California State Auditor

BUREAU OF STATE AUDITS

California State University

Common Management System

Presentation by

California State Auditor

Joint Legislative Audit Committee
Informational Hearing

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This presentation document is only intended to outline selected portions of Report 2002-110, *California State University: Its Common Management System Has Higher Than Reported Costs, Less Than Optimal Functionality, and Questionable Procurement and Conflict-of-Interest Practices* (March 2003). For a more complete explanation of the points outlined in this document, refer to the report.

AUDIT SCOPE

- ❏ Review the Common Management System (CMS) project and identify the initial cost estimates and current projected costs.
- ❏ Review such costs as system integration costs, consultant costs, data center costs, and the university funding sources for these related expenditures.
- ❏ Identify the university's needs, benefits, and return on investment from CMS and its supporting data center.
- ❏ Review the university's management and oversight for CMS and the data center.
- ❏ Review the process used to select hardware, software, and consultants.
- ❏ Identify how implementation has affected growth in employee positions and workload.

AUDIT HIGHLIGHTS

- ☑ The university did not establish a business case for CMS to define its intended benefits and associated costs and ensure that the expenditure of university resources is worthwhile.

- ☑ The university's previous cost projections understated the full costs of CMS over its now nine-year project period. Costs include an estimated $393 million in one-time costs and $269 million for maintenance and operations for a total of $662 million. (Nine-year period is fiscal year 1998-99 through 2006-07.)

- ☑ The university has not established a mechanism to monitor overall systemwide costs adequately, contributing to a lack of complete project cost information for university management and the Legislature.

- ☑ The university lacks a systemwide funding plan for the CMS project.

- ☑ Problems exist that cast doubt on whether CMS will achieve all the objectives intended. The university plans to continue to use existing processes for systemwide reports because it did not design CMS to replace these processes.

- ☑ CMS software procurement process raises questions about whether the university used a fair and objective competitive process. The university decided late in the process to recommend one software vendor but did not use a process to objectively select between two finalists.

- ☑ Although the university followed recommended practices to acquire data center services, its procurements for software and consultants on the project raise questions about the fairness and competitiveness of the university's practices.

- ☑ The university did not do enough to prevent or detect apparent conflicts of interest on CMS-related procurements.

THE UNIVERSITY DID NOT ESTABLISH A BUSINESS CASE FOR THE CMS AND ITS DATA CENTER

Originally Anticipating Significant Savings From CMS and the Data Center Consolidation Initiatives, the University's Expectations for Both Efforts Changed

In September 1996, the university's executive director of the integrated technology strategy initiative, currently the CIO, made a presentation to the board's committee on technology utilization and described CMS as an initiative "with the aim of achieving significant cost savings that can be redirected to other information technology investments." The university's current CIO also informed the board's committee that a feasibility study would be conducted in the fall of 1996; however, this study was never performed.

In an October 2002 letter to us the university clarified the goal by stating that "the implementation did not have savings as a primary goal, rather it was expected that the implementation would result in cost avoidance or minimized costs for improved and expanded administrative software services over the long term."

No Feasibility Study Conducted

Public Contract Code (PCC) requires state agencies to follow the State Administrative Manual (SAM) when acquiring IT goods and services. SAM procedures include a need and cost-benefit analysis. However, the university is exempt from certain state oversight and approval of its IT procurements. Further, the university believes that the PCC exempts it from following SAM even though the statute requires the university to adopt policies and procedures that further the legislative policy.

Regardless of the applicability of SAM feasibility study procedures, the university would have been in a stronger position to answer questions concerning the need for CMS if it had established a business case.

A feasibility study would have:

- Described the business problem or opportunity that CMS and its data center were addressing.
- Provided a description of the hardware, software, and personnel to be involved in the project.
- Included an economic analysis of the life-cycle costs and benefits of the project and the costs and benefits of the current method of operation during the life cycle of the project.
- Identified the source of funding for the project.

The university cannot rely on the IBM study or the Pacific Partners study as business cases for CMS and its data center. The IBM study was not designed to evaluate the existing administrative systems and did not conclude the university should replace them. In fact, IBM recognized that the university needed to conduct additional cost-benefit analyses to develop a sound business case for informed decisions regarding CMS.

The Pacific Partners study was limited to identifying experiences of other organizations that consolidated data centers. Pacific Partners also recognized that the university needed to evaluate data center costs in more detail. It told the university that one of the most important actions going forward was a feasibility/implementation study that looked at the full life-cycle costs.

Ironically, the university created a financial analysis tool that might have helped it make the business case but it *did not require* campuses to use the tool. The tool provided the structure for each campus to compare projected costs of maintaining the current systems with the costs of installing and maintaining a new system over the next five years.

The University Cannot Support the Assertion That It Had Severe Problems With Its Administrative Systems

In its "Why CMS ?" document, the university failed to document the severity of the problems or their pervasiveness across campuses.

> In this document, the university lists software problems such as eroding vendor support and increased maintenance costs. However, the university was not able to identify specific meetings or any documentation to suggest that numerous campuses expressed a desire to replace administrative systems at that time.

The university cannot support the assertion that most of its campuses were planning to replace administrative systems in July 1999. When it began the RFQ process in early 1997, the university indicated that ***only 6*** campuses planned to replace their ***financial systems, 6*** planned to replace ***human resources***, and only ***2*** were replacing ***student administration systems***.

THE UNIVERSITY IS LIKELY TO SPEND MORE, NOT LESS, TO MAINTAIN AND OPERATE ITS NEW SOFTWARE

Table 2 shows that prior to CMS, campuses spent approximately $40 million to operate and maintain its systems and the chancellor's office spent about $1.4 million. However, the university projects that CMS maintenance and operations costs will exceed $65 million annually by fiscal year 2006-07.

CSU subsequently questioned the validity of the $40 million it estimated for maintenance and contends that it was spending $100 million on faltering administrative systems. However, we used the same data as the university and prepared an alternative analysis that indicates the annual cost to maintain these prior systems was approximately $43 million.

THE UNIVERSITY'S PROJECT COSTS EXCEED INITIAL ESTIMATES AND COST MONITORING PROCEDURES ARE NOT ADEQUATE

Recent Estimates for CMS Exceed Initial Cost Estimates, Which Did Not Include All Costs

In June 1999 (nine months after it purchased the PeopleSoft software), the university estimated that CMS costs would total $440 million. In June 2002, the university estimated costs were nearly $482 million, a $42 million increase.

Also, it is important to note that until we requested cost information in June 2002, the chancellor's office had not gathered project cost data from the campuses.

The university's cost estimate did not include costs for maintenance and operations as well as in-kind costs. It excluded these costs from the estimate because they are not "new costs."

The university's June 1999 estimate did not include about $180 million in campus costs because its focus was only on new costs. Adding the $180 million for maintenance and operations and in-kind costs increases the estimate from $482 million to $662 million. (See Table 3)

It should be noted that the accuracy of these figures is uncertain because 73 percent of the projected $662 million is estimated costs. Further, the cost figures cover nine years with only four years of actual data included, which accounts for $176 million out of the $662 million it projects to spend. (See Table C.1)

Also, future costs are uncertain because in-kind costs are especially hard to estimate. Campuses were instructed to report only the costs for staff spending more than 50 percent of their time on CMS in a given month. Also, some campuses are further along in implementation than others and campuses may choose the level of functionality they want, which will affect cost per campus. (See Figure 1)

The University Expects to Spend More Than $296 Million in Personnel Costs and $167 Million for Consultants Through Fiscal Year 2006-07

The university plans to use consultants extensively through implementation and then transition to university personnel after staff has developed the necessary skills on CMS.

Figure 2 shows that costs for personnel and consultants represent 45 percent and 25 percent of total projected costs, respectively.

Through fiscal year 2001-02 the university has spent $43 million on personnel costs and nearly $56 million on consultants. Actual and total projected costs for personnel and consultants are shown on Tables C.1 and C.2.

Consultants at the chancellor's office have worked on various tasks including developing and coding the modifications to the PeopleSoft software deemed necessary to meet the university's needs.

