applications had far exceeded the 2008 goal of having 50 percent of applications to CSU received electronically. By June 30, 2003, over 68 percent of applications were so submitted, rendering further tracking unnecessary. Today, 98% of all CSU applications are received online.

In March 2001, the CSU presented a five-year progress report to the Board of Trustees, noting that the first-wave initiatives were well underway. A follow-up ten-year report was delivered in March 2006.

The ITS never was a specific detailed plan but more a dynamic strategic planning framework. As such, it has continued to guide the CSU's investments in technology for more than a decade and will do so well into the foreseeable future. For example, the administrative initiatives to implement common human resources, financial and student administration systems are almost complete; and a centralized data center supporting those systems is fully implemented. Subsequently, with the technical and administrative enabling infrastructures in place, CSU leaders have made academic technology a major policy priority of the system. The goals of the original academic initiatives have largely been achieved, and the efficiencies mainstreamed.

For more than a decade, the pyramid has been the iconic representation of the ITS. An additional pyramid for academic technology has been developed to illustrate the evolving nature of the ITS. This new pyramid (Figure 2 in Appendix A) shows the outcomes specific to academic technology, the initiatives in progress, and the infrastructure required to support them. Some first wave initiatives from the ITS, such as Common Management System (CMS) and those focused on Excellence in Teaching and Learning, have become institutionalized and now form part of the infrastructure for the new academic efforts.

Measures Of Success (MOS)

The MOS is the vehicle through which CSU has informed the legislature about progress and benefits of the ITS. Annual reports were submitted each November, beginning in 1999. The 1999 report outlined the plan for the series, the 2000 report provided baseline data descriptions and measurement, and the next seven year's reports 2001 – 2007)chronicled changes to the baseline data. This is the tenth and final report in the series.

The reports measured progress in achieving the benefits associated with specific ITS initiatives in the following outcome categories:

- ◆ Excellence in Learning and Teaching
- ◆ Quality of the Student Experience
- ◆ Administrative Productivity and Quality
- ◆ Personal Productivity

The intent of the *Measures of Success* process was to yield information about:

- ◆ Extensiveness, or the amount of usage of IT services
- ◆ Effectiveness, or the degree to which the ITS objectives have been met
- ◆ Efficiency, or the cost of the services provided
- ◆ Quality, or the currency and capacity of IT resources and the satisfaction of users

The benefits of ITS depend on a robust technology infrastructure. Therefore, executive management determined that this infrastructure should be given priority—often above new buildings. Voter-approved bonds provided the source of funding to build the technology infrastructure. Before approving CSU plans to use capital dollars on technology infrastructure, the state legislature required assurances that having this capability would produce the benefits identified in the ITS.

The MOS is the result of negotiations between the CSU and the California Department of Finance. Agreement was reached on a framework and metrics for measuring and reporting on the progress and results of ITS implementation. The ten-year time frame of the reporting requirement showed that as the infrastructure is extended to a growing number of campuses over time, there is commensurate improvement in ITS goal attainment.

Methodology

The CSU conducted a wide range of data collection efforts to support the MOS process. Both institutional surveys and individual surveys of students, faculty, and staff were administered from the baseline year of 2000 through 2007. These included:

Annual Systemwide Technology Surveys: Certain types of campus data often are mandated by law and are collected, synthesized, and published by systemwide offices. These data include official demographic and quantitative records

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on students, faculty, staff, space and facilities, course enrollments, administrative budgets, and so forth. Where appropriate, these official databases and reporting sources were used in preparation of the MOS reports. Other aggregate statistics are routinely collected at the program or department level to monitor and evaluate major systemwide ITS initiatives, and these were included in the reports as well.

Annual Campus Technology Survey: This institutional survey was initiated for the explicit purpose of collecting information identified in the original MOS report and to provide additional technology-related data for internal CSU uses. The survey was coordinated by campus chief technology officers, and addressed every important facet of the ITS—academic, administrative, and network infrastructure—and was a major part of the MOS reports.

Biennial Student, Faculty, and Staff Technology Surveys: In addition to institutional data and broad aggregate indicators, CSU gathered individual information about student, faculty, and staff experiences with technology. Some of the questions in these telephone surveys for all three groups were modified or deleted over time due to evolving technologies and absence of significant change in the findings from previous surveys. The surveys also sought to address emerging policy concerns of the campuses and system office.

A total of 12 telephone surveys were conducted over the MOS period. Each was based on representative samples of the CSU student, faculty, and staff populations using stratified random techniques. About 3,000 students and faculty, and roughly 2,000 staff were included in the biennial surveys. These provided user data on the importance of information technology; perceptions of the availability of computing and network technologies and services; use of those resources; and satisfaction with the quantity and quality of the technology and support available.

Annual National Surveys: Since 1990, the annual Campus Computing Project has been the largest continuing study on the role of computers and information technology in American higher education. All 23 campuses were mandated to participate in the projects annual survey as part of the MOS data collection effort. Each year, the CSU contracted with the survey provider for customized data comparing the CSU findings to roughly 100 Carnegie Masters I institutions nationally. Responses to this survey provided the CSU with a policy and budgetary context within which the MOS metrics could be considered.

EDUCAUSE is the leading professional organization on information technology in higher education in the nation, and sponsors a Core Data Services survey each year. CSU campuses were strongly encouraged to participate because of the web-based, interactive comparisons that could be made with national norms. This survey focuses heavily on organizational and fiscal issues in IT, and between 15 and 20 CSU campuses usually participated.