

Administrative Office of the Courts

The Statewide Case Management Project
Faces Significant Challenges Due to Poor
Project Management

February 2011 Report 2010-102



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Elaine M. Howle
State Auditor
Doug Cordiner
Chief Deputy

CALIFORNIA STATE AUDITOR

Bureau of State Audits

555 Capitol Mall, Suite 300

Sacramento, CA 95814

916.445.0255

916.327.0019 fax

www.bsa.ca.gov

February 8, 2011

2010-102

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

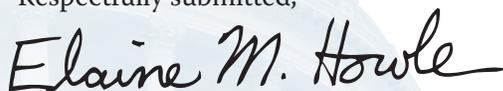
As requested by the Joint Legislative Audit Committee, the California State Auditor presents this audit report concerning the Administrative Office of the Courts' (AOC) management and oversight of the statewide case management project, which includes two interim systems and the most recent version, the California Court Case Management System (CCMS). As of June 2010 the AOC and several superior courts had spent \$407 million on the project. The AOC's records show that as of fiscal year 2015-16—the year it expects that CCMS will be deployed statewide—the full cost of the project will be \$1.9 billion. However, this amount does not include \$44 million that the seven superior courts reported to us they spent to implement the interim systems or the unknown but likely significant costs the superior courts will incur to implement CCMS.

This report concludes that the AOC has not adequately planned the statewide case management project since 2003 when the Judicial Council of California (Judicial Council) directed the AOC to continue its development. Further, the AOC has not analyzed whether the project would be a cost-beneficial solution to the superior courts' technology needs and it is unclear on what information the AOC made critical decisions during the project's planning and development. In addition, the AOC did not structure its contract with the development vendor to adequately control contract costs. As a result, over the course of seven years, the AOC entered into 102 amendments and the contract has grown from \$33 million to \$310 million. Further, although the AOC fulfilled its reporting requirements to the Legislature, the four annual reports it submitted between 2005 and 2009 did not include comprehensive cost estimates for the project, and the AOC's 2010 report failed to present the project's cost in an aggregate manner. Moreover, the AOC has consistently failed to develop accurate cost estimates for the statewide case management project, which is now at risk of failure due to a lack of funding.

In addition, our survey of the seven superior courts using interim versions of the statewide case management project found they experienced challenges and difficulties in implementation, and some are reluctant to implement CCMS. Many of the remaining 51 superior courts not using an interim version expressed uncertainty about various aspects of the project. Although the Judicial Council has the authority to compel the superior courts to implement CCMS, our survey results indicate that its successful implementation will require the AOC to more effectively foster court support. Although state-level justice partners indicated to us they look forward to CCMS, the extent to which local justice partners will integrate their systems with CCMS is unclear due to cost considerations.

Finally, the AOC has not contracted for adequate independent oversight of the statewide case management project. Our information technology expert believes that as a result of the AOC's failure to address significant independent oversight concerns and quality problems experienced, CCMS may be at risk of future quality problems. In light of these issues, we believe that prior to proceeding with the AOC's plan to deploy CCMS at three courts that will be early adopters of the system, there would be value in conducting an independent review to determine the extent of any quality issues and problems.

Respectfully submitted,



ELAINE M. HOWLE, CPA
State Auditor

Contents

Summary	1
Introduction	9
Chapter 1	
The Statewide Case Management Project Lacked Adequate Planning	23
Recommendations	36
Chapter 2	
Poor Cost Estimates and Uncertain Funding Have Plagued the Statewide Case Management Project	39
Recommendations	49
Chapter 3	
The Administrative Office of the Courts Has Not Adequately Fostered Superior Courts' Receptiveness to Implementing the California Court Case Management System	51
Recommendations	66
Chapter 4	
The Administrative Office of the Courts Has Not Ensured Adequate Independent Oversight of the California Court Case Management System	67
Recommendations	86
Appendix A	
Risks Identified in the December 2010 Readiness Assessment of the Superior Courts That Are Early Adopters of the California Court Case Management System	89
Appendix B	
The Bureau of State Audits' Survey of the Seven Superior Courts That Use an Interim System of the Statewide Case Management Project	91
Appendix C	
The Bureau of State Audits' Survey of the 51 Superior Courts That Do Not Use an Interim System of the Statewide Case Management Project	97
Response to the Audit	
Judicial Council of California, Administrative Office of the Courts	103
California State Auditor's Office Comments on the Response From the Judicial Council of California, Administrative Office of the Courts	129

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Summary

Results in Brief

Proposition 220, approved in 1998 by California voters, began the process of unifying California's superior and municipal courts. The Trial Court Funding Act of 1997 established a funding scheme where these courts receive state, rather than local, funding. With administrative functions provided by the Administrative Office of the Courts (AOC), these superior courts receive funding through allocations from the Judicial Council of California (Judicial Council). As part of an effort to address technology problems facing the many case management systems used by the superior courts, the AOC, at the direction of the Judicial Council in 2003, continued the development of a single court case management system, referred to as the *statewide case management project*. Two interim systems—the criminal and traffic system (referred to in this report as the criminal system) and the civil system—are presently in use at seven superior courts. Currently, the AOC is responsible for managing the development of the most recent version of the statewide case management project—the California Court Case Management System (CCMS)—which covers all court case types. The AOC asserts that once this system is deployed statewide, CCMS will improve the access, quality, and timeliness of justice; promote public safety; and enable court accountability. CCMS is also designed to include statewide reporting; court interpreter and court reporter scheduling; and the capacity to interact electronically with other justice partner systems, such as those of local sheriffs and district attorneys. Further, the AOC stated that the system will replace a myriad of disparate commercial and custom-built case management systems that the 58 superior courts currently use. The AOC's records show that as of fiscal year 2015–16—the year in which the AOC estimates that CCMS will be deployed statewide—the full cost of the project is likely to reach nearly \$1.9 billion. However, this amount does not include costs that superior courts will incur to implement CCMS. By June 2010 the AOC and several superior courts had spent \$407 million on the project.

The work undertaken by the AOC on the statewide case management project has lacked sufficient planning and analysis. In implementing the project, the AOC, acting at the policy direction of the Judicial Council, should have more fully defined how it would implement the objectives and scope of the project before it began the development of the interim systems. In addition, the AOC should have analyzed whether the project would be a cost-beneficial solution to the superior courts' technology needs. The AOC had a consultant prepare a business case in December 2007 (2007 consultant study), four years after the project's inception.

Audit Highlights . . .

Our review of the Administrative Office of the Courts' (AOC) oversight of the development of the statewide case management project revealed that the AOC:

- » *Inadequately planned for the statewide case management project and did not analyze whether the project would be a cost-beneficial solution to the superior courts' needs.*
- » *Was unable to provide contemporaneous analysis and documentation supporting key decisions on the project's scope and direction.*
- » *Did not structure the development vendor's contract to adequately control cost and scope—over the course of seven years, the AOC entered into 102 amendments and increased the cost from \$33 million to \$310 million.*
- » *Failed to develop accurate cost estimates—in 2004 the cost estimate was \$260 million and by 2010 the estimated cost was \$1.9 billion.*
- » *Has not obtained the funding needed for statewide deployment and without full deployment to the 58 superior courts, the value of the project is diminished.*
- » *Must gain better support from the superior courts for the project—the superior courts of Los Angeles and Sacramento counties asserted that they will not adopt the system unless their concerns are resolved.*

continued on next page . . .

» *Did not contract for independent verification and validation (IV&V) of the statewide case management project until 2004 and independent project oversight services until 2007.*

- *The level of IV&V oversight was limited in scope and duration.*
- *Even so, the consulting firm providing independent oversight raised significant concerns that the AOC has not adequately addressed.*

» *The statewide case management project may be at substantial risk of future quality problems as a result of the AOC's failure to address certain of the consulting firm's concerns.*

However, the AOC had already made a significant commitment to the statewide case management project as it had spent a total of \$217 million as of June 2007, developed two interim systems, and deployed or was deploying these systems at seven superior courts. Despite significant investment in the interim systems, by the time the 2007 consultant study was completed the AOC had decided to develop CCMS, which would use functionality from the interim systems and include all case types. The AOC maintains that it commissioned the study to quantify the benefits that would be realized from CCMS. However, it appears that rather than critically analyzing the propriety of the statewide case management project, the AOC commissioned the 2007 consultant study to justify its previous actions and decisions.

Furthermore, at key points during planning and development—specifically, the decisions to develop and deploy the interim systems and then later downsize implementation of the civil system and eventually to discontinue deployment of both the criminal and civil systems in favor of a comprehensive system—it is unclear on what information the AOC made these critical decisions. The AOC asserted that it developed the project by using an iterative approach that focused on building CCMS by developing two smaller systems. Although this is the AOC's explanation of the events that took place, it was unable to provide contemporaneous analysis or documentation supporting key decisions on the project's scope and direction. We expected analysis and documentation to demonstrate the reasons for the dramatic change in the AOC's approach to developing the statewide case management project, especially given that AOC records show that the total costs invested to develop and deploy the criminal and civil systems were approximately \$109 million and that the added cost to develop CCMS amounts to \$199 million.

Additionally, the AOC did not structure its contract with Deloitte Consulting LLP (development vendor), the firm that has assisted in developing CCMS, to ensure that the AOC could adequately control the total cost and size of the contract. Over the course of seven years, the AOC entered into 102 amendments to develop, deploy, and support the civil system; to deploy and support the criminal system; and to develop CCMS. As a result, the cost of the contract has increased significantly—growing from \$33 million to \$310 million—and the AOC has become increasingly dependent on the development vendor's knowledge and expertise. Further, the AOC did not ensure that it could benefit from the warranty for the civil system because no superior court had begun to use the civil system in a live operational environment before the warranty expired. The AOC is trying to avoid similar problems with the warranty for CCMS by working to ensure that the warranty will be in effect only after CCMS has met all acceptance criteria and at least one superior court has the system deployed in a live operational environment.

In addition to planning inadequately for the statewide case management project, the AOC has consistently failed to develop accurate cost estimates. Projected in 2004, the AOC's earliest available cost estimate for the system was \$260 million, an amount that grew substantially to \$1.9 billion based on the AOC's January 2010 estimate. Over the same period, complete deployment to the superior courts has been postponed by seven years, from fiscal year 2008–09 to fiscal year 2015–16. However, the \$1.9 billion estimate fails to include costs that the superior courts have already incurred to implement the interim versions—which they reported to us as costing nearly \$44 million—as well as the unknown but likely significant costs that superior courts will incur to implement CCMS. The latest estimate also does not reflect the nature of the costs that state and local government justice partners will incur to integrate their systems with CCMS.

Although the AOC has fulfilled its reporting requirements to the Legislature, it did not provide to the Legislature additional beneficial information about the projected increases in total project costs. Specifically, the four annual reports that the AOC submitted to the Legislature between 2005 and 2009 did not include comprehensive cost estimates for the project, and the 2010 report did not present the costs in an aggregate manner. As a result, these annual reports did not inform decision makers about the true cost of the statewide case management project. When asked by the Legislature in August 2010 what the true cost of the project will be upon its completion, AOC officials cited a figure of \$1.3 billion, which excludes both the \$557 million that has been spent or will be spent for the criminal system and the support costs for the civil system and CCMS until CCMS is fully deployed.

Moreover, the statewide case management project is at risk of not being able to obtain the funding needed for statewide deployment. The AOC believes the core portion of CCMS development will finish in April 2011, and it estimates that it will need funding of roughly \$1 billion to deploy the system for use at the 400 court facilities located statewide. However, because future funding for this project is uncertain, it is unclear whether the AOC will be able to obtain the \$1 billion deployment cost or the additional \$391 million needed to support CCMS through fiscal year 2015–16 when the AOC has estimated that the CCMS will be fully deployed. The AOC is attempting to develop alternative plans to minimize project costs and to deploy CCMS based on the level of funding that may be available, but the AOC believes that without full deployment to all 58 superior courts, the value of CCMS to the judicial branch may diminish.