Consultants at the campuses have worked on specific projects such as integrating existing campus systems into CMS, reengineering the university's business processes to fit CMS better, and in a few instances maintaining CMS at smaller campuses.

Tables D.1 and D.2 show actual and projected costs for consultants at the chancellor's office and the 23 campuses, respectively.

The University Expects to Spend $78 Million Through Fiscal Year 2006-07 on Data Center Costs

Costs include $3.7 million because of failed negotiations with IBM and the need for a contingency data center, $4 million for telecommunications, and more than $70 million to Unisys, its data center provider.

The university originally selected IBM for its data center contract; however, neither side was able to negotiate a final contract. Correspondence explains that the reason for failed negotiations was irreconcilable differences in pricing and scope for the project.

In March 2001 the university entered into a contract with Unisys for the data center services.

THE UNIVERSITY HAS NOT MONITORED SYSTEMWIDE COSTS ADEQUATELY

The university lacks a process to gather and monitor campus costs. The university tracks central project costs but does not track campus costs because it believes those costs are the responsibility of each campus.

The university has not been reporting a clear picture of the project's costs to the Legislature.

> For example, in its November 2002 report, the university reported the CMS project budget for fiscal years 2000-01 and 2001-02 as being $30 million and $31 million, respectively; however, it did not report campus costs, which totaled $29 million and $47 million for those two fiscal years.

The chancellor's office does not use status reports that track cost variances nor track CMS costs by development, implementation, and ongoing maintenance.

As a result, it has been unable to provide us the accurate amount spent for developing modifications to the software or the ongoing amount for central CMS maintenance.

CMS budget forecast documents do not provide an approved initial project budget that the chancellor's office can use to compare against actual and projected CMS costs. Instead budget forecast documents simply report the funding the chancellor's office has allocated or expects to allocate.

ALTHOUGH THE UNIVERSITY DOES NOT HAVE A COMPREHENSIVE FUNDING PLAN, MOST EXPENDITURES ARE SUPPORTED BY THE UNIVERSITY GENERAL FUND

The CMS Project Charter of 1999 lists a comprehensive systemwide cost and funding plan as a critical factor to the project's success. However, we found that the funding plan only addresses expected expenditures at the chancellor's office and excludes campuses' funding needs.

CMS implementation at campuses accounts for 63 percent of the project's overall costs, yet the "systemwide" CMS funding plan does not consider campus funding needs for CMS. Rather, the chancellor's office expects campuses to determine on their own the costs and funding necessary to implement CMS.

Recently, the university began to see the importance of having campus cost data and funding information when it began collecting this data in response to our audit.

The Chancellor's Office Is Funding Its Share of CMS Costs Through Its General Fund

The chancellor's office plans to fund the entire $236 million it plans to spend on CMS from its general fund.

- Table C.2 shows CMS project costs by type and campus.
- Figure 5 shows the funding sources, including 31 percent of its costs being supported by "off the top" assessments of all campuses.
- The annual assessments represent funding that otherwise would have been passed from the chancellor's office to the 23 university campuses during the annual budget allocation. Annual assessments have been $10 million to all campuses collectively.

Campuses CMS Expenditures Have Been Supported Primarily by the University General Fund

Table 6 shows that campuses have relied heavily on their general fund accounts to fund CMS costs through 2002.

- In fact, approximately 85 percent of expenditures through June 30, 2002, have been supported through campus general funds. Campuses can spend general fund revenue for a variety of purposes, including such items as salaries, instructional materials, and administrative costs.

Table 7 shows projected expenditures through 2006-07 and most campuses plan to again use general fund money to support CMS. However, our survey of the campuses revealed that only 7 of the 23 campuses were able to provide us with a funding plan that identified funding sources for projected costs.

CMS MAY NOT ACHIEVE ALL OF ITS BUSINESS OBJECTIVES NOR ALL THE POSSIBLE BENEFITS OF A SYSTEMWIDE SOFTWARE PROJECT

OBJECTIVES:

- Minimize costs to implement and maintain application software.
- Minimize time to implement application software.
- Establish standards to share information for common reporting purposes.
- Provide ready access to current, accurate, and complete administrative information and the means to use it in an effective manner.

Initial Versions of the Software Required About 200 Modifications to Meet the University's Business Needs

The university has made more than 100 modifications to the initial version of the human resources software, more than 50 to the finance software, and 40 to the student administration software.

Often, modifications must then be reapplied each time PeopleSoft releases a new version of the CMS software, adding costs to reapply, test, and implement the modifications.

Because the university did not track the hours spent working on modifications, it does not know the costs associated with these efforts.

The University Has Not Implemented CMS in a Manner That Will Maximize Systemwide Reporting

The university is not installing shared databases.

The university has been installing separate and distinct databases for all campuses except Sonoma and the Maritime Academy. As a result, each campus's database must be individually maintained and tested.

Functionality will vary across campuses.

- The university has not established a minimum level of functionality that campuses are required to implement statewide.

- Most campuses have not implemented and are not planning to implement all the modules or sub-modules purchased under the PeopleSoft agreement. (See Table 8)

- Variability can exist within each functionality element as well.

  For example, although all campuses have implemented or plan to implement a general ledger functionality element, the extent of functionality could vary by campus.

- The university is conducting or planning more than 20 unique implementations of the software, which will increase the cost to implement the system.

Systemwide Reporting Processes Will Remain Substantially Unchanged After CMS Is Implemented

- The university cannot use CMS, as the university designed it, to produce systemwide reports.

- Currently, to prepare systemwide reports, campuses extract the necessary data from each of their electronic information systems. When the chancellor's office receives the data, it uses other systems to manipulate and summarize the data into a format that allows systemwide reports.

- Under CMS, this reporting process will remain substantially unchanged. The only difference is that CMS will be the source of the data as opposed to previously existing information systems.

Some Campuses Have Lost Some Functionality

One campus must now manually perform some functions and enter the results into CMS that its prior system had performed automatically. (Example: calculating and withholding taxes from employees and out-of-state vendors.)

The CMS Project Has Encountered Other Problems in Work Quality and Information Security

Between October 2001 and November 2002, the university distributed to campuses three releases each of the CMS software applications, totaling nine application releases. However, it had to redistribute two within weeks of their initial distribution because of errors in the initial release.

- The university distributed 80 updates or fixes to the human resources application but had to redistribute 14. Similarly, it distributed 175 updates or fixes to the student administration application but had to redistribute 20.

The University has not addressed its information security needs for CMS.

- A search feature in the PeopleSoft software apparently allows employees access to confidential information of other employees and students. Specifically, the search feature allows employees to access students' and employees' full Social Security numbers, dates of birth, and gender information.

- Rather than reapply a prior modification to resolve the problem, the university implemented a policy on "sensitive" information, which would place the responsibility for privacy on employees by requiring them to sign confidentiality agreements before getting access to the system. However, the university did not establish a policy requiring that all campuses implement the use of confidentiality agreements.

Likewise, the university did not ensure that the CMS software provided adequate password management, such as enforcing minimum password length, requiring frequent password changes, revoking the password after five failed log-in attempts, and not allowing reuse of previously used passwords.

WEAK INITIAL PLANNING AND LIMITED REPORTING EXPECTATIONS HAVE LED TO QUESTIONS ABOUT WHETHER THE PROJECT WILL ACHIEVE ITS BUSINESS OBJECTIVES

- The university did not sufficiently evaluate its business processes before the procurement.

  Thorough evaluations of its business processes before it purchased the software would have helped the university make an informed decision about what software product would fit its needs best and be the least costly to install.

- Maximized systemwide reporting was not an intended benefit.

  It was a conscious decision on the part of the university to continue to use existing processes for systemwide reports rather than design CMS to replace these processes.

- The university did not establish an effective quality assurance function.

  After more than three years of designing, developing, and implementing CMS, the university only recently began establishing a quality assurance group.