Further, although the Judicial Council has the authority to compel the superior courts to implement CCMS, the successful implementation of the system will require the AOC to foster support

from the superior courts more effectively. We conducted a survey of the seven superior courts currently using an interim version of CCMS in part to determine their satisfaction with the interim systems.¹ Two superior courts that implemented an interim system reported experiencing challenges and difficulties in doing so and indicated that as a result, they are reluctant to deploy CCMS. The largest of the superior courts, the Superior Court of Los Angeles County (Los Angeles), which implemented the civil system in only four courtrooms at one location, believes that the AOC's plan for CCMS has been overly ambitious. Further, Los Angeles stated that due to the lack of a mature underlying product, a program management strategy, a solid business case, and a resource model to ensure its achievement, the statewide case management project is extremely risky. In fact, both Los Angeles and the Superior Court of Sacramento County asserted that they will not adopt CCMS unless their concerns about the system are resolved. Without the willing participation of these larger superior courts, particularly Los Angeles, the AOC may encounter significant challenges in achieving its goals, which mostly depend on the successful statewide implementation of CCMS. Of the seven superior courts that deployed an interim system, the four larger courts reported encountering difficulties during and after implementation, including the need to hire additional staff, system performance issues, and problems with the process for fixing defects. Conversely, the three smaller superior courts, although also encountering challenges during and after implementation, reported generally positive perspectives about the interim systems.

Interestingly, in response to our survey of the 51 superior courts that do not use an interim system, 18 superior courts said that their existing case management systems are currently meeting all of their needs. In replying to another question, 32 of the 51 superior courts reported that their existing systems will serve them for the foreseeable future. Of particular concern is that just 12 of these 51 superior courts that do not use an interim system submitted responses that were generally positive about CCMS or that did not discuss potential challenges associated with CCMS deployment. Many of the remaining 39 superior courts expressed uncertainty about the statewide case management project. For instance, the Superior Court of Kern County (Kern) reported that it perceives no benefit to the AOC's plan to replace Kern's current systems with CCMS and that it would refuse implementation as currently proposed.

We recognize that the implementation of any new system, especially one as large and complex as CCMS, would likely have a significant impact on any organization and would not occur

¹ The superior courts' views cited in this report are from responses to two surveys of court executive officers. The survey questions we asked appear in appendices B and C.

without some challenges; however, it is critically important for the AOC to resolve the concerns and negative perceptions held by several superior courts. The AOC could aid such an effort by using the results from a survey of the superior courts conducted by a consultant with which the AOC has recently contracted.

Although the AOC contracted with Sjoberg Evashenk Consulting, Inc. (consulting firm) to provide independent oversight of the statewide case management project, the contract does not require that these services be performed consistent with industry standards for a project of this size and scope. Under best practices for system development and to help ensure project success—particularly with large, complex, and costly projects such as CCMS—entities normally contract with consultants to provide two types of independent oversight: *independent verification and validation (IV&V)* to ensure that software meets requirements and user needs as well as *independent project oversight (IPO)* to ensure that effective project management practices are in place and in use. The level of rigor of independent oversight should be commensurate with the size, scope, and complexity of the project. Although the Judicial Council directed the AOC in 2003 to continue its efforts in developing the statewide case management project, the AOC did not contract for IV&V services until April 2004 or for IPO services until July 2007. Even when it did contract for IV&V services, the specific level of oversight was limited in scope and duration. Further, as of July 2007 onward, the IV&V work that the consultant was to perform applied only to the development of the civil system and CCMS, and it did not cover the period of actual system deployment. Moreover, many of the services that it contracted for as of July 2007 were not required by the contract to be practiced in a manner that is consistent with industry standards adopted by the Institute of Electrical and Electronics Engineers, Inc.² and best practices for a project of this size and complexity.

Although the AOC asserted that it had an approach that provided oversight sufficient for a project of this size and scope, it did not document its oversight plan and it could not demonstrate that some practices were performed. Additionally, the AOC relied on its staff—who cannot be considered independent in such a role—to provide portions of the IV&V and IPO oversight, and the AOC has experienced an unexpected 10-month project delay due to quality issues detected during testing. Even with the level of oversight that it was engaged to perform, the consulting firm providing IV&V and IPO services raised significant concerns that the AOC addressed inadequately. In fact, Catalysis Group, our information technology (IT)

² The Institute of Electrical and Electronics Engineers, Inc. is a leading developer of international standards that support many projects and services, including IT.

expert, believes that CCMS may be at substantial risk of future quality problems as a result of the AOC's failure to address certain of the consulting firm's concerns and the quality issues experienced on the project to date. In light of these issues, we believe that before proceeding with its plan to deploy CCMS at three superior courts that will be early adopters of the system (early-adopter courts), the AOC would derive value from conducting an independent review to determine the extent of any quality issues and problems. We do not expect that conducting this review would require a halt in the project; rather, we expect that this review could be performed in concert with the remaining development and testing effort without significant disruption to the statewide case management project.

Recommendations

To understand whether CCMS is a cost-beneficial solution to the superior courts' case management needs, the AOC should ensure that it conducts a thorough analysis of the costs and benefits of CCMS. The AOC should carefully evaluate the results of this analysis and present a recommendation to the Judicial Council regarding the course of action that it believes should be taken with CCMS.

To ensure its management of the statewide case management project is transparent, the AOC should make sure that all key decisions for future activities on CCMS are documented and retained.

The AOC should consider restructuring its current contract to ensure the warranty for CCMS is adequate and covers a time period necessary to ensure that deployment of CCMS has occurred at the three early-adopter courts and they are able to operate the system in a live operational environment.

Regardless of whether it is expressly required by statute, the AOC should report to the Legislature and others the true cost of the statewide case management project, including the costs for the interim systems and CCMS. Also, the AOC should require superior courts to track their past and future costs related to the statewide case management project and then include these in the total cost. Further, the AOC should be clear in disclosing what kind of costs other entities, such as justice partners, will incur that are not included. Finally, the AOC should update its cost estimate for CCMS on a regular basis, as well as when significant assumptions change.

To address the funding uncertainty facing CCMS, the AOC should work with the Judicial Council, Legislature, and governor to develop an overall strategy for CCMS that is realistic, given the current fiscal crisis facing the State.

Additionally, the AOC should use the results from its consultant's survey of the superior courts to identify and better understand the courts' concerns regarding CCMS and the status of their existing case management systems. If the survey results indicate that superior courts have significant concerns about CCMS or that they believe their case management systems will serve them for the foreseeable future, the AOC should take steps to address these concerns and perceptions. Moreover, the AOC should continue to work with the superior courts that have deployed an interim system to ensure that the AOC is promptly and appropriately addressing the courts' concerns with the systems. Although the Judicial Council has the authority to require that the superior courts implement CCMS, it is still critically important to ensure that the AOC addresses the courts' concerns as implementation moves forward.

To make certain that no significant quality issues or problems exist within CCMS, the AOC should retain an independent consultant to review the system before deploying it to the three early-adopter courts. If any quality issues and problems identified by this review can be adequately addressed, and system development can be completed without significant investment beyond the funds currently committed to develop the system, the AOC should deploy it at the early-adopter courts during the vendor's warranty period.

Going forward, we made recommendations to the AOC on how to improve its process for managing future IT projects, including that it complete a thorough analysis of cost and benefits before investing significant resources into development, document and retain all key decisions, ensure that cost estimates are accurate and include all relevant costs, have a long-term funding strategy in place, take steps to foster support from the superior courts and, if applicable, —depending on the project's size and complexity—obtain independent oversight throughout projects as well as appropriately address concerns raised.

Agency Comments

Although the Judicial Council, AOC generally agreed with our conclusions and recommendations, it disagreed with some of our conclusions relating to its cost and contract management for the statewide case management project. Additionally, the Judicial Council, AOC disagreed with some of our conclusions and recommendations regarding the independent oversight services on CCMS and whether additional independent oversight should be performed prior to deployment.

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Introduction

Background

California's judicial branch, which is the largest of its kind in the nation, consists of two separate levels: the superior courts, which are the State's trial courts, and the courts of appeal and one supreme court, which are the appellate courts. The Judicial Council of California (Judicial Council) has policy and rule-making authority over California's judicial branch. Established in 1926, the Judicial Council is charged with improving the administration of justice by performing certain duties. These duties include establishing direction and priorities to improve the court system; promulgating rules of court administration, practice, and procedure; sponsoring and taking positions on legislation affecting the court system; allocating funds appropriated by the Legislature to support the operations of the judicial branch; and responding to legislative mandates. The chief justice chairs the multi-member Judicial Council. The California court system has more than 2,000 judicial officers and 21,000 employees; it received more than 10 million case filings in fiscal year 2008–09. Each of the 58 counties has a superior court. Each superior court has between one and 55 courthouse branches, with a total of 400 locations statewide, and each superior court hears civil and criminal cases as well as family, probate, juvenile, and other cases.

The Administrative Office of the Courts (AOC) provides administrative support to the Judicial Council. Approved by California voters in 1998, Proposition 220 authorized the voluntary unification of each county's superior and municipal courts into a single trial court system. By February 2001 the AOC reported that all 58 counties had voted to unify their municipal and superior court operations. The Legislature appropriates annual funding and the AOC develops a recommended budget for the judicial branch, which the Judicial Council must approve before funds can be spent. This budget includes funding for the superior courts, the AOC, and for infrastructure and technology projects. The total budget as listed in the governor's proposed budget for fiscal year 2011–12 for the judicial branch in fiscal year 2010–11 was roughly \$3.7 billion, of which about \$3.1 billion was appropriated for the superior courts.

Following enactment of the Trial Court Funding Act of 1997, the AOC began looking at statewide initiatives to improve information technology (IT) within California's state court system. One of the projects undertaken by the AOC is the effort to develop a statewide system for the superior courts to use in managing court case files and court business, referred to as the *statewide case management project*, which consists of two interim systems covering certain case types and, more recently, a comprehensive system covering

all case types known as the California Court Case Management System (CCMS). As of June 2010 the AOC and some superior courts had spent nearly \$407 million³ on the statewide case management project since its inception. Based on expenditure information reported by the AOC to the Legislature in April 2010, the total cost for the project, including money already spent, will approach \$1.9 billion.⁴ Once CCMS is completed, the AOC plans to deploy the system to all superior courts and replace the patchwork of existing systems in use. The AOC asserts that when completed, CCMS will be a uniform, integrated case management system that will allow the 58 superior courts to manage all case types with a single application. The new case management system will perform various functions, including case reporting, and court interpreter and court reporter scheduling. In addition, CCMS will have the ability to share information electronically with state and local justice partners involved in court business, such as sheriffs' offices and the California Department of Justice, as Figure 1 shows.

The Origins of the Statewide Case Management Project

Following enactment of the Trial Court Funding Act of 1997, the Judicial Council became responsible for allocating funding to support the various case management systems used by the superior courts. Case management systems are the mechanism by which court staff calendar, update, and track all cases. The AOC states that in 2002 California's 58 superior courts were operating more than 200 different case management systems. The AOC indicates that an assessment it conducted in 2001 to understand the viability of case management systems in use by the superior courts found a number of superior courts facing critical needs caused by outdated systems, deficient technical support, and significant maintenance costs.

The AOC pursued several possible avenues to create more uniformity among the superior courts' case management systems. In August 2000 the Judicial Council adopted a plan directing the AOC to certify commercially available case management systems. The AOC was to identify case management systems that performed basic trial court functions, including case management processing of all case types as well as accounting functions. The AOC indicates that the certification efforts resulted in the withdrawal of four out of five vendors from the evaluation. The fifth vendor failed to achieve certification because it could not meet all of the judicial branch's

³ This amount includes expenditures of \$358 million made by the AOC as well as \$49 million paid by the superior courts as of June 30, 2010.

⁴ Effective January 1, 2005, state law requires that each year until project completion, the Judicial Council is to provide an annual status report to the Legislature regarding the statewide case management project.

Figure 1
The California Judicial Branch and Its Relationship With State and Local Justice Partners



Source: The Administrative Office of the Courts.

functional requirements. As a result, none of the vendor systems received certification. In 2002 the certification requirements were relaxed, and the objectives of the certification program were limited to a tactical goal of identifying providers that could supply stable interim case management system solutions with basic case type capabilities. The AOC certified five case management system vendors under the relaxed requirements, many of which are still used by superior courts. The AOC also explored the idea

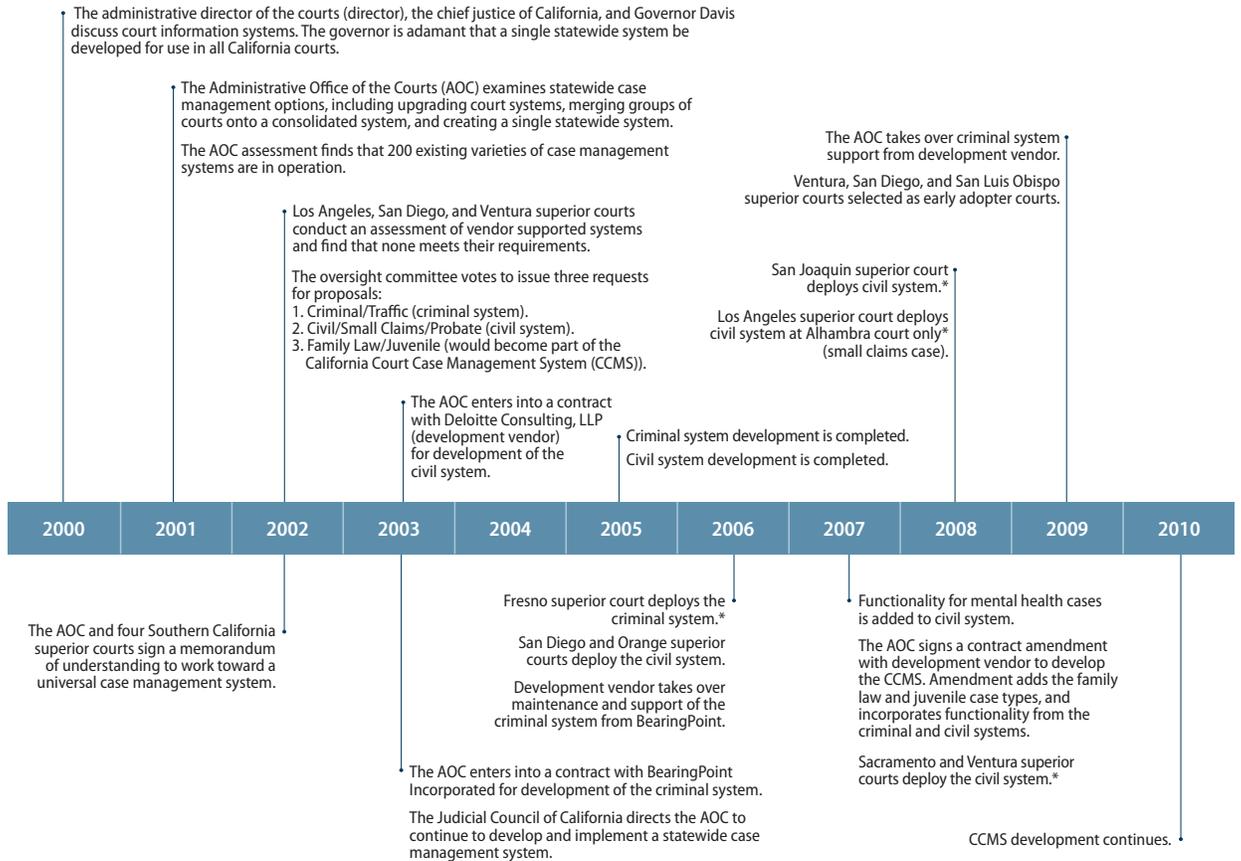
of grouping IT systems of the superior courts by regional location in the State; however, according to the director of the AOC's information services division, this plan was discarded in favor of a single statewide case management system.

Figure 2 shows a timeline of the development of the statewide case management project. According to the administrative director of the courts (director), who oversees the AOC, two discussions with former Governor Gray Davis took place in December 1999 and March 2000. During these discussions, the governor stated that the lack of a case management system capable of providing and receiving accurate, complete, and timely data was impeding the effectiveness of the justice system. The director stated that the former governor was adamant that a single statewide case management system be developed for use in all California courts and to interface with state justice partners such as the departments of Justice, Child Support Services, and Corrections and Rehabilitation. The director also stated that Governor Davis was explicit in his position that a statewide solution was essential and that he would not support funding for anything other than a statewide system.

In 2002 the AOC's director met with the presiding judges and chief executive officers from nine Southern California superior courts to discuss and resolve the direction of technology initiatives, including case management system solutions in the southern region of the State. The meeting resulted in an agreement that four superior courts and the AOC should pursue the development or acquisition of a universal case management system that would include a common approach to all case types, integration with state and local criminal and civil justice systems, and state ownership or maintenance of the developed software. Subsequently, the AOC and the presiding judges of the Los Angeles, Orange, San Diego, and Ventura county superior courts signed a memorandum of understanding symbolizing their willingness to work toward a universal case management system. In 2003 the Judicial Council directed the AOC to continue to develop and implement a statewide case management system as quickly as possible. Since that time, the AOC has been responsible for managing the statewide case management project.

Also in 2002, the AOC and the four superior courts created a governance structure for the statewide case management project, which included an oversight committee, a steering committee, the southern regional program office (southern office), and the regional administrative director of the AOC's southern office. The oversight committee consisted of the presiding judges of superior courts in five counties—Los Angeles, Orange, Sacramento, San Diego, and Ventura—and the director of the AOC's southern office. The oversight committee was accountable for the overall success of the project, focusing on policy decisions and program issue resolution,

Figure 2
Timeline for Development of the Statewide Case Management Project



Source: The Administrative Office of the Courts.

* Deployment dates were provided by the superior courts and represent the date they began using any part of an interim system in a live court environment.

as well as guiding the vision and strategy of the statewide case management project. The steering committee consisted of the executive officers of the same five superior courts and the director of the AOC's southern office. It was responsible for monitoring timelines and deliverables, managing and resolving executive issues, reviewing and approving the risk management plan, and motivating and guiding project members. In 2008 court executive officers from 14 small superior courts began to participate in the project as advisory members on the oversight and steering committees to represent the small superior courts. This governance structure was in place until July 2010, when the AOC disbanded it partly to address a recommendation made to the AOC by the Office of the State Chief Information Officer (Information Office)⁵ in the report

⁵ Chapter 404, Statutes of 2010, which became effective January 1, 2011, renames the Office of the State Chief Information Officer as the California Technology Agency and the position of the State's chief information officer as the Secretary of California Technology.

that it issued in April 2010 titled *Review of the California Court Case Management System* (April 2010 CCMS report). This report recommended that the AOC augment the governance structure with involvement from additional superior courts to ensure the adoption and use of the system by all superior courts targeted for deployment. In late December 2010, the AOC finalized a new governance structure, for which the Judicial Council serves as the executive sponsor and it has designated the AOC director as the lead executive over the CCMS project. The new governance structure consists of an executive committee that is the overarching authority responsible for oversight of the CCMS project, and three advisory committees responsible for making recommendations to the executive committee in the areas of general administration, trial court operations, and justice partner integration. The AOC's director is responsible for appointing all members of the executive committee and the three advisory committees.

The Evolution of the Statewide Case Management Project

In its April 2010 report to the Legislature, the AOC stated that the statewide case management project consists of several projects that have built on the technology, functionality, and experience of previous developments. In 2003 the AOC selected BearingPoint Incorporated (BearingPoint) as the vendor responsible for developing a case management system for criminal and traffic case types, referred to as the *criminal system*. The criminal system was based on an earlier version that was in use at the Superior Court of Orange County (Orange) and a separate version in use at the Superior Court of Ventura County (Ventura). The vendor began development of the criminal system in 2003. In July 2006 the Superior Court of Fresno County (Fresno) deployed the criminal system. Although the AOC planned to deploy the system to other superior courts, Fresno was the only court to ultimately implement it. BearingPoint supported the system until December 2006, when the AOC transitioned the contract to Deloitte Consulting LLP (development vendor). In October 2009 the AOC took over support of the criminal system.

In 2003 the AOC contracted with the development vendor for the design of a system for civil, small claims, and probate cases, referred to as the *civil system*, which the AOC indicates was completed in November 2005. In July 2007 the mental health case type was added to the civil system. As Table 1 indicates, Los Angeles, Orange, Sacramento, San Diego, San Joaquin, and Ventura county superior courts implemented various components of the civil system. However, Los Angeles reported that it has deployed the civil system only at four courtrooms in one location out of a total of 282 courtrooms that adjudicate case types covered by the civil

system. Although the development vendor is currently maintaining and supporting the civil system, the AOC is considering taking over that responsibility in 2011.

Table 1
Criminal and Civil System Implementations to Date

INTERIM SYSTEM	CASE TYPES	SUPERIOR COURTS						
		FRESNO	LOS ANGELES*†	ORANGE*	SACRAMENTO	SAN DIEGO*	SAN JOAQUIN	VENTURA
Criminal system	Criminal	✓						
Criminal system	Traffic	✓						
Civil system	Civil			✓	✓	✓	✓	✓
Civil system	Probate			✓	✓	✓	✓	✓
Civil system	Small claims		✓	✓		✓	✓	✓
Civil system	Mental health			✓			✓	✓

Source: The Bureau of State Audits' survey results from superior courts using the interim systems.

* These three courts host their own installation of the civil system. The other superior courts use a shared system hosted at the Administrative Office of the Court's California Court Technology Center located in Arizona.

† The Los Angeles County Superior Court indicated that the civil system is installed in four courtrooms (for small claims) out of a total of 282 courtrooms that adjudicate case types covered by the civil system.

In June 2007 the AOC began overseeing the development of a single, statewide case management system for all case types, referred to as the CCMS. AOC indicates that CCMS is in the final development phase and will combine the capabilities already developed in the criminal and civil systems (interim systems) with new functionality for family law and juvenile case types. The civil system was to serve as the architectural base for CCMS.

As the text box shows, the goals for CCMS include improving the access, quality, and timeliness of justice; promoting public safety; and enabling court accountability. CCMS is also designed to include statewide reporting, and court interpreter and court reporter scheduling, and interfaces with other justice partner systems. The CCMS application is designed to manage all case types, including civil, small claims, probate, mental health, criminal, traffic, family law, juvenile dependency, and juvenile delinquency cases. The CCMS design also includes a public Web site that is intended to allow users to search for case information, pay fines

Goals of the California Court Case Management System (CCMS)

Providing Equal Access to Justice: CCMS is designed to provide equal access to court records and to increase transparency across court jurisdictions.

Promoting Public Safety: CCMS is designed to include electronic interfaces among the courts and other criminal and social justice systems so that it provides real-time updates of criminal history, among other benefits.

Improving the Quality of Justice: CCMS is designed to reduce instances in which court orders conflict across jurisdictions.

Promoting the Timeliness of Justice: CCMS is designed to deliver an electronic calendaring system that enables immediate scheduling of judges and courtrooms.

Enabling Court Accountability: CCMS is designed with a single data warehouse that will allow the judicial branch to electronically generate reports and be more accountable for its use of public funds.

Source: The Administrative Office of the Courts' March 2009 budget change proposal for CCMS.

and fees, request traffic school enrollment, request a continuance on a traffic case, access court calendars, and view certain case documents.

In 2003 the AOC also began operating a statewide technology center, known as the California Court Technology Center (Technology Center). Currently maintained by a vendor⁶ headquartered in Virginia, the facility, which is located in Tempe, Arizona, provides IT support for the judicial branch. Technology Center services include hosting and support services for case management systems, including the civil and criminal systems. The AOC also plans to install the CCMS at the Technology Center.

CCMS essentially consists of two portions: the first, known as the *core portion*, provides the superior courts with the functionality to manage all case types; the second, or *noncore portion*, consists of the external components that provide the functionality to allow superior courts to interface with state and local justice partners. The AOC plans to complete development of the core portion of CCMS in April 2011 and to finish developing and testing the noncore portion in July 2011. Once both portions are complete, the AOC plans to deploy the system in the superior courts of three counties—San Diego, Ventura, and San Luis Obispo—referred to as the *early-adopter courts*. The development vendor conducted a readiness assessment at these three superior courts to determine the nature and complexity of IT improvements that are needed before the deployment of CCMS. The AOC completed the readiness assessment in late December 2010. As of January 2011, the AOC has no plans to deploy CCMS to any other superior courts until additional funds become available.

An Overview of Software Development Processes

Catalysis Group, our IT expert, characterizes the software development process for large development efforts like CCMS as consisting of analysis, design, build and test, deployment, and maintenance and operations. Our IT expert explains that the software development life cycle begins with analysis, gaining an understanding of the problem to be solved by seeking information from likely system users, applicable regulations, and other sources to create a list of requirements: statements that describe the system's boundaries and the functions it must perform. Software engineers use the list of requirements to create a design that defines how the system will be constructed to perform the necessary functions and solve the problem. The design document is like

⁶ Science Applications International Corporation.

a blueprint for the system in that it explains what will be built and how the parts will behave and interact with users and other systems. When design is complete, it is customary to associate each of the requirements with the corresponding places in the design where the requirement is addressed, an association known as *traceability*. The intent of confirming traceability between requirements and design is to assure that no requirements are overlooked and that the solution is complete and correct.