THE UNIVERSITY'S PROCUREMENT APPROACH DID NOT SHARE PROJECT RISK WITH VENDORS AND CONSULTANTS

The university's procurement of the software for the CMS project resulted in agreeing to pay PeopleSoft $33 million for the right to use the software for the next eight years, and for an initial amount of training and consulting services. The contract was amended to $37 million for additional software products and maintenance.

The university then hired consultants on an hourly basis to help identify campus business needs, design and develop the modifications needed for the software and to help implement the software at campuses throughout the university system.

The university could have structured its procurement so that, in return for a fixed fee the winning firm would be primarily responsible for the successful implementation of whatever software product the university decided to use. The university could have entered a contract that paid the firm only upon completion of key deliverables, such as the modification of functionality elements.

The university also did not share risk when it procured consultants to assist in modifying and implementing the software. The chancellor's office and the campuses typically pay consultants on an hourly basis rather than for the delivery of accepted work products.

PROCESSES THE UNIVERSITY USED TO SELECT THE SOFTWARE VENDOR AND CONSULTANTS DID NOT CLEARLY DEMONSTRATE BEST-VALUE PROCUREMENTS

The University's Selection of the CMS Vendor Was Problematic

When the objective of the CMS software procurement changed from selecting one or more vendors to selecting one vendor, the university continued with the procurement process even though its solicitation document did not provide for a method to select only one vendor.

The original intent was to identify one or more vendors to provide integrated systems that included financial, student, and human resources services. These vendors could then be selected by one or more campus collaboratives for their respective campuses.

In April 1997 the university issued a solicitation document, a request for qualifications that planned for a process to select one or more vendors for one or more collaboratives. In July 1997 the university qualified three vendors to proceed to the next procurement phase.

However, in April 1998, during the final stages of the procurement, the university decided to select a single software vendor. In September 1998 the university executed its contract with PeopleSoft. In December 1998 the university determined that all 23 campuses would implement CMS in five to seven years.

Not Restarting or Formally Modifying the Procurement Process When the Methodology Was No Longer Compatible With Its Objectives Raises Questions

The university's procurement process was not geared initially to identify a single vendor.

When deciding to select only one vendor, the university needed an evaluation process that demonstrated it objectively surfaced the best-value vendor, considering both quality of the vendors' proposal and costs associated with the vendors' offers.

However, the university did not restart the process by issuing a new RFQ, nor did it modify the process by notifying the potential vendors that it was changing the overall process outlined in the RFQ. Instead it simply proceeded with an evaluation process to select a winning vendor.

Although one evaluation team performed some scoring, the RFQ did not provide a scoring method to select a single vendor. The university did not use a weighted scoring process to select a best-value vendor.

The University Could Not Show That It Resolved Evaluation Teams' Concerns About Potential Vendors and Discounted Some Information Favoring the Vendor Not Chosen

The university could not provide documentation to show how it resolved, mitigated, or acknowledged acceptance of risks associated with concerns evaluation teams raised about any of the vendors being considered.

Especially problematic is the fact that the university could not demonstrate that it addressed serious concerns the student administration function team raised about PeopleSoft.

The university also discounted a survey of the campuses, which shows that 13 campuses indicated a high interest in another vendor, Systems and Computer Technology Corporation, while only three indicated a high interest in PeopleSoft.

The university could not show how it determined that cost differences between the competing vendors were immaterial

THE UNIVERSITY'S SELECTION OF CMS PROJECT CONSULTANTS IS TROUBLESOME AND DOES NOT ENSURE BEST VALUE

PeopleSoft Was Effectively Hired As a Sole-Source Contractor

The university effectively hired consultants from PeopleSoft without competition. Although the original contract provided for initial training and consultant time, the chancellor's office entered into a second contract with the vendor for additional consulting services.

When qualifying consultants to provide services for the CMS project, the university did not require PeopleSoft to go through the same process as the other firms it considered.

Hiring Io Consulting as a Sole-Source Contractor Was Questionable

In April 1999, the university hired Io consulting as a sole-source contractor. The initial contract was for the services of one individual. The chancellor's office stated in its justification for the sole source contract that it needed the specific expertise of one individual in the firm.

However, the contract expanded significantly from a $350,000 sole-source contract for one consultant to a contract totaling $5.1 million for the services of nine additional individuals. The university issued a total of seven contract amendments from April 1999 to June 2001. (See Figure 7)

When Io Consulting's sole-source contract was not extended further, it continued to work under an arrangement with KPMG. In July 2001, Io consulting began working as a subcontractor for KPMG on the CMS project.

In November 2001 the university executed a three-year master agreement with Io Consulting and as of October 2002, Io had earned an additional $1.7 million at the chancellor's office alone.

Campuses Selected Consultants From University Master Agreements Without Ensuring That They Received the Best Value

The chancellor's office established groups of master service agreements in 1999 in which 7 consulting firms were selected and again in 2001 when an additional 15 firms were selected.

These master agreements only provide ceiling labor rates and campuses may negotiate more favorable rates to reflect campus requirements. However, some campuses did not solicit offers from more than one consultant and therefore cannot demonstrate that they selected the best-value consultant.

DATA CENTER SERVICES HAVE IMPROVED BUT DATA WAREHOUSING NEEDS REMAIN

DATA CENTER PROCUREMENT FOLLOWED RECOMMENDED PRACTICES

Unlike the CMS procurement, the university did use recommended procurement practices to select the outsourced data processing services needed to run CMS.

The university conveyed its needs to potential vendors asking them to propose solutions.

The university used an objective selection process with weighted criteria to evaluate potential vendors. The university further detailed each criterion into factors that evaluation team members scored individually on a scale from 0 to 5.

The university negotiated a contract that shares risk with the vendor. Contract provisions allow the university to assess penalties on an escalating scale should the vendor fail to meet specified service levels.

- The data center has not always provided the level of service required by the contract, but service has improved in recent months. From October 2001 through June 2002 the data center met the required service level only once; however, during July 2002 through November 2002 it met service levels for three out of five months.

THE UNIVERSITY MUST ADDRESS NEEDS FOR CMS WAREHOUSING

The university is only now starting to address campus CMS data warehousing needs. Also, because the chancellor's office considers data warehousing a campus responsibility, it has not included the cost associated with CMS data warehousing as a central cost of the CMS project.

Data warehousing facilitates the cost-effective storage of data for very long periods of time. The data then can be used to conduct various business analyses, such as producing reports that reflect historical trends. Data warehousing also provides the potential to integrate CMS data with data from other systems to produce even more sophisticated analyses and management reports.

Originally the university recognized the need for data warehousing for CMS and included it within the project's scope but eliminated it in April 2002.

The university is now working on a fee-for-service arrangement with a voluntary consortium of campuses to address data warehousing needs. The chancellor's office is working on a pilot project currently funded by the chancellor's office to design and develop a data warehousing model for campuses. It expects to release its final version of the data warehousing model in early 2003.

THE UNIVERSITY'S OVERSIGHT 0F POTENTIAL CONFLICTS OF INTEREST NEEDS IMPROVEMENT

The university did not do enough to detect or prevent conflicts of interest by decision makers for CMS-related procurements.

The university's conflict-of-interest code left out some university positions that should have been designated for filing annual Form 700s. Further, it did not always retain and make available certain required filings of these forms.

- Some campus CMS project directors with significant decision-making authority were not designated to file Form 700s.

- The Political Reform Act requires the university to retain original filings of Form 700s for seven years but the chancellor's office and campuses could not locate these forms in a number of cases. (We requested 244 forms for 63 employees but did not receive 39 forms.)

The university did not require consultants on the project to file Form 700s, although they performed duties similar to employees in designated positions.

- Consultants assisted in evaluating responses on the CMS data center procurement. Also, one consulting firm was used to provide management services for the data center procurement on an ongoing basis and appears to have participated in making governmental decisions.

- The university hired the principal consultant from Io Consulting as a project manager and did not require him to file a Form 700. This consultant was responsible for managing and directing contract and university staff and had the duty of communicating and presenting the project's status to relevant parties and groups.