Once the design is complete, our IT expert explains that the software system is built and test cases are created to verify that the system works correctly. Test cases are predefined interactions with the system intended to assure that the system behaves in the expected way. A test case describes the actions and data that will be input to the system and the expected behavior and results. Many test cases are intended specifically to assure that the requirements were correctly and completely addressed. Confirming traceability between all requirements and their corresponding test cases assures that all requirements have been implemented correctly. The build and test phase of the project is complete when a special set of tests, called acceptance tests, are performed by the client and the system is accepted as a viable solution. Once the system has been accepted, the next step is deployment and involves preparation for and implementation of the system. Once operational, the system will require ongoing maintenance and operation to keep it up and running. Providing user support is an ongoing activity to ensure that the users' needs are met and the system continues to perform as specified in the operational environment.

Results of Previous Reviews of the AOC's Statewide Case Management Project

The statewide case management project received scrutiny from the Legislative Analyst's Office (LAO) in 2004 and the Information Office in 2010, and has been the subject of two hearings held by the Assembly Committee on Accountability and Administrative Review (Accountability Committee). These entities have raised serious concerns about the project's management, cost, and scope.

In its 2004 legislative report, the LAO highlighted that an assessment of the statewide costs and benefits had not been done, and that risk common to large IT projects were not sufficiently mitigated. In that report, the LAO suggested that the governance structure did not have adequate information to do its job effectively. For example, although the AOC was able to provide the LAO with a CCMS implementation schedule, no information was available concerning the estimated cost of the project at each major phase of implementation. Without such information, the LAO was

not certain the governance structure would be able to effectively monitor the project. In addition, the LAO noted that, unlike departments within the executive branch, the AOC is not required to prepare a detailed cost-benefit analysis or identify measurable project objectives. The LAO reported that, consequently, the AOC had done neither. Moreover, the LAO observed that the AOC had no established standards that require a certain level of project oversight or risk management.

The Information Office also raised concerns in its April 2010 CCMS report. Although the Information Office concluded that the project is at the point where there is more reason to move forward than to stop, it recommended the AOC develop a detailed deployment plan explaining how the AOC will support CCMS during the system's maintenance and operation period. Additionally, the Information Office recommended that AOC formally assess and define the project's success in terms of cost, schedule, and scope. As mentioned previously, the Information Office also recommended strengthening the governance structure to ensure the adoption and use of the system by all superior courts.

The Accountability Committee has raised concerns about CCMS funding shortfalls, as well as the overall cost of the project. The Accountability Committee was concerned with the AOC's total project cost estimate and whether the estimated amount could increase in the future. The AOC's chief deputy director stated during the Accountability Committee's August 2010 hearing that he did not expect the statewide case management project to exceed \$1.3 billion to complete. He also stated that the AOC was developing a deployment plan that would be sensitive to funding constraints. We discuss our concerns with the AOC's cost estimates for completing the system as well as the lack of funding in Chapter 2.

Scope and Methodology

The Joint Legislative Audit Committee requested that the Bureau of State Audits conduct an audit of the AOC's oversight of the development of the statewide case management project. In addition to reviewing and evaluating the laws, rules, and regulations significant to the audit objectives, we were asked to do the following:

- Determine the goals of the statewide case management project and how they were defined. Determine if the original goals have been refined and when such refinements occurred. In addition, determine if such refinements have been integrated with existing estimates and plans.

- Evaluate the AOC's method for determining the annual budget for the project and the extent to which it considers its other priorities, particularly given the recent reductions in state resources. Compare the proportion of the annual expenditures for the project to the overall annual budget of the AOC.
- Identify the original cost estimates or budgets for the system and the actual amount spent to date, as well as the budget and time projections to complete the system. Determine whether the actual expenditures to date have accomplished the respective goals anticipated for the amount spent and contrast budgeted expenditures to date with actual expenditures.
- Determine whether the AOC has a process to ensure the goals for the project are being met and continue to best serve the needs of the judicial branch. Determine whether the AOC's monitoring process also identifies project costs and any milestones to allow for timely adjustments when necessary.
- Determine if the current contractors' scopes of work are sufficient to complete the project.
- Determine if the plan for the project contains a clear path for completing it, including key milestones, their estimated costs, and completion times. Assess whether projected costs and deadlines are attainable. Review and assess any other significant issues that are relevant to the project.

To determine the original goals of the statewide case management project and how they were defined, we interviewed key personnel in the AOC's information services and executive office divisions and reviewed any supporting documentation. We also reviewed reports from the LAO, the Information Office, the AOC's annual reports to the Legislature, discussions from Accountability Committee hearings, and minutes from the Judicial Council, oversight, and steering committee meetings.

To evaluate the AOC's method for determining the annual budget for the project and the extent to which it considers other priorities, we reviewed the process it used, and currently uses, to develop the budget for the project. We compared the budget for the project to the total appropriation for the superior courts for fiscal years 2008–09 and 2009–10. In addition, we reviewed the AOC's budgets for the statewide case management project for fiscal years 2008–09 and 2009–10 to determine how the budget for the project has fluctuated in response to changes in the State's fiscal climate. We found that the budget for the statewide case management project decreased from roughly \$138 million in fiscal year 2008–09 to \$90 million in fiscal year 2009–10, and

constituted between roughly 4 percent and 3 percent, respectively, of the total superior court operations budgets during these fiscal years. Additionally, our legal counsel reviewed the laws and regulations governing the AOC's ability to use superior court funds for the statewide case management project and concluded that it is lawful to use those funds for a project of this type. Moreover, we interviewed AOC management, reviewed financial records and the December 2010 readiness assessment to determine whether the AOC has identified sufficient funding for the initial deployment of CCMS at the three early-adopter courts and has a reasonable methodology for deploying to those courts. Finally, by interviewing AOC staff and reviewing financial records, we determined whether the AOC incorporated superior courts costs into the budget for the statewide case management project.

To identify the original cost estimates and budgets for the project, we obtained all historical cost estimates that the AOC developed and evaluated the accuracy of total project cost and expected deployment timelines. Further, we examined the AOC's contract with the development vendor to understand the relationship between project goals and the contract scope and cost. To determine the actual amount spent through June 2010, we obtained an excerpt of financial data from the AOC's Oracle financial system (AOC's financial system), and we conducted a survey of the seven superior courts using interim systems of the statewide case management project to gather responses regarding project-related expenditures they incurred.

To assess whether the AOC has a process to ensure the goals of the project are being met and continue to serve the needs of the judicial branch, we surveyed all 58 superior courts, interviewed AOC management, and reviewed the AOC's contract with the development vendor for the interim systems and CCMS. Moreover, we met with the consulting firm that the AOC contracted with to provide IV&V and IPO services. We also contracted with an IT expert who reviewed the IV&V and IPO reports to the AOC, and assisted in determining whether the AOC appropriately addressed the issues raised by the consulting firm. Further, our IT expert compared the services called for in the AOC's contracts with the consulting firm it hired to provide IV&V and IPO services with the independent oversight services customarily called for in IT projects of similar size and complexity to CCMS. In surveying the 58 superior courts, we received responses from the executive officers of the courts and, accordingly, these responses reflect their opinions and perceptions. We used these survey responses to identify, among other things, the perceptions of executive officers of the courts regarding the current status of the courts' existing case management systems and the executive officers' perceptions of the statewide case management project. Appendix B contains the survey questions we asked the seven superior courts that are

using an interim system, and Appendix C contains the survey questions we asked the 51 superior courts that are not using an interim system.

To identify whether the current contractor's scope of work is sufficient to complete the CCMS project, we reviewed the AOC's contract with the development vendor, contract amendments, and supporting documentation, including meeting minutes and presentations from the CCMS governance committees. In addition, to understand the cost and approach for the statewide deployment of CCMS, we reviewed a draft statement of work for a contract that the AOC and the development vendor were negotiating, but did not complete due to a lack of funding.

To determine if the plan for CCMS contains a clear path for completing the project, including key milestones, their estimated costs, and completion times, we interviewed AOC staff involved in CCMS deployment activities. With the assistance of our IT expert, we reviewed the statewide case management project's contract and amendments, statements of work, and weekly and monthly project status reports to determine whether the project's estimated cost and deadlines are attainable. In addition, we reviewed the AOC's contract amendment with the development vendor for the readiness assessment for the three early-adopter courts. Finally, we interviewed AOC staff and reviewed the contract amendment with the development vendor to assess if there is risk that it will not be able to deploy CCMS to the early-adopter courts within the contractually negotiated warranty period.

To review and assess any other significant issues relevant to the statewide case management project, we surveyed the seven superior courts that have implemented an interim system, interviewed court executive officers and judges who use the criminal and civil systems, and observed the civil system in use at one court in Los Angeles. Further, we met with the development vendor and AOC staff to observe a demonstration of the criminal, civil, and CCMS systems. In surveying these seven superior courts, we obtained from each the perceived benefits or challenges associated with the interim systems as well as the courts' perspectives about implementing CCMS.

We relied on various electronic data files when performing this audit. The U.S. Government Accountability Office, whose standards we follow, requires us to assess the sufficiency and appropriateness of the computer-processed data. We obtained the AOC's financial system data for fiscal years 2000–01 through 2009–10 to determine total expenditures associated with the development of the statewide case management project. However, we could not assess the reliability of the AOC's financial system data for fiscal years 2000–01

through 2005–06 because the AOC had previously destroyed the hard-copy source documents in accordance with its record retention policy. Therefore, we determined that the AOC’s financial system data for fiscal years 2000–01 through 2005–06 was of undetermined reliability.

We assessed the reliability of the AOC’s financial system data for fiscal years 2006–07 through 2009–10 by conducting data-set verification procedures, performing electronic testing of key data elements, and performing accuracy and completeness testing of the data. We did not identify any issues when performing data-set verification procedures, nor did we identify any errors in key data fields during electronic logic testing. In addition, we tested accuracy by selecting a random sample of 29 transactions from the total population of transactions in the AOC’s financial system data and found no errors. Further, we selected an additional random sample of five transactions for the statewide case management project and found no errors. We also found that certain key data fields included in our sample were generated by the AOC’s financial system. Due to the nature of system-generated fields, there is no corroborating evidence available for our review. Therefore, we were unable to determine the accuracy of those key data fields for the purposes of this audit. In addition, to test the completeness of the financial system data, we haphazardly selected a sample of 29 hard-copy source documents, traced them to the financial system data, and found no errors. Finally, as discussed in Chapter 2 of this report, the AOC’s financial system does not fully account for payroll costs associated with staff that performed a role in the statewide case management project. Therefore, based on our testing and analysis, we found the financial system data in the AOC’s financial system for fiscal years 2006–07 through 2009–10 to be of undetermined reliability, for the purposes of our audit, to determine total expenditures associated with the development of the statewide case management project.

We also obtained the State Controller’s Office payroll system data for fiscal years 2002–03 through 2009–10 for the purpose of determining total gross salary for a sample of employees associated with the statewide case management project. We assessed the reliability of the payroll system data by conducting data-set verification procedures and performing electronic testing of key data elements. In addition, we reviewed testing of the payroll system’s major control features performed as a part of the State’s annual financial audit. Based on our testing and analysis, we found the payroll system data for fiscal years 2002–03 through 2009–10 to be sufficiently reliable for the purpose of our audit.

Chapter 1

THE STATEWIDE CASE MANAGEMENT PROJECT LACKED ADEQUATE PLANNING

Chapter Summary

Despite the high cost and far-reaching impact of the statewide case management project, the Administrative Office of the Courts (AOC), under the direction of the Judicial Council of California (Judicial Council), managed its development without sufficient planning and analysis. Since the Judicial Council directed the AOC in 2003 to continue to develop a statewide case management project, the AOC has failed to conduct a cost-benefit analysis to ensure that the estimated \$1.9 billion its records show this project will cost is the most cost-effective technology solution for the case management needs of the superior courts. Furthermore, at key points during planning and development—the decisions to develop and deploy two interim systems and then to eventually discontinue deployment of one and first downsize and eventually discontinue deployment of the other in favor of a comprehensive system, referred to as the California Court Case Management System (CCMS)—the AOC could not provide contemporaneous documentation demonstrating what information it used to make these critical decisions.