The university could not provide signed disclosure forms for many participants in the CMS software procurement. Individuals signing disclosure forms are certifying that they have no personal or financial interests incompatible with their participation in the procurement process.

University lacks a policy that spells out for employees what constitutes "incompatible activities," such as accepting anything of value from anyone seeking to do business with the university and does not require that employees in designated positions receive regular ethics training.

The university stated that it does not have an incompatible activities policy because statutes and the state constitution spell out the incompatible activities, and current statutes no longer require the university to have such a policy.

The university also does not require its employees to receive ethics training regularly. The university asserts it is exempt from state requirements that employees receive such training.

The university cites Education Code Section 66606.2, which states the Legislature intends that the university not be governed by any statute enacted after January 1, 1997, that does not amend a previously applicable act, unless the statute expressly provides that the university is to be governed by that statute.

FORM 700s INDICATE A UNIVERSITY EMPLOYEE HAD AN APPARENT CONFLICT OF INTEREST

A University Senior Executive Who Participated in the CMS Software Procurement Received Income From PeopleSoft

The CMS software procurement took place between April 1997 and September 1998, and this senior executive received income from the bidder for facilitating meetings periodically from 1996 through 1998.

The senior executive reported more than $10,000 of consulting fees and between $1,001 and $10,000 in travel reimbursements for 1996. For 1997 and 1998, he reported between $1,001 and $10,000 for facilitating meetings in addition to travel payments of $4,400 and $2,900, respectively.

The senior executive asserts that his role in the CMS procurement process did not include the selection of the vendor because he recused himself from meetings in which decisions were made. However, while the senior executive may not have participated in the final meeting, we did find that he participated in key activities related to the vendor's selection.

Another University Senior Executive May Have Tried To Use Nonpublic Information for Financial Benefit

A senior executive reportedly purchased stock in a company one day before the university executed the contract with that company. According to the individual's Form 700, the senior executive purchased between $10,001 and $100,000 of the stock

The senior executive has a high-ranking management position whose responsibilities included overseeing information technology services that support the chancellor's office.

RECOMMENDATIONS

- Adopt policies and procedures that require a feasibility study before the acquisition and implementation of significant future information technology projects.

- To measure the benefits achieved through common management and business practices, the university should establish quantitative measures of increased business process efficiencies through CMS, in addition to any qualitative factors being assessed.

- Monitor systemwide costs adequately, including establishing a mechanism to collect data on campus costs periodically. Also, it should establish a systemwide funding plan for CMS that includes campuses.

- To ensure that it adequately addresses CMS project quality and information security, the university should establish a quality management plan and continue its efforts to establish an effective quality assurance function of the CMS project.

- Take steps to ensure that it meets its business objectives for the CMS project. Determine how it could improve the design of CMS to report systemwide information.

- Collect comprehensive cost information annually, including in-kind, upgrades, and integration costs.

- Compare project costs to approved project budgets and publish the information in its quarterly status reports.

- Use recommended practices, such as ensuring that it shares project risk with vendors and consultants such as allowing them to propose their solutions and structuring contracts to protect the university's interests, including paying only after deliverables have been tested and accepted.

- In future procurements, the university should evaluate its specific business processes against vendor products before procurement, then select vendors that best accommodate the university's specific needs. In addition, establish a practice of using a quantitative evaluation method to identify a best-value vendor.

- Strengthen its procedures for preventing and detecting conflicts of interest for individuals participating in procurement decisions. Conduct periodic ethics training for designated employees and establish an incompatible activities policy that it formally communicates to employees.

- ⇨ Update its conflict-of-interest code to classify all positions responsible for evaluating or overseeing vendors or contractors.

- ⇨ Require consultants that serve in a staff capacity and participate or influence university decisions to file Form 700s.

- ⇨ Remind human resources personnel of their responsibility to collect, retain, and make available the filed Form 700s for the required seven-year period.

TABLE 2

Comparison of Annual Maintenance and Operations Costs Between Prior Administrative Systems and CMS

	Actual Pre-CMS Annual Maintenance and Operations Costs (fiscal year 1999–2000)	Projected CMS Annual Maintenance and Operations Costs (fiscal year 2006–07)	Increase (Decrease)
Chancellor's office	$ 1,380,000*	$29,346,376	$27,966,376
Combined campuses	40,340,730†	35,760,740	(4,579,990)
Total annual maintenance and operations costs	**$41,720,730**	**$65,107,116‡**	**$23,386,386**

Source: The university's November 2000 *Measures of Success* report; the university's June 2002 cost survey.

* The director of business management services estimated that the chancellor's office spent this amount supporting administrative systems that were subsequently replaced by CMS.

† This amount only reflects maintenance and operations costs reported by the 22 campuses in existence at the time. Channel Islands' annual maintenance and operations costs are reflected in fiscal year 2006–07, amounting to $73,158. Chancellor's office "campus" costs, representing the cost of maintaining and operating human resources and finance applications at the chancellor's office, are also included in fiscal year 2006–07, amounting to $779,300.

‡ This amount includes the projected ongoing costs to maintain and operate the version of CMS that would exist in fiscal year 2006–07. However, it does not reflect the costs for upgrades or additional development efforts that the CMS software may require in the future.

TABLE 3

A Comparison of the 1999 and 2002 CMS Project Cost Estimates for the Nine-Year Project Period

Cost Item	June 1999 Cost Estimate	June 2002 Cost Estimate	Estimate Growth or (Shrinkage)
Central Costs:			
Personnel	$ 26,735,486	$ 73,714,004	$46,978,518
Training and Travel		5,144,228	5,144,228
Consultants	70,840,335	31,264,032	(39,576,303)
Hardware	400,000	1,313,555	913,555
Data Center*	75,000,000	75,176,426	176,426
Software		4,126,357	4,126,357
PeopleSoft Software	34,876,961	39,876,812	4,999,851
Other	1,757,000	5,800,515	4,043,515
Central Costs Total	**209,609,782**	**236,415,929**	**26,806,147**
Campus Costs:†			
Personnel	110,400,000	74,374,321	(36,025,679)
Training and Travel	23,575,000	21,869,074	(1,705,926)
Consultants	85,100,000	127,679,650	42,579,650
Hardware and Software	10,925,000	15,214,506	4,289,506
Other		6,236,258	6,236,258
Campus Costs Subtotal	**230,000,000**	**245,373,809**	**15,373,809**
Subtotals	**$439,609,782**	**481,789,738**	**$42,179,956**
Other Campus Costs:‡			
In-Kind		63,378,034	
Maintenance and Operations		116,714,146	
Total Project Costs		**$661,881,918**	

Source: The university's June 1999 implementation approach analysis document and June 2002 cost survey.

* The June 2002 cost estimate for the data center costs include other nonpersonnel costs of $728,683, outsourced data center costs of $70,223,133, and data center related telecommunications costs of $4,224,610.

† For its June 1999 estimate, the university estimated implementation costs of $10 million for one campus and extrapolated to $230 million for 22 campuses plus the chancellor's office "campus" costs. This estimate excluded campus in-kind costs as well as maintenance and operations costs. Further, although upgrade and integration costs are additional or new costs resulting from the CMS project, the university also excluded these from its 1999 estimate.

‡ The campus in-kind and maintenance and operations costs, which are shown separately on this table, are included in the various types of costs, such as personnel, shown in Figure 2. Thus, the individual cost items in Figure 2 and Table 3 are not comparable.

TABLE C.1

Summary of Actual and Projected Common Management System Systemwide Costs by Year From Fiscal Years 1998–99 Through 2006–07

Types of Costs	Actual 1998–99	Actual 1999–2000	Actual 2000–01	Actual 2001–02	Projected 2002–03	Projected 2003–04	Projected 2004–05	Projected 2005–06	Projected 2006–07	Projected Total Costs
Personnel	$ 606,092	$ 3,551,457	$13,164,359	$25,257,557	$39,474,266	$44,687,388	$ 54,324,844	$ 60,201,142	$55,365,310	$296,632,415
Training	712,375	623,684	1,212,306	2,728,382	3,348,674	3,479,362	3,358,458	2,742,716	1,238,778	19,444,735
Travel	155,852	714,751	692,635	734,364	1,487,243	1,511,009	2,495,701	2,354,722	1,061,590	11,207,867
Consultants	801,769	8,258,435	21,654,163	25,145,293	21,592,323	22,664,619	32,308,037	25,628,121	8,632,758	166,685,518
Hardware	293,511	227,533	9,068,302	17,172,445	15,503,303	12,466,757	10,783,791	10,098,288	9,954,589	85,568,519
Software	4,077,028	5,822,412	16,167,269	12,307,951	7,086,147	5,353,440	5,710,823	4,765,074	6,826,546	68,116,690
Other	181,506	478,040	1,278,204	2,443,468	2,530,898	1,977,672	1,765,354	1,892,866	1,678,166	14,226,174
Total Costs	**$6,828,133**	**$19,676,312**	**$63,237,238**	**$85,789,460**	**$91,022,854**	**$92,140,247**	**$110,747,008**	**$107,682,929**	**$84,757,737**	**$661,881,918**

Source: The university's June 2002 cost survey.

TABLE C.2

CMS Project Costs by Type of Cost and by Campus for Fiscal Years 1998–99 Through 2006–07

	Personnel Costs	Training Costs	Travel Costs	Consultant Costs	Hardware Costs	Software Costs	Other Costs	Projected Total Costs
Central*	**$ 73,714,004**	**$ 3,155,990**	**$ 1,988,238**	**$ 31,264,032**	**$76,489,981**	**$44,003,169**	**$ 5,800,515**	**$236,415,929**
Campus								
Bakersfield	3,919,590	202,094	145,648	3,204,173	178,226	627,784	186,286	8,463,801
Chancellor's Office†	4,620,400	235,500	4,000	1,682,100	90,400	27,835	53,000	6,713,235
Channel Islands	172,455	20,000		657,078	5,000	7,134		861,667
Chico	8,367,081	482,657	823,540	4,671,915	809,202	2,592,814	698,931	18,446,140
Dominguez Hills	10,020,000	1,370,000	340,000	1,470,000	200,000	144,800	285,000	13,829,800
Fresno	12,567,200	111,400	208,526	3,862,700	378,800	976,000	277,500	18,382,126
Fullerton	8,954,339	685,680	293,425	6,933,500	55,294	1,932,395	469,000	19,323,633
Hayward	8,541,966	511,100	678,500	7,620,670	287,700	284,400	571,290	18,495,626
Humboldt	6,512,882	953,587	435,694	2,982,423	186,000	125,139	447,139	11,642,864
Long Beach	19,271,579	897,218	398,374	10,469,009	1,518,218	3,502,747	1,050,983	37,108,128
Los Angeles	10,561,700	1,126,400	300,300	1,044,000	54,800	281,700	51,600	13,420,500
Maritime Academy		189,347	119,060	3,712,748	312,843	304,187		4,638,185
Monterey Bay	8,579,143	512,500	82,000	4,305,076	586,103	503,152	815,663	15,383,637
Northridge	8,491,406	589,560	222,238	7,389,894	180,000	1,224,520	121,211	18,218,829
Pomona	9,960,395	645,078	412,637	7,418,625	335,218	357,093	1,108,393	20,237,439
Sacramento	8,040,800	363,700	344,600	7,270,400	410,000	2,567,100	275,900	19,272,500
San Bernardino	7,295,863	93,669	118,654	9,043,831	179,575	3,014,656	162,736	19,908,984
San Diego	19,635,159	1,882,300	2,346,199	12,378,200		1,282,500	72,000	37,596,358
San Francisco	16,652,300	878,300	305,800	11,571,500	1,298,000	2,318,100	258,000	33,282,000
San Jose	7,023,753	2,176,000	289,169	4,514,933	140,679	1,153,043	166,625	15,464,202
San Luis Obispo	18,599,501	1,094,773	479,767	12,295,148	559,186	221,796	401,903	33,652,074
San Marcos	5,992,000	798,600	270,400	2,478,900	1,026,400	100,300	155,700	10,822,300
Sonoma‡	12,400,377	240,032	383,283	6,537,925	214,328	330,957	678,512	20,785,414
Stanislaus	6,738,522	229,250	217,815	1,906,738	72,566	233,369	118,287	9,516,547
Campus Costs	**222,918,411**	**16,288,745**	**9,219,629**	**135,421,486**	**9,078,538**	**24,113,521**	**8,425,659**	**425,465,989**
Total CMS Costs	**$296,632,415**	**$19,444,735**	**$11,207,867**	**$166,685,518**	**$85,568,519**	**$68,116,690**	**$14,226,174**	**$661,881,918**

Source: The university's June 2002 cost survey.

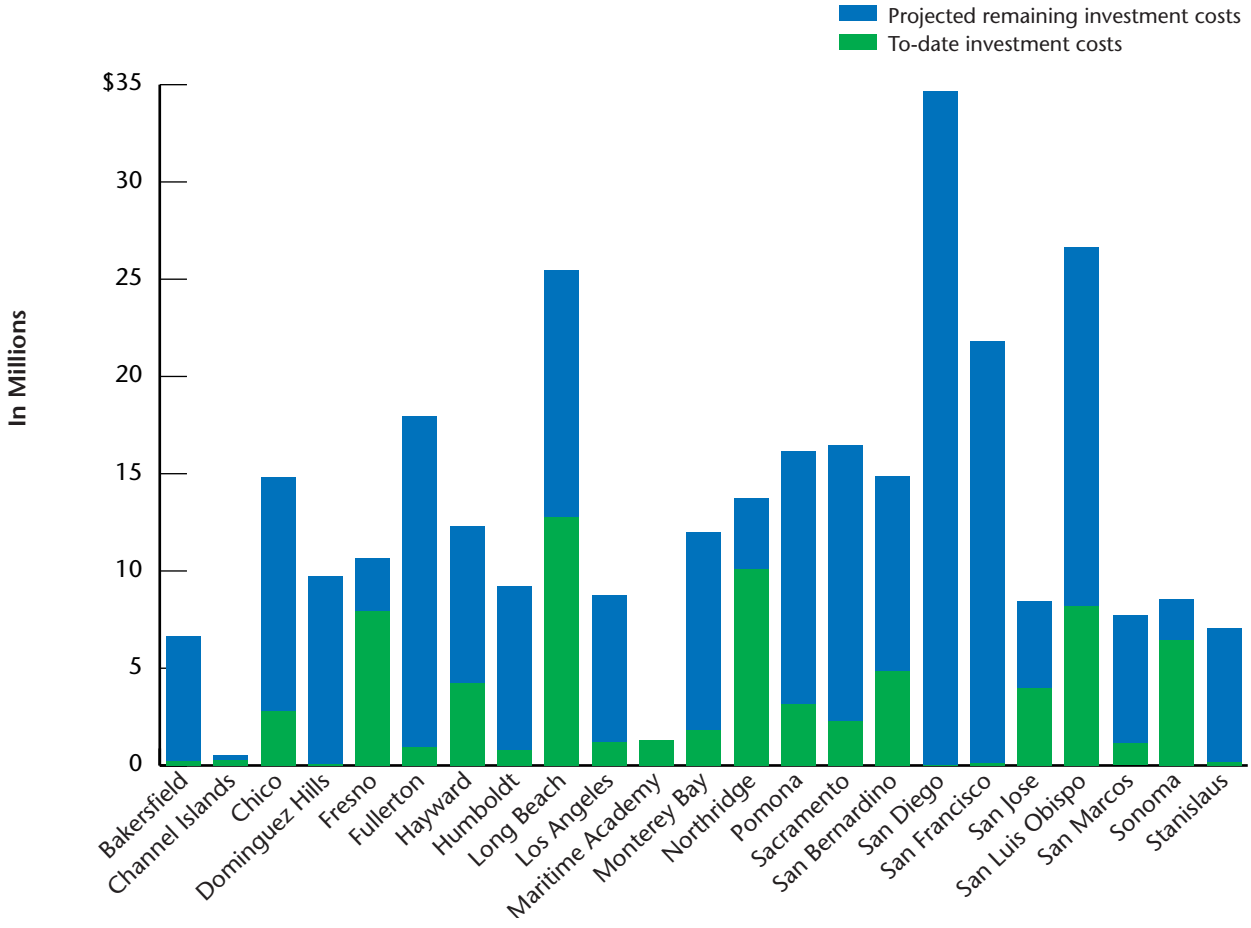
* Central costs are the centralized costs for the development, implementation support, and operation of CMS systemwide.