In addition, the AOC did not structure its contract with Deloitte Consulting LLP (development vendor) to ensure that it could adequately control the total cost and size of the contract. Over the course of seven years, the AOC entered into 102 amendments to develop, deploy, and support the civil system; to deploy and support the criminal system; and to develop CCMS. As a result, the cost of the contract has increased significantly—growing from \$33 million to \$310 million—and the AOC has become increasingly dependent on the development vendor's knowledge and expertise. Further, the AOC did not ensure that it could benefit from the warranty for the civil system because no superior court had used the civil system in a live operational environment before the warranty expired. The AOC is trying to avoid similar problems with the warranty for CCMS by working to ensure that the warranty will be in effect only after CCMS has met all acceptance criteria and at least one superior court has the system deployed in a live operational environment. Moreover, the AOC did not ensure that the contract deliverables for the readiness assessment of CCMS at three superior courts selected to initially deploy the system, referred to as the early-adopter courts, were adequately defined.

The AOC Lacked Adequate Documentation to Justify the Need for the Statewide Case Management Project

Despite the fact that the Judicial Council directed it to continue development of a statewide system in 2003, the AOC failed to establish a business need for the statewide case management project. Before beginning an information technology (IT) project, best practices suggest that decision makers use a business case or similar document that provides the necessary information to determine whether a project is worth the required investment. Typically, the business need for the project and a cost-benefit analysis are included in the business case to justify the project. The business case should be periodically reviewed to ensure that the project is on track to deliver the expected benefits. In the early stages of the project life cycle, periodic review of the business case also helps to confirm that the project is still required. State departments within the executive branch must prepare a document called a feasibility study report for larger proposed IT projects, which includes a description of the proposed system as well as a cost-benefit analysis. However, the judicial branch is not subject to the same requirements.

Since 2003 the AOC has conducted some piecemeal planning efforts, but none were comprehensive enough to demonstrate appropriate planning for this costly and far-reaching project.

Although not mandated by state law, if it had followed best practices, the AOC would have better planned the objectives and scope of the statewide case management project prior to beginning development of the interim systems. Since 2003 the AOC has conducted some piecemeal planning efforts, but none were comprehensive enough to demonstrate appropriate planning for this costly and far-reaching project. The most extensive of these efforts was a business case that a consultant prepared for the AOC in December 2007 (2007 consultant study), four years after the AOC was directed to continue its development. However, the 2007 consultant study did not analyze whether the project was an appropriate and cost-beneficial solution; rather, it focused on the advantages of all 58 superior courts using CCMS. At that time, the AOC had already made a significant commitment to the statewide case management project as it had spent a total of \$217 million as of June 2007, developed two interim systems, and deployed or was deploying them at seven superior courts. Despite significant investment in the interim systems, by the time the 2007 consultant study was completed, the AOC had decided to develop CCMS, which would use functionality from the interim systems and include all case types. Moreover, it signed a contract amendment in June 2007, six months before the 2007 consultant study was completed, committing the AOC to pay the development vendor an additional \$59 million to develop CCMS. The AOC maintains that it commissioned the study to quantify the benefits that would be realized from CCMS. However, rather than critically analyzing the propriety of the statewide case management project, the 2007 consultant study

appears to have been commissioned to justify actions the AOC had already taken and the decisions the AOC had already reached regarding the project's scope and magnitude.

In addition, the AOC has never conducted a formalized cost-benefit analysis of the project. Without such an analysis, it is unable to demonstrate that the cost of the project, almost \$1.9 billion according to its most current estimates, is warranted. A cost-benefit analysis is a process for calculating and comparing the benefits and costs of a project to determine if it is a sound investment and to see how it compares with possible alternatives. Decision makers use a cost-benefit analysis to compare the benefits of a project's outcomes with the cost required to produce them. The AOC has not conducted a formal cost-benefit analysis because, according to the director of its finance division (finance director), the size and scope of the statewide case management project has changed dramatically over time. The finance director further stated that because the AOC inherited significant new responsibilities with the implementation of state trial court funding, which began in fiscal years 1997–98 and 1998–99, there was a need to establish various processes and policies. The finance director explained that until 2007, there was not one single, formalized process for evaluating proposed IT systems.

The administrative director of the courts (director) also stated that, because the AOC lacked knowledge or expertise about developing IT systems, he consulted with the State's chief information officer who served in that capacity from 2002 to 2007 (former information officer) about the different approaches that could be taken. The director recalled that the former information officer's recommendation was to not do a feasibility study report, which would have included a cost-benefit analysis; as such a report would not help address what was necessary to accomplish a workable system. When we spoke with the former information officer, he confirmed providing this advice because, at the inception of the project, the AOC had no real understanding of what the superior courts wanted in a statewide system, and it had no consensus from the superior courts that they would accept a system created by the AOC. He explained that planning one large implementation of a statewide system using a feasibility study report did not make sense for the AOC. In addition, the former information officer stated that it did not make sense to advocate that the judicial branch use a process required from agencies in the executive branch because he believed that the process often fails to yield successful IT projects and that the judicial branch's overall decision-making processes were very different from those of the executive branch. The former information officer went on to state that the AOC should now conduct a cost-benefit analysis to inform the Judicial Council, the executive branch, and the Legislature about the pros and cons of such a substantial expenditure at its current stage before a final decision is made for statewide deployment of CCMS.

The former information officer recommended to not do a feasibility study report, which would have included a cost-benefit analysis.

With a projected cost of nearly \$1.9 billion, the AOC will need roughly 24 years to recover the investment in the statewide case management project once CCMS is deployed to all 58 superior courts.

However, we disagree with the former information officer on this issue. We believe that before the AOC spent \$407 million and eight years developing the statewide case management project, the AOC should have identified the business needs the project was intended to address, and it should have conducted a cost-benefit analysis or a similar project-planning document to ascertain whether the project is a cost-beneficial solution.

The AOC's current cost and benefit information does not clearly indicate whether CCMS is a cost-beneficial solution. According to the 2007 consultant study and the AOC's estimated support costs for CCMS, statewide deployment will provide net quantifiable benefits of \$78 million annually, including savings from electronic filing and self-service case inquiries, among other things. The AOC's records show that the statewide case management project will cost nearly \$1.9 billion, which includes the costs for CCMS and the interim systems. Thus, the AOC will need roughly 24 years to recover the investment in the project once CCMS is deployed to all 58 superior courts.⁷ The AOC's estimated benefits could be reduced if funding shortfalls limit or delay statewide deployment. Although the Office of the State Chief Information Officer's (Information Office) April 2010 report noted, and we agree, that some of the benefits from CCMS were not quantifiable, such as data sharing across courts, without a cost-benefit analysis the AOC is unable to demonstrate that the benefits of CCMS outweigh the nearly \$1.9 billion cost.

In October 2010, during our fieldwork for this audit, the AOC contracted with a consultant to perform a cost-benefit analysis for CCMS. According to the contract, the consultant will develop a cost-benefit analysis that will estimate the full life-cycle cost and benefits of the project. This analysis will include up to two additional scenarios depicting varying assumptions on factors such as project deployment strategy and baseline cost or quantifiable benefits, as well as the impact on the CCMS return on investment for each scenario. The contract schedule calls for the consultant to deliver a cost-benefit analysis by February 2011.

The AOC's Planning and Decision-Making Process Was Unclear and Lacked Transparency

The AOC's assistant director of its information services division (assistant director of information services) explained that the statewide case management project was developed using an iterative

⁷ We calculated the 24 years by dividing \$1.9 billion, the estimated cost of the statewide case management project, by \$78 million, or the annual estimated benefits that the AOC asserts the statewide project will provide. Other factors, such as delays in the deployment of CCMS, as well as the time value of money, could affect this calculation by increasing the number of years to recover the AOC's investment in the project.

approach that focused on building the project in sections while AOC and court staff gained incremental system development experience and knowledge. The assistant director of information services told us that the AOC began building the case management system by developing two smaller systems—the criminal system and the civil system—which the AOC refers to as the *interim systems*. Although this is the AOC’s explanation of the events that took place, the AOC was unable to provide us with analyses or other documentation to demonstrate that the decisions to develop and deploy the criminal and civil systems on a limited basis were methodically planned as key stages toward development of the statewide case management project.

Oversight committee presentations for May 2003 and February 2004 show that the AOC envisioned the statewide case management project as made up of three systems (criminal, civil, and juvenile/family) operating separately but being accessible to superior courts under a common interface. In fact, the AOC’s director stated to us that a project funding model developed in 2004 was based upon forecasts of costs to complete the development of the interim systems, to deploy those interim systems to 42 superior courts, and to develop CCMS and unify it with the interim systems. Figure 3 on the following page shows the statewide case management project as displayed in the May 2003 and February 2004 oversight committee presentations and in the AOC’s current plan.⁸

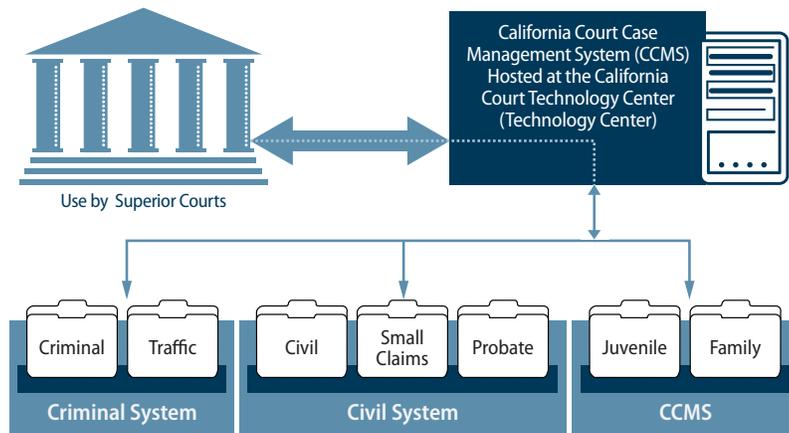
The AOC was unable to provide documentation demonstrating that it presented an appropriate level of analysis to the governance committees before it made these critical decisions. For example, the AOC’s director noted that significant changes to both the strategy and scope for the statewide case management project have occurred over time, such as the AOC deciding that the criminal system would be an interim system and would not be deployed to all superior courts. In July 2006 the criminal system was deployed in the Superior Court of Fresno County (Fresno), which turned out to be the only court to deploy the criminal system. The AOC’s annual legislative reports for 2005 and 2006 indicate that there was a plan to first deploy the criminal system in Fresno, in the Superior Court of Alameda County, and in up to eight other superior courts. During 2007 the AOC decided to cease criminal system court deployments. However, the AOC was unable to provide any contemporaneous documentation demonstrating what evidence or analysis supported this decision. In addition, the AOC report to the

AOC was unable to provide documentation demonstrating that it presented an appropriate level of analysis to the governance committees before it made critical decisions about the project’s direction.

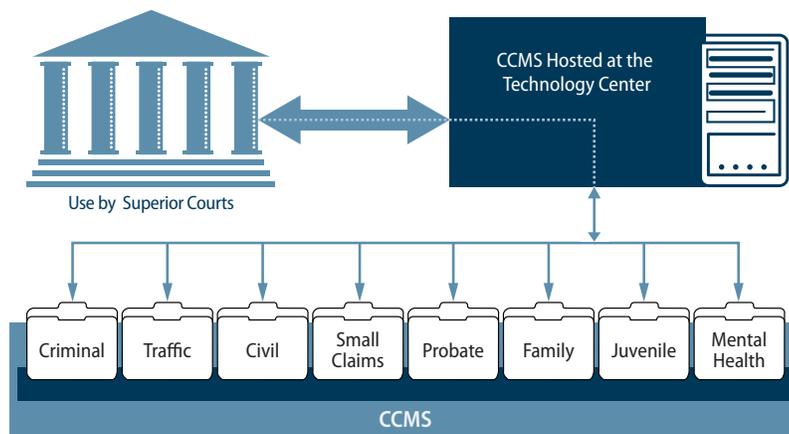
⁸ The oversight committee consisted of the presiding judges of five superior courts—Los Angeles, Orange, Sacramento, San Diego, and Ventura counties—and the director of the AOC’s southern office. This committee was accountable for the overall success of the project, focusing on policy decisions and program issue resolution, and for guiding the vision and strategy of the statewide case management project. The AOC disbanded the oversight committee in July 2010.