† Chancellor's office "campus" costs represent the cost of implementing human resources and finance applications at the chancellor's office.

‡ Subsequent to the June 2002 cost survey, the Sonoma campus informed us that $64,000 of its "other costs" represented costs similar to those we classified as personnel costs.

FIGURE 1

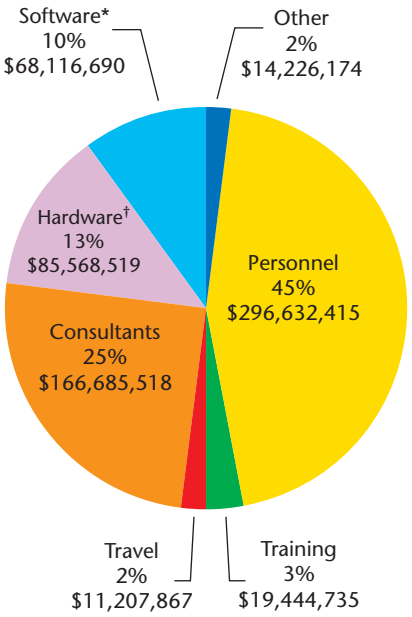
Campus CMS Implementation Status as of June 2002
Measured by Investment Costs



Source: The university's June 2002 cost survey.

FIGURE 2

Projected Total Costs for the CMS Project Including Maintenance and Operations Costs Fiscal Years 1998–99 Through 2006–07



Source: The university's June 2002 cost survey.

* Software costs include PeopleSoft software costs.

† Hardware costs include Unysis data center costs.

TABLE D.1

Chancellor's Office Central Consultant Costs

Consulting Firm	Actual Costs July 1998 Through June 2002	Projected Costs July 2002 Through June 2007	Projected Total Costs
PeopleSoft	$ 7,398,778	$ 137,308	$ 7,536,086
Not Yet Determined by Chancellor's Office		7,050,000	7,050,000
Cedar/Hunter Group	4,083,292	2,261,100	6,344,392
Io Consulting	5,662,907		5,662,907
KPMG Consulting*	1,506,417		1,506,417
Lewis & Co	713,129		713,129
Monarch Information Technology Systems	514,795		514,795
Aligne	352,508		352,508
IBM	318,110		318,110
BIT/Digiterra/Ciber	268,976		268,976
California State University, Fresno	225,812		225,812
4GL Solutions	130,800		130,800
Mercury Interactive	124,788		124,788
Vista IT	91,338		91,338
Reboot	83,750		83,750
Price Waterhouse	57,500		57,500
Sunset Data Services	40,000		40,000
John G. Kelly	39,414		39,414
International Management	35,480		35,480
Korn/Ferry International	30,750		30,750
Academe Solutions	26,437		26,437
Technical Connection	19,500		19,500
GTC Systems	19,409		19,409
Michael W. Dula, Ph.D	16,508		16,508
Epeople	16,250		16,250
Bea Systems	16,040		16,040
ITprolink	15,600		15,600
John Miller Information	4,800		4,800
Ampco Systems Parking	2,471		2,471
Adver Services	65		65
Total Chancellor's Office Central Consultant Costs	**$21,815,624**	**$9,448,408**	**$31,264,032**

Source: The university's June 2002 campus cost survey.

* The actual amount reflects $683,612 paid to firm for Io Consulting as a subcontractor.

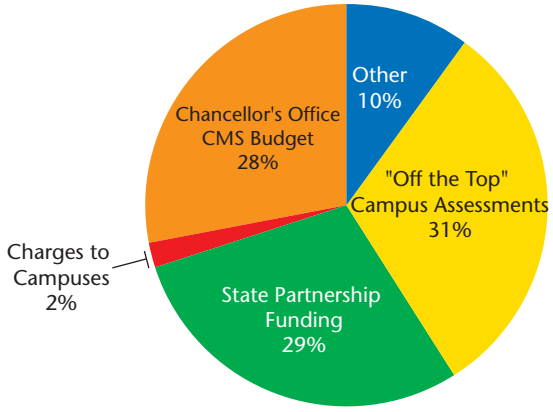
TABLE D.2

Campus Consultant Costs

Consulting Firm	Actual Costs July 1998 Through June 2002	Projected Costs July 2002 Through June 2007	Projected Total Costs
Not Yet Determined by Campus		$ 61,801,855	$ 61,801,855
Cedar/Hunter Group	$ 9,393,876	23,231,129	32,625,005
Io Consulting	9,826,229	10,803,655	20,629,884
KPMG Consulting	6,479,099		6,479,099
PeopleSoft	3,451,590	1,527,000	4,978,590
Price Waterhouse	2,003,023		2,003,023
Sonoma State University	297,919	1,100,000	1,397,919
Monarch Information Technology Systems	123,472	1,054,680	1,178,152
EQV Consulting	227,783	795,200	1,022,983
BIT/Digiterra/Ciber	746,612	160,000	906,612
Signature	314,152		314,152
Bennett (SDB)	50,000	250,000	300,000
Financial Aid Services		226,331	226,331
Hershey Business Systems	23,430	175,000	198,430
Informed Decision	137,241	11,500	148,741
Independent–Jacobson	136,200		136,200
Fugatt		124,600	124,600
Walt Patterson	105,800		105,800
Carrera-Maximus Consulting	105,700		105,700
CSLink Consulting		100,000	100,000
IBM Consulting	91,800		91,800
Provista	81,789	10,000	91,789
San Jose State University	91,500		91,500
Deloitte Touche	71,383		71,383
Independent-Miller	71,348		71,348
Sargent	67,500		67,500
Information Management Systems Consulting	50,000		50,000
Sunset Data	50,000		50,000
Prism Computing	15,000		15,000
Page Consulting	14,950		14,950
CMC	9,000		9,000
Sierra Systems		6,500	6,500
Orion	5,000		5,000
EPNL	2,400		2,400
Amelia Assoc-Citrix Consulting	240		240
Total Campus Consultant Costs	**$34,044,036**	**$101,377,450**	**$135,421,486**

FIGURE 5

Projected Chancellor's Office Central CMS Funding Sources Fiscal Years 1998–99 Through 2006–07



Source: The university's CMS budget forecast document (December 2002).

TABLE 6

University Campus Funding Sources for CMS Expenditures (July 1998 Through June 2002)

Campus	General Fund–General Support	General Fund–Information Resources and Technology	General Fund–Capital Outlay	Auxiliary Funds	Various University Trust Funds	Other Revenue Funds	Total Funding Reported	Total Expenditures Reported
Bakersfield	$ 386,455						$ 386,455	$ 386,455
Channel Islands	256,580						256,580	256,580
Chico	3,443,824					$ 1,067	3,444,891	3,444,891
Dominguez Hills	85,600						85,600	85,600
Fresno*	6,938,580		$469,635		$ 652,011		8,060,226	8,060,226
Fullerton	933,440						933,440	933,440
Hayward	5,059,187						5,059,187	5,059,187
Humboldt	813,242						813,242	813,242
Long Beach	13,204,585						13,204,585	13,204,585
Los Angeles	1,673,200						1,673,200	1,673,200
Maritime Academy	2,007,733						2,007,733	2,007,733
Monterey Bay*	409,576			$1,412,276			1,821,852	1,821,852
Northridge	5,242,297				5,239,266		10,481,563	10,481,563
Pomona	3,781,988						3,781,988	3,781,988
Sacramento	2,270,200						2,270,200	2,270,200
San Bernardino	5,032,514	$406,530					5,439,044	5,439,044
San Diego†								
San Francisco*	12,300	237,100					249,400	249,400
San Jose	2,485,235				2,335,586	95,068	4,915,889	4,915,889
San Luis Obispo	8,874,561						8,874,561	8,874,561
San Marcos*	1,140,200						1,140,200	1,140,200
Sonoma	6,496,734			815,093	523,459	483,054	8,318,340	8,318,340
Stanislaus	187,547						187,547	187,547
Totals‡	**$70,735,578**	**$643,630**	**$469,635**	**$2,227,369**	**$8,750,322**	**$579,189**	**$83,405,723**	**$83,405,723**
Percent	84.81%	0.77%	0.56%	2.67%	10.49%	0.70%		

Source: The Bureau of State Audits' October 2002 "CMS Funding Survey"; the university's June 2002 cost survey.