Figure 3
Change to the Statewide Case Management Project Over Time

The Statewide Case Management Project as Envisioned in 2004



The Statewide Case Management Project in Its Current Form



Sources: Oversight committee presentations from May 21, 2003, and February 3, 2004, and documents provided by the Administrative Office of the Courts in March 2009.

Legislature in 2005 discussed deployment of the civil system to 15 superior courts, although only six ultimately adopted the system. However, in 2007 the AOC decided to accelerate the development and deployment of CCMS. Under this approach, the CCMS would be the single system that would include all case types and expand

services for superior courts and justice partners, and would use the civil system as the technical platform and integrate functionality from the criminal and civil systems.

We would have expected analysis and documentation to demonstrate the reasons for the dramatic change in the AOC's approach for developing the statewide case management project, especially given that AOC records show the total costs invested into developing and deploying the criminal and civil systems stood at approximately \$109 million, and the added cost to develop CCMS amounted to \$199 million. Further, although the AOC indicates using the functionality and structure from the interim systems in CCMS, given the cost to develop, deploy, and maintain them, it is unclear how much value the AOC derived from the earlier systems. The AOC asserts that it saved an estimated \$12.3 million by moving the functionality from the criminal system into CCMS. However, we saw no discussion to debate the merits of this approach in the governance committees' minutes, nor has the AOC been able to provide us contemporaneous analysis or documentation of the decision. In addition, although we requested documentation to show that the AOC had conducted an analysis to determine whether it would realize savings by including the functionality and software architecture from the civil system in CCMS, the AOC never responded to our request.

The AOC Did Not Adequately Manage Contract Costs and Ensure Its Independence From the Development Vendor

The AOC did not structure its contract with the development vendor to ensure that it had sufficient control over the cost and scope of the contract. In addition, the contract structure left it dependent on the development vendor for knowledge and expertise, which may interfere with any plans the AOC might have to limit the development vendor's role in deploying CCMS. In total, the contract, which includes work on the criminal system, civil system, and CCMS, consists of 102 amendments, spans over seven years, and obligates the AOC to pay the development vendor up to \$310 million. Rather than negotiating separate contracts for each of the three elements of the statewide case management project, the AOC chose to combine these distinct elements into one contract. As a result, the AOC's contract with the development vendor for the development of the civil system grew over time as the AOC added amendments to deploy the civil system to six superior courts, deploy the criminal system to several courts,⁹ develop CCMS, provide support for the

Although the AOC plans on using the functionality and structure from the interim systems in CCMS, it is unclear how much value the AOC derived from the earlier systems.

⁹ The AOC later modified the contract to halt deployment of the criminal system to more superior courts. The criminal system ultimately was deployed only to one court.

criminal system, and extend support services for the civil system. Table 2 breaks down the amendments and their value by year. The addition of contract amendments increased the cost of the contract for all years except 2004, and the years that contain the most amendments—2006, 2007, and 2008—are also those with the greatest cost increases.

Table 2
Number and Cost of the Amendments to the Administrative Office of the Courts’ Contract With Deloitte Consulting LLP
(Dollars in Thousands)

YEAR	NUMBER OF AMENDMENTS CREATED	TOTAL COST OF AMENDMENTS
2003	NA	\$33,089*
2004	†	0
2005	5	11,330
2006	32	49,610
2007	34	134,863
2008	19	70,045
2009	10	8,494
2010	2	3,037
Totals to date	102	\$310,468

Source: The Administrative Office of the Courts’ (AOC) records regarding its contract and amendments with Deloitte Consulting LLP.

NA = Not applicable.

* Valued at \$33 million, this is the original contract to develop the civil system.

† The AOC did not enter into any contract amendments in 2004.

The AOC entered into 33 amendments,¹⁰ for which it has earmarked a total of nearly \$35 million, to deploy and support the criminal system. Although it originally intended to deploy the criminal system to as many as 10 superior courts and contracted for this system’s deployment to several courts, the AOC ultimately decided to deploy the criminal system only to Fresno. As a result, the AOC had to develop several amendments to suspend work on the deployment of the criminal system to several other superior courts.

¹⁰ We used the AOC’s records to understand the distribution of amendments across the three systems. The information delineated in this section is based on the amount earmarked or committed for specific purposes, not the total value of each amendment. As a result, the total amounts described in this paragraph and the following paragraphs add up to \$293 million or \$17 million less than the \$310 million shown in Table 2. Further, because the AOC frequently included activities for more than one system in the same amendment, the number of amendments listed in this section will not add up to 102 amendments.

For the civil system, the AOC has thus far executed an initial contract and an additional 65 amendments, for which the AOC earmarked roughly \$124 million between January 2005 and August 2010 for development, deployment, and support. In addition, the AOC allowed the six superior courts that were implementing the civil system to work with the development vendor during the deployment of this system. Of the 65 amendments related to the civil system, the AOC negotiated with the development vendor a total of 38 amendments on behalf of the courts valued at nearly \$48 million.

For CCMS the AOC has executed 10 amendments for which it has earmarked almost \$134 million, primarily to develop CCMS and to perform a readiness assessment of the three early-adopter courts. Since June 2007 the contract with the development vendor has encompassed various development, deployment, and support activities associated with the three systems. In fact, we found one instance in which the AOC experienced difficulty in tracking the total cost of the contract. In 2009 the AOC determined that it had not kept an accurate total of the cost of deliverables and services as agreed upon in previous amendments. As a result, a September 2009 amendment reduced the contract's cost by nearly \$43 million.

The AOC has also incurred costs as a result of system support needs. It developed multiple amendments to address extensions of system support services from the development vendor. In addition, several amendments addressing shortcomings in the software were potentially the result of the AOC's failure to negotiate an appropriate software warranty period with the development vendor, which we discuss in the next section. A total of 45 amendments—for which the AOC has earmarked or spent \$80 million to date—include software releases and support services; 26 of these amendments, for which \$17 million has been earmarked or spent, address software releases to enhance the criminal and civil systems.

Laws that apply to executive branch agencies—but not to the AOC—prohibit structuring contracts in the manner previously described. Contracts for the acquisition of IT are generally subject to review and approval by the Department of General Services (General Services). To provide appropriate control over contracting practices, state policy that applies to executive branch agencies also requires approval of General Services when a contract amendment extends the term of a contract one year or more. Finally, provisions of law that apply specifically to the acquisition of IT by state agencies state the Legislature's intent that agencies use an acquisition method that is compatible with their short- and long-term fiscal needs. The significant changes in the scope of the AOC's contract with the development vendor—taking over the criminal system deployment, deploying the civil system, and adding the development of CCMS—would have been subjected to these

For the civil system, the AOC has thus far executed an initial contract and an additional 65 amendments costing about \$124 million between January 2005 and August 2010 for development, deployment, and support.

requirements if the AOC were a state agency. These requirements are intended to ensure competition and that the State acquires services in the most cost-effective manner possible.

Adding amendments to the initial development contract for the civil system expanded the AOC's relationship with the development vendor to encompass all elements of the statewide case management project. By amending the contract to encompass services for all three systems, the AOC has become increasingly dependent on the development vendor for its knowledge and expertise. In fact, the assistant director of information services acknowledges that, should the AOC decide to deploy CCMS without the current development vendor, its most practical and preferred course of action would be to enter into an amendment with the development vendor to transfer the knowledge and information necessary to configure CCMS for use at the superior courts. Although we acknowledge that the judicial branch is not subject to the same laws and rules related to contracts as those that apply to other state entities, the fact remains that the Judicial Council is ultimately funded by taxpayers and, as such, acts as a steward of public funds.

The AOC Did Not Adequately Protect Its Investment in the Civil System Warranty

The AOC failed to ensure that the warranty period in its contract with the development vendor was effective during the time that warranty defects were most likely to become evident. To protect itself from potential errors that the development vendor might make in developing the civil system, the AOC negotiated a 12-month warranty period to make certain that any system defects identified during this period would be addressed by the development vendor at no increased cost to either the AOC or the superior courts. The 12-month warranty period went into effect in November 2005 when the civil system was completed, but at which time no superior court had deployed the system. Between November 2005 and November 2006, the San Diego and Ventura county superior courts were engaged in user acceptance testing, which the AOC project director for the civil system asserts should have been sufficient to determine application stability and operational effectiveness. However, no superior court had begun to use the civil system in a live operational environment before the warranty ended in November 2006. The assistant director of the AOC's information services division stated that the AOC could not extend the warranty period to provide protection while the courts were deploying the civil system without significant cost. By structuring the warranty period in this manner, the AOC did not sufficiently mitigate the risk of later paying to remedy software errors that should have been addressed under the warranty at no additional cost to the AOC and the courts.

The warranty period for the civil system was only in effect when none of the superior courts were actually using the system in a live operational environment.

Superior courts reported to us that they began to encounter significant difficulties with the civil system after it was deployed, including slow system response times and numerous defects. Altogether, the AOC's records show that, over nine software releases between 2006 and 2010, the development vendor fixed 8,415 civil system defects. Of these 8,415 defects, 2,953 were addressed by December 2006 and were covered under the warranty according to the civil system product lead manager. As of January 2011, the product lead manager indicates 858 defects are unresolved, but not all have been verified as a defect that would have been subject to the warranty. Rather, the AOC indicates that some of the issues identified as defects may actually be enhancements, which are not covered under the defect warranty or may have been resolved in a previous software release. Nonetheless, had the AOC better monitored the superior courts' progress on deploying the civil system, it might have had the opportunity to extend the warranty or renegotiate the warranty start date to ensure that the courts were using the system in a live operational environment during the warranty period so that more defects could have been identified and fixed under the warranty, at no additional cost to the AOC. Furthermore, as we discuss in Chapter 3, several courts reported concerns with defects and the AOC's process for resolving them.

An example of a critical system defect are the problems encountered with the civil system's minute order capture system, which the AOC's assistant director of information services indicates was not found during testing and was not identified until after the warranty expired. Minute orders are the written record that reflect a court's official action in legal proceedings and are essential to conducting court business. However, once the civil system was fully deployed, San Diego and Sacramento reported that problems arose with the minute order capture system, causing decreased productivity at these courts. The AOC's assistant director of information services attributes the problems with the minute order capture system to the development vendor's use of an accepted testing strategy that failed to pick up on underlying weaknesses in the application. As we discuss in Chapter 4, the AOC did not retain adequate independent oversight services to ensure that the development vendor's testing procedures were sufficient, which may have contributed to significant quality concerns with CCMS and the interim case management systems. Although the warranty had expired by the time the minute order capture system defect was identified, the development vendor agreed to fully address the defect at no additional cost. Even though the AOC avoided paying additional funds to fix this defect, the courts were affected in terms of lost productivity, because this critical function was not working.

The AOC is attempting to avoid similar problems with the warranty period for CCMS by negotiating with the development vendor to allow the early-adopter courts to do user acceptance testing and deploy

According to the AOC's records, over nine software releases between 2006 and 2010, the development vendor fixed 8,415 civil system defects.

CCMS in a live operational environment while under warranty. To that end, the AOC has negotiated the warranty so that it does not take effect until CCMS has met all acceptance criteria. In addition, the AOC has included an eight-month interim period following acceptance in order to allow time for at least one superior court to implement all case types. The warranty will go into effect and extend for 12 months following the end of the eight-month interim period.

The Initial Plan for CCMS Deployment Placed Significant Responsibility on the AOC and the Superior Courts

The AOC drafted a statement of work for a contract that, although never executed, was not based on sufficient information to fully understand the scope and cost of implementing the system. In May 2009 the AOC and its development vendor negotiated a draft statement of work for a contract that was under consideration, which Catalysis Group, our IT expert, concludes would have placed significant responsibility on the AOC and the superior courts to perform activities key to the system's successful deployment. The contract was never executed due to a lack of funding; however, our IT expert believes that if the contract had been executed, the development vendor would have received \$600 million essentially to provide a supporting role in the statewide deployment of CCMS. Indeed, many critical deployment tasks were assigned to the AOC and the superior courts. However, this potential \$600 million, which is included as part of the \$1.9 billion project cost, is the cost for the development vendor and does not include costs that the AOC and the superior courts will incur during CCMS deployment, which would have been substantial. For example, the readiness assessment for the three early-adopter courts indicates that the AOC and the early-adopter courts will need to commit the equivalent of roughly 400 personnel years for deployment. Furthermore, the price of the draft statement of work in this unexecuted contract is based on general assumptions. The estimate was based on the cost to conduct deployment at five different court sizes and on the number of systems used at each superior court rather than on the actual size, system, and needs existing at each superior court. Our IT expert indicates that using these general guidelines as the basis for the cost of a draft statement of work creates significant risk of increased costs as unexpected situations are encountered during deployment. For example, our IT expert notes that the draft statement of work makes the superior courts responsible to prepare data for transfer from their existing systems to CCMS, which could be time-consuming and expensive, depending on the age and complexity of the existing systems.