* Fresno, Monterey Bay, San Francisco, and San Marcos fund CMS costs through a pooled account that is supported by the applicable funds listed above for each campus. These figures may not represent actual funding sources for CMS at these campuses because the figures are based on the contribution percentages of these funding sources to the pooled account.

† No funding information is provided for the San Diego campus because it will not incur CMS implementation costs until after June 2002.

‡ The table does not include chancellor's office "campus" costs. These costs represent the cost of implementing the human resources and finance applications at the chancellor's office. For the period above, chancellor's office "campus" costs totaled $1,647,635. This amount was funded through "general fund–general support."

TABLE 7

Projected University Campus Funding Sources for CMS Expenditures (July 2002 Through June 2007)

Campus	General Fund–General Support	General Fund–Information Resources and Technology	Auxiliary Funds	Various University Trust Funds	Other Revenue Funds	Total Funding Reported	Total Expenditures Reported
Bakersfield	$ 8,077,346					$ 8,077,346	$ 8,077,346
Channel Islands	605,087					605,087	605,087
Chico	14,444,501				$ 556,748	15,001,249	15,001,249
Dominguez Hills	13,744,200					13,744,200	13,744,200
Fresno	10,165,750			$ 156,150		10,321,900	10,321,900
Fullerton*							18,390,193
Hayward†	13,436,439					13,436,439	13,436,439
Humboldt	10,829,622					10,829,622	10,829,622
Long Beach	23,903,543					23,903,543	23,903,543
Los Angeles	11,747,300					11,747,300	11,747,300
Maritime Academy	2,630,452					2,630,452	2,630,452
Monterey Bay‡							13,561,785
Northridge	7,689,766			47,500		7,737,266	7,737,266
Pomona	16,455,451					16,455,451	16,455,451
Sacramento	17,002,300					17,002,300	17,002,300
San Bernardino	12,645,127	$ 1,824,813				14,469,940	14,469,940
San Diego	37,596,358					37,596,358	37,596,358
San Francisco†	7,203,200	11,839,000				19,042,200	33,032,600
San Jose	9,410,103			804,440	333,770	10,548,313	10,548,313
San Luis Obispo	24,777,513					24,777,513	24,777,513
San Marcos	9,682,100					9,682,100	9,682,100
Sonoma	7,332,595		$1,120,395	2,824,284	1,189,800	12,467,074	12,467,074
Stanislaus	9,329,000					9,329,000	9,329,000
Totals§	**$268,707,753**	**$13,663,813**	**$1,120,395**	**$3,832,374**	**$2,080,318**	**$289,404,653**	**$335,347,031**
Percent	92.85%	4.72%	0.39%	1.32%	0.72%		

Source: The Bureau of State Audits' October 2002 "CMS Funding Survey"; the university's June 2002 cost survey.

* The Fullerton campus indicated it had yet to determine how its projected CMS costs would be funded; however, the campus estimates that at least 75 percent will come from the general fund, while other revenue sources such as parking, housing, and the university trust fund also may be used.

† The Hayward campus indicated that it may have to finance one-time CMS costs as necessary. The San Francisco campus indicated that it will finance the difference between its projected CMS expenditures and the funding reported above.

‡ The Monterey Bay campus declined to project how its future CMS expenditures would be funded; however, the campus estimates that the majority of costs will continue to be funded through the general fund. The campus also plans to obtain funding from auxiliary organizations.

§ The table does not include chancellor's office "campus" costs. These costs represent the cost of implementing the human resources and finance applications at the chancellor's office. For the period above, chancellor's office "campus" costs totaled $5,065,600. This amount was funded through "general fund–general support."

TABLE 8

Range of Functionality Elements Implemented by Campuses

	Number of Campuses	Number of Functionality Elements Implemented or Planned*
Human Resources Application†		
	1	41
	0	36 to 40
	6	31 to 35
	2	26 to 30
	4	21 to 25
	9	16 to 20
	1	11 to 15
	1	6 to 10
	0	1 to 5
Finance Application†		
	1	12
	3	9 to 11
	11	7 to 8
	5	5 to 6
	4	3 to 4
	0	1 to 2
Student Administration Application‡		
	1	22
	8	18 to 21
	4	14 to 17
	5	10 to 13
	4	6 to 9
	0	1 to 5

Source: The Bureau of State Audits' October 2002 Module Survey, which reflects the status of functionality elements as of June 2002.

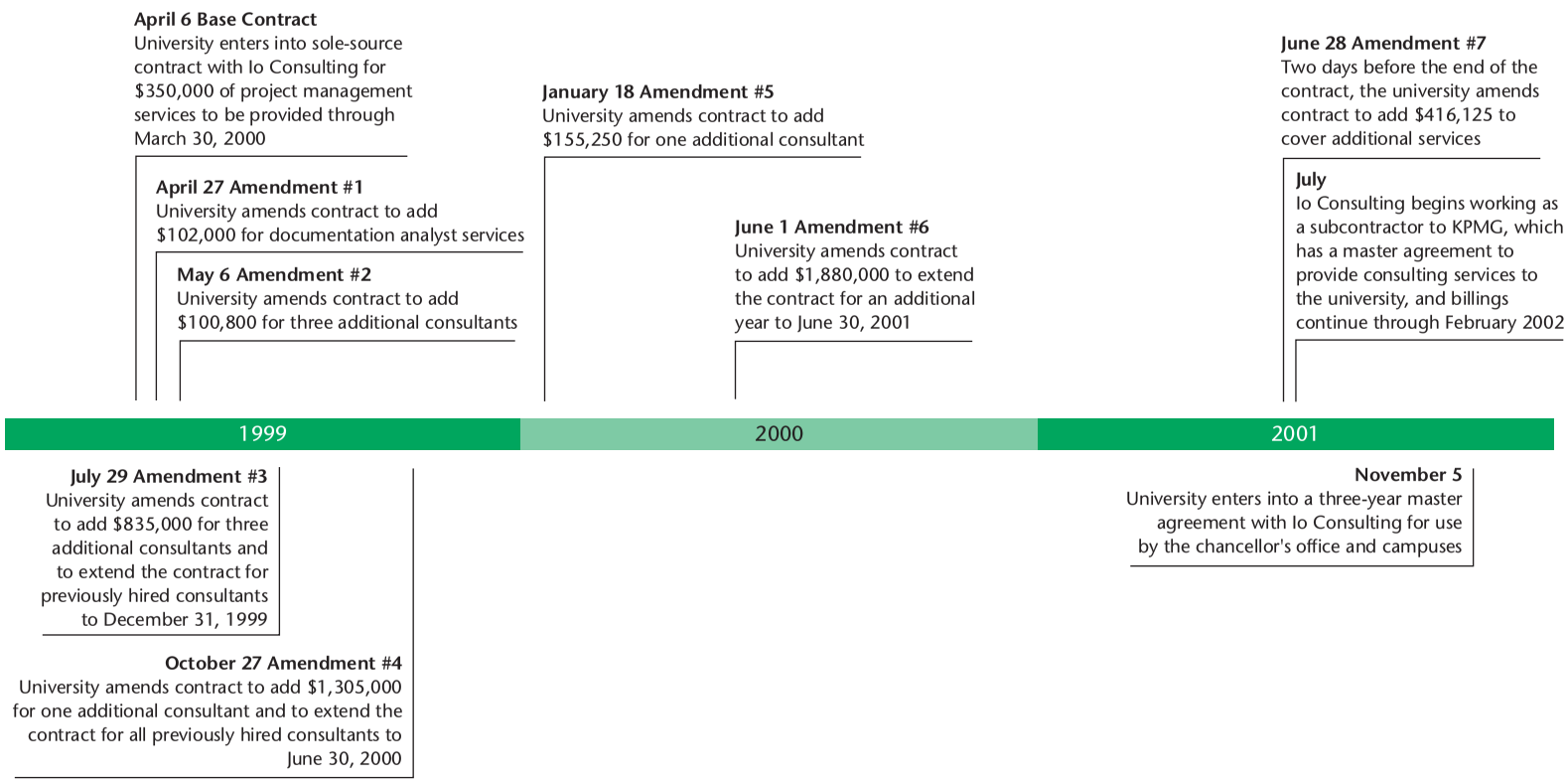
* Includes modules, sub-modules, and university-created functionality.

† Number of campuses equals 23 campuses plus chancellor's office (human resources and finance only).

‡ Channel Islands and chancellor's office did not plan to implement student administration as of the October 2002 survey.

FIGURE 7

Timeline of the University's Contracting With Io Consulting



Source: University contract and payment documents.

TABLE 4

Summary of Projected Total Costs by Project Area
Fiscal Years 1998–99 Through 2006–07

	Cost	Percent of Cost
One-Time Investment Costs		
Implementation	$291,349,354	44.0%
Integration	12,868,156	1.9
In-Kind*	63,433,034	9.6
Upgrade	24,957,016	3.8
Investment Total	392,607,560	59.3
Ongoing Costs		
Maintenance and Operations	269,274,358	40.7
Total†	**$661,881,918**	**100.0%**

Source: The university's June 2002 cost survey.

* The In-Kind costs, which include $55,000 of central costs, have been broken out as follows: Implementation $50,889,187, Integration $4,873,451, and Upgrade $7,670,396.

† Included in the total costs are $83,855,717 in investment costs and $152,560,212 in maintenance and operations costs incurred by the chancellor's office for its "central" efforts on the CMS project. The chancellor's office does not differentiate between investment and maintenance and operations costs when it accounts for its costs. Thus, it allocated its costs between these two areas based on when the campuses begin using each application.

TABLE B.1

Projected Total Central Costs and Campus Costs for Fiscal Years 1998–99 Through 2006–07

	Projected Total Investment Costs	Projected Total Maintenance and Operations Costs	Projected Total Costs
Central*	$ 83,855,717	$152,560,212	$236,415,929
Campus			
Bakersfield	6,611,545	1,852,256	8,463,801
Chancellor's Office†	3,321,300	3,391,935	6,713,235
Channel Islands	514,880	346,787	861,667
Chico	14,815,073	3,631,067	18,446,140
Dominguez Hills	9,710,000	4,119,800	13,829,800
Fresno	10,656,526	7,725,600	18,382,126
Fullerton	17,978,070	1,345,563	19,323,633
Hayward	12,303,668	6,191,958	18,495,626
Humboldt	9,235,829	2,407,035	11,642,864
Long Beach	25,448,554	11,659,574	37,108,128
Los Angeles	8,769,400	4,651,100	13,420,500
Maritime Academy	1,303,614	3,334,571	4,638,185
Monterey Bay	11,984,613	3,399,024	15,383,637
Northridge	13,717,868	4,500,961	18,218,829
Pomona	16,154,608	4,082,831	20,237,439
Sacramento	16,469,300	2,803,200	19,272,500
San Bernardino	14,869,265	5,039,719	19,908,984
San Diego	34,661,458	2,934,900	37,596,358
San Francisco	21,844,500	11,437,500	33,282,000
San Jose	8,419,218	7,044,984	15,464,202
San Luis Obispo	26,622,700	7,029,374	33,652,074
San Marcos	7,733,700	3,088,600	10,822,300
Sonoma	8,567,704	12,217,710	20,785,414
Stanislaus	7,038,450	2,478,097	9,516,547
Campus Costs	308,751,843	116,714,146	425,465,989
Total CMS Costs	**$392,607,560**	**$269,274,358**	**$661,881,918**

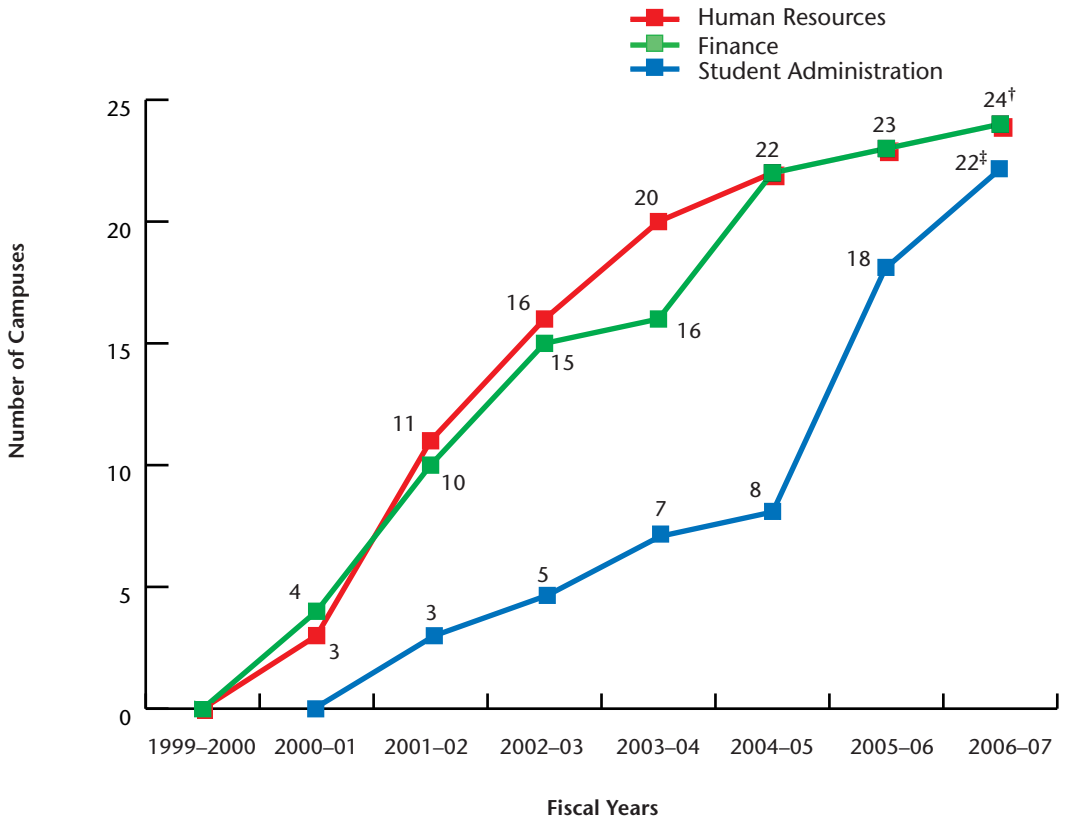
Source: The university's June 2002 cost survey.

* Central costs are the centralized costs for the development, implementation support, and operation of CMS systemwide.

† Chancellor's office "campus" costs represent the cost of implementing human resources and finance applications at the chancellor's office.

FIGURE 3

Number of Campuses "Live"* on CMS by Application



Source: CMS deployment timeline as of December 2002.

* "Live" means a campus has completed testing on at least some functionality of its initial version of the application, and is now using it in the day-to-day operation of the campus.

† Includes all 23 campuses and chancellor's office.

‡ Includes all campuses except Channel Islands.