Further, the draft statement of work requires each superior court to commit to a two-year schedule of readiness activities before deploying CCMS. According to the AOC's deployment manager,

The readiness assessment for the three early-adopter courts indicates that the AOC and the early-adopter courts will need to commit the equivalent of roughly 400 personnel years for deployment.

any superior court that cannot meet the deadlines on this schedule will lose its place in the deployment schedule and be replaced by the next available court. This approach is further complicated by the draft statement of work's failure to address the resource requirements or costs the justice partners may incur during CCMS deployment. Our IT expert indicates that without clearly defined resource requirements, neither the superior courts nor the justice partners can accurately plan and budget for implementing or interfacing with CCMS. If state and local justice partners are unable to integrate with CCMS due to a lack of funding, the benefits of CCMS would be limited.

It Is Unclear Whether the Deployment Efforts at the Early-Adopter Courts Will Produce Sufficient Information for Statewide Deployment of CCMS

Because the AOC lacked the funding to execute the draft statement of work, it decided to implement CCMS at three early-adopter courts—San Diego, San Luis Obispo, and Ventura county superior courts. To accomplish this task, in June 2010 the AOC entered into a contract amendment with the development vendor to conduct a readiness assessment, which would include establishing a deployment strategy, describing the general readiness of the superior courts to deploy the system, assessing the ability of justice partner integration, and providing a data exchange implementation plan specific to each early-adopter court. The development vendor was to assess the existing hardware, software, system configurations, and business practices at each of these three superior courts to determine the organizational change necessary to adopt the new system and the work necessary to interface with local justice partners. Using the readiness assessment of the early-adopter courts, the AOC hopes to understand the activities necessary and the skills that staff will need to deploy CCMS at any superior court.

According to the assistant director of information services, the AOC intends to receive documents, templates, artifacts, workflow strategies, and other information from the readiness assessment that it can then use to take over deployment for the early-adopter courts as well as conducting those of the remaining 55 superior courts. He further stated that he expects the AOC to be in a position to take what it has learned from the first deployments to negotiate a better price with the development vendor or another vendor on a piecemeal basis if it decides to take that approach. However, according to our IT expert, this latest amendment does not adequately define project deliverables related to the readiness assessment to ensure that the AOC receives the appropriate documentation and other information needed to implement CCMS at the early-adopter courts. Further, our IT expert believes that this amendment does not define effectively

In June 2010 the AOC entered into a contract amendment with the development vendor to conduct a readiness assessment of the early-adopter courts, which would include establishing a deployment strategy, describing the general readiness of the courts to deploy the system, assessing the ability of justice partner integration, and providing a data exchange implementation plan specific to each early-adopter court.

The December 2010 readiness assessment found a number of risks that could delay the schedule, increase the cost, and/or result in the need to reduce the scope of the deployments at the three early-adopter courts.

the deployment project plan and the details required to convert the courts' data for use in CCMS. Our IT expert concluded that because the project plan and conversion objectives are required to be at a high level only, the development vendor is not obligated to include the level of detail and specificity the AOC would need to deploy CCMS on its own or with the assistance of a different vendor.

The development vendor completed the readiness assessment for the three early-adopter courts, as well as a summary report of this effort, in late December 2010. According to the development vendor's summary report, there are a number of risks that could impact the deployment and prevent the creation of a detailed deployment plan for the implementation of CCMS at the three early-adopter courts. Appendix A summarizes these risks, which encompass issues similar to those discussed in our report, including the reluctance of superior courts to commit to the scope and schedule requirements, key local justice partners' inability to commit to integration with CCMS, the scope and complexity of data conversion, the lack of available court staff to assist with deployment, and one superior court's desire to host the CCMS software locally. The development vendor commented that these risks could delay the schedule, increase the cost, and/or result in the need to reduce the scope of the CCMS deployments. The results of the readiness assessment indicate that the AOC faces significant challenges even with the three early-adopter courts and that any delays in CCMS deployment may prevent the deployment from occurring during the warranty period.

Recommendations

To understand whether CCMS is a cost-beneficial solution to the superior courts' case management needs, the AOC should continue with its planned cost-benefit study and ensure it completes this study before spending additional significant resources on the project. The AOC should ensure that this study includes a thorough analysis of the cost and benefits of the statewide case management project, including a consideration of costs and benefits it believes cannot be reasonably quantified. The AOC should carefully evaluate the results of the study and present a recommendation to the Judicial Council regarding the course of action that should be taken with CCMS. Further, the AOC should fully share the results of the study as well as its recommendation to all interested parties, such as the superior courts, justice partners, the Legislature, and the Information Office. The AOC should update this cost-benefit analysis periodically and as significant assumptions change.

To ensure the statewide case management project is transparent, the AOC should make sure all key decisions for future activities on CCMS are documented and retained.

To ensure its contract with the development vendor protects the financial interests of the State and the judicial branch, the AOC should consider restructuring its current contract to ensure the warranty for CCMS is adequate and covers a time period necessary to ensure that deployment of CCMS has occurred at the three early-adopter courts and they are able to operate the system in a live operational environment.

If the Judicial Council determines that CCMS is in the best interest of the judicial branch and it directs the AOC to deploy the system statewide, assuming funding is available, the AOC should ensure that any contract it enters into with a deployment vendor includes the following:

- Cost estimates that are based on courts' existing IT environments and available resources to assist with deployment activities.
- Well-defined deliverables.
- Adequate responsibility is placed on the vendor for conducting key steps in the deployment of the system.

The Judicial Council should make certain that the governance model for CCMS ensures that approval of contracts and contract amendments that are significant in terms of cost, time extension, and/or change in scope occur at the highest and most appropriate levels, and that when contracts or contract amendments above these thresholds are approved, that the decision makers are fully informed regarding both the costs and benefits.

To ensure that any future IT projects are in the best interest of the judicial branch and the State, the AOC should do the following:

- Complete a thorough analysis of the project's cost and benefits before investing any significant resources and time into its development, and update this analysis periodically and as significant assumptions change.
- Document and retain all key decisions that impact the project in general, including the goals of the project.
- Better structure contracts with development and deployment vendors to protect the financial interests of the judicial branch and ensure the contracts provide for adequate warranty periods.

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Chapter 2

POOR COST ESTIMATES AND UNCERTAIN FUNDING HAVE PLAGUED THE STATEWIDE CASE MANAGEMENT PROJECT

Chapter Summary

Since 2003, when the Judicial Council of California (Judicial Council) directed the Administrative Office of the Courts (AOC) to continue the development of the statewide case management project, the AOC has consistently failed to develop accurate cost estimates for the project, which includes the development and deployment of the criminal system, the civil system, and the California Court Case Management System (CCMS). The AOC's earliest available cost estimate for the project was \$260 million in 2004, an amount that grew substantially to \$1.9 billion in 2010. In the same period, complete deployment to the superior courts has been delayed by seven years, from fiscal years 2008–09 to 2015–16. This \$1.9 billion primarily includes vendor and AOC costs to develop, deploy, and support the criminal system, the civil system, and CCMS. However, the \$1.9 billion estimate fails to include all costs that the superior courts have already incurred to implement interim versions of the project—which the superior courts told us cost nearly \$44 million—as well as the unknown but likely significant costs that courts will incur to implement CCMS. The latest estimate also does not reflect the nature of the costs that state and local government justice partners will incur to integrate their systems with CCMS.

Although the AOC has fulfilled its requirements to report to the Legislature, it did not provide additional data about the increasing total project cost—information that would have been beneficial to the Legislature. Specifically, the four annual reports that the AOC submitted to the Legislature between 2005 and 2009 did not include comprehensive cost estimates for the project, and the 2010 report did not present the costs in an aggregate manner. As a result, these reports may not have informed decision makers about the true cost of the project. When asked by the Legislature to estimate the true cost to complete the project, AOC officials cited a figure of \$1.3 billion, which excludes the \$557 million that has already been spent or will be spent for the criminal system and for support costs for the civil system and CCMS.

Moreover, the project is at risk of not receiving the funding needed for statewide deployment. The AOC believes that CCMS development will be finished in April 2011 and estimates that it will need roughly \$1 billion to deploy the system at the 400 court facilities located statewide. However, because the availability of

future funding for this project is uncertain, it is unclear at this point whether the AOC will be able to obtain the \$1 billion deployment funding or the additional \$391 million its current estimates show is needed to support CCMS through fiscal year 2015–16.

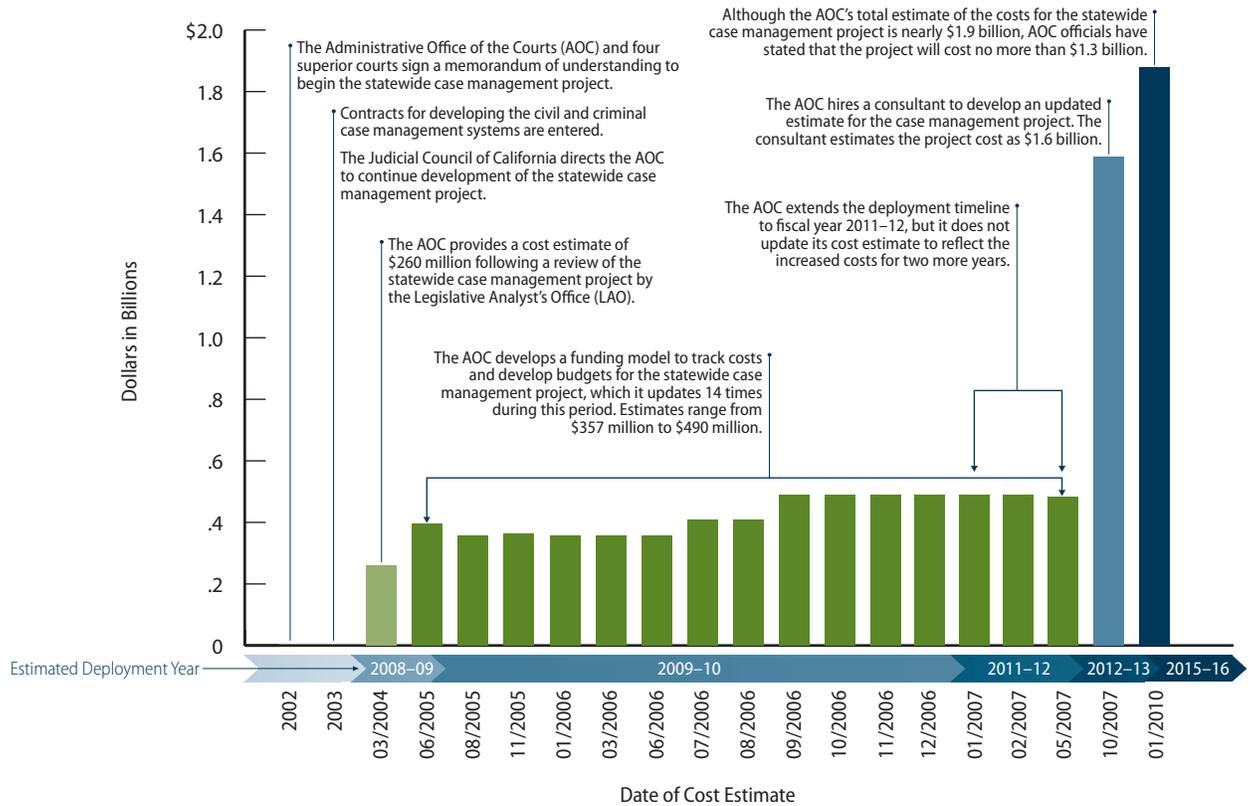
The AOC Consistently Failed to Develop Accurate Cost Estimates for the Project

Although the AOC believed that the size, scope, and cost of the statewide case management project would be significant from the onset, it failed to develop a comprehensive budget and to estimate the total cost of the project until 2004. Between 2004 and 2010, the AOC developed four funding models that it used to create annual budgets and identify its funding needs for the project. However, all four models consistently understated the project's total cost. These models list the costs the AOC anticipates it will incur to develop, deploy, and support CCMS and the interim versions of the statewide case management project. The models also project the fiscal year when CCMS will be fully deployed to all 58 superior courts. As Figure 4 illustrates, the AOC's cost estimates have grown significantly, from \$260 million in 2004 to nearly \$1.9 billion by January 2010. In addition, the AOC's estimate of the date for complete deployment of CCMS has been pushed back by seven years, from fiscal year 2008–09, as estimated in 2004, to fiscal year 2015–16, as predicted in 2010.

AOC's cost estimates have grown significantly, from \$260 million in 2004 to nearly \$1.9 billion in 2010, and the estimated date for complete deployment has been pushed back by seven years.

The AOC's initial estimate of \$260 million was prompted by a 2004 Legislative Analyst's Office (LAO) review of the statewide case management project. The AOC now asserts that this estimate did not include \$21 million of initial funding spent on the project and also did not include estimated deployment costs for 16 superior courts that, at that time, the AOC had anticipated would be retaining their existing systems. From June 2005 to May 2007, the AOC used a different funding model that its finance division developed and updated periodically to monitor project costs. The costs listed in this model, which was updated a total of 14 times, fluctuated between \$357 million and \$490 million during this two-year period. In addition, in its January 2007 report to the Legislature on the status of CCMS, the AOC included a deployment plan that changed the estimated year to complete statewide deployment from fiscal year 2009–10, as reported in its December 2005 report, to fiscal year 2011–12. However, it did not update its internal cost estimate to include costs for the additional two years. The director of the AOC's finance division (finance director) explained that the model was not updated to reflect the later deployment years because the AOC had determined that a broad-scale examination of costs, assumptions, and plans related to the statewide case management project should be undertaken and was subsequently initiated. Consequently, ongoing project estimates

Figure 4
The Administrative Office of the Courts' Cost Estimates for the Statewide Case Management Project From the Beginning of the Project to the Present



Sources: The March 2004 response by the AOC to the LAO and the AOC's internal cost estimates from 2005 to 2010.

contained in the funding model were no longer updated, except to reflect prior-year costs for purposes of reporting CCMS expenditures in the annual report to the Legislature.

In separate contracts entered into in June and July 2007, the AOC hired a consultant to conduct a business case (2007 consultant study) and to determine the costs to complete the CCMS. In October 2007, the 2007 consultant study priced expected costs to complete the system at \$1.6 billion and projected full deployment of CCMS in all 58 superior courts by fiscal year 2012-13. The finance director indicated that the AOC determined that the total estimated cost of CCMS and other technology projects would exceed the level of resources available to the judicial branch. Consequently, the AOC developed a budget change proposal that identified the long-term funding shortfall and the need for a funding solution, which could include funds from the State's General Fund. The finance director indicated that the proposal also attempted to demonstrate the efforts taken by the judicial branch to locate

funds internally. This proposal was submitted to the Department of Finance (Finance) in the fall of 2008 and to the Legislature in January 2009. In addition, the finance director indicated that the AOC met with Finance and other high-level members of the former governor's staff, as well as several legislative members and staff to discuss the funding needs in greater detail. The proposal the AOC submitted to Finance requested spending authority from special funds and authorization for the Judicial Council to seek additional funding. Although the proposal identified the future costs of CCMS and other technology projects through fiscal year 2012–13, it did not include a total cost of the project.

Although the AOC's internal cost estimates to complete the project were increasing since reporting its initial estimate of \$260 million to the LAO in 2004, because it was not required to it did not mention these increases in its reports to the Legislature. Table 3 displays the costs reported in each status report compared to the AOC's internal estimate at the same time. For example, the AOC reported expenditures to the Legislature totaling \$466 million for CCMS in April 2008, when its internal estimate of the total cost for the statewide case management project had reached nearly \$1.6 billion. Although the AOC is not statutorily required to report the total projected costs of the statewide case management project, given the dramatic rise in the AOC's internal cost estimates during this period, we believe providing the Legislature with the most robust information that the AOC had would have been prudent and reasonable.

Table 3
Expenditures Reported to the Legislature in Compliance With State Law Compared With the Administrative Office of the Courts' Internal Estimates of Total Costs for the Statewide Case Management Project (In Millions)

DATE REPORTED	EXPENDITURES REPORTED TO LEGISLATURE AS REQUIRED BY STATE LAW	ADMINISTRATIVE OFFICE OF THE COURTS' INTERNAL COST ESTIMATE FOR THE OVERALL PROJECT
December 2005	\$179	\$365
January 2007	271	490
April 2008	466	1,587
January 2009	744	1,587

Sources: The yearly reports to the Legislature by the Administrative Office of the Courts (AOC) that the AOC titled *Status of the California Court Case Management System and the Phoenix Program*, submitted on the dates listed, as well as the AOC's internal cost estimates.

Note: The first column of figures includes the costs to date and an estimate of the costs for the current fiscal year and following fiscal year, while the second column of figures represents the AOC's projected total cost for the statewide case management project.

Since October 2009 the AOC has been using an internally developed model to estimate the cost of the statewide case management project, which assumes full funding will be available to deploy CCMS statewide. This model is based on various assumptions, including deployment cost estimates from a draft statement of work that the AOC and the development vendor had begun to negotiate to deploy CCMS to all 58 superior courts. The AOC's model extends the deployment timeline to fiscal year 2015–16, and estimates that the project's total cost will be nearly \$1.9 billion. This estimate also includes \$313 million of projected support costs for CCMS until it is fully deployed statewide. Later in this chapter, we discuss how even this estimate fails to include significant costs. Although the AOC's records show that its latest estimate is nearly \$1.9 billion for the statewide case management project, the AOC often reports only the portion of these costs related specifically to CCMS, which it calculates to be \$1.3 billion.

The fluctuations in the AOC's cost estimates may be due in part to its lack of adequate centralized budgeting and oversight of the project. A retired AOC senior manager in the finance division who prepared the budget for the project, asserted that the AOC and the superior courts were attempting to understand the scope and cost of developing a statewide system by reviewing vendor estimates of cost, resources, and time. The former senior manager also stated that budgets during this period were often based on estimates from vendor proposals, with consideration of available resources. In addition, the AOC's finance director indicated that using an ad hoc approach to project budgeting required coordination among the AOC's division of information services, its southern regional administrative office (which until November 2010 oversaw development of the statewide case management project), and the AOC's finance division.

The same consultant who conducted the 2007 business case for CCMS also assisted the AOC with developing budgets for all of its technology projects. The finance director told us this process resulted in the development of a baseline five-year budget for the statewide case management project as well as the establishment of a project review board that includes the AOC's finance director, the director of the AOC's information services division, and the AOC's chief deputy director. Since August 2008 this board has reviewed the status of the statewide case management project, including changes to the project that could lead to time, resource, and funding issues. The finance director asserts that the reason prior procedures were not as robust as those used by the project review board was because a formalized review process had not yet been established. However, although the AOC was in the process of developing its administrative processes and its responsibilities with respect to the superior courts, this does not relieve it from the

The AOC's cost estimates have fluctuated due in part to its lack of adequate centralized budgeting and oversight.

responsibility of proper fiscal planning and oversight for a project of this size and cost. By the time the project review board began reviewing the project in August 2008, the AOC and the superior courts already had spent roughly \$315 million on the project.

The AOC Continues to Underestimate the Full Cost of the Project

Similar to past estimates, the cost estimate included in the AOC's most recent project status report to the Legislature does not clearly reflect the full cost of the statewide case management project. Since fiscal year 2004–05, state law has required the AOC to provide an annual report to the Legislature on the status of the statewide case management project, including project accomplishments to date, project activities underway, proposed activities, and a listing of annual revenues and expenditures for the project.¹¹ Although the reporting currently done by the AOC satisfies these requirements, it does not provide a comprehensive cost estimate for the project. The four annual reports for 2005 through 2008 only provided expenditures by fiscal year and estimates of the expenditures for the fiscal year in which the report was published and the upcoming fiscal year. The April 2010 report did finally include details on the cost of the project; however, it presents expenditures to date and the costs to complete the project in three separate exhibits located on different pages that correspond to different project elements, making it difficult for report users to identify the total cost of the project. Further, when asked for the total cost of the project in a legislative hearing held in August 2010, the AOC's chief deputy director cited the \$1.3 billion estimate for CCMS development and deployment, which excluded \$557 million that has been spent or will be spent for the criminal system and support costs for the civil system and CCMS until CCMS is fully deployed. Ultimately, as shown in Table 4, the AOC estimates the cost for the statewide case management project is nearly \$1.9 billion as of January 2010.

The \$1.9 billion estimate excludes other significant but mostly unknown costs that will likely increase the overall cost to realize the full benefits of the project, most notably costs that the superior courts and justice partners are likely to incur in deploying CCMS.

Moreover, as shown in Table 4, the \$1.9 billion estimate excludes other significant but mostly unknown costs that will likely increase the overall cost to realize the full benefits of the project. The most notable of these excluded costs are those that the superior courts incurred in deploying the interim systems or will likely incur to deploy CCMS. According to our information technology (IT) expert, deployment at each superior court will be costly because of expenses to train staff, change business processes, and convert data

¹¹ Under Government Code, Section 68511.8, effective August 2004, the AOC was to annually report on the "California Case Management System." Although this section does not expressly define "California Case Management System," because the criminal and civil systems were the only systems under development between 2004 and 2007, we think a reasonable reading of the statutory reporting requirements in this section would call for including those costs in this annual report.

Table 4
The Administrative Office of the Courts' Reported Statewide Case Management Project Expenses by Category
(In Thousands)

California Court Case Management System (CCMS) and civil system development and deployment*	\$1,321,586
CCMS support	313,052
Criminal system development, deployment and support, and civil system support†	244,253
Total projected cost of the statewide case management project, using cost data from the Administrative Office of the Courts (AOC)	\$1,878,891
Costs that the AOC has not included in its estimates:	
Superior court deployment costs	?
Additional support costs for the interim systems due to CCMS development delays	?
Justice partner interface costs	?
Cost of the statewide case management project when all entities are considered	\$1,878,891 plus ?

Source: The AOC's report to the Legislature titled *Status of the California Case Management System and the Phoenix Program 2009*, April 2010.

Note: The project costs are based on actual expenditures as of June 30, 2010, and projected expenditures estimated in January 2010.

* Civil system costs are roughly \$95 million; the remaining \$1.227 billion relates to CCMS.

† Civil system costs are roughly \$152 million; the remaining \$92.3 million relates to the criminal system.

from existing systems. From its experience deploying the interim systems, the AOC already knows that these expenses are significant because, according to its records, the seven superior courts paid nearly \$49 million directly to the development vendor to assist with implementation of these systems. However, the AOC did not direct superior courts to account for the costs they incurred to implement the interim systems because—according to its finance director—separating these costs from other court technology costs is difficult and because of inconsistencies in how courts tracked and recorded the costs. In addition, the finance director asserts that the superior courts' costs were not material when compared to the total cost of the statewide case management project.

Nevertheless, the seven superior courts that have implemented the criminal and civil systems reported to us that they spent nearly \$44 million in staffing, equipment, and consulting costs to test, deploy and support the interim systems beyond the roughly \$49 million that they paid directly to the development vendor. Even this \$44 million is likely understated because one superior court—the Superior Court of San Diego County (San Diego)—also reported that in fiscal years 2005–06 and 2006–07 between

120 and 130 of its staff worked part-time to full-time on implementation of the civil system but it was unable to quantify the cost related to their efforts.

As part of its plan to deploy the three early-adopters of CCMS (early-adopter courts), the AOC plans to track these courts' deployment expenses. According to the assistant director of the AOC's information services division (assistant director of information services), it plans to use this information to develop a more accurate estimate of the deployment costs that other superior courts can expect to incur. However, San Diego and the Superior Court of Ventura County (Ventura) already gained experience and efficiencies by implementing the civil system. For example, according to our IT expert, data conversion for these two superior courts, which our IT expert indicates is likely one of the more expensive and time-consuming tasks, will be less difficult for the four case types on the civil system because the data is organized in a similar manner on CCMS. According to the assistant director of information services, although the AOC may leverage some savings from converting data for case types included in the civil systems at San Diego and Ventura, it will be able to estimate the costs of data conversion since these courts will also be converting data to CCMS for case types not covered by the civil system. Nonetheless, the AOC needs to ensure that it takes into account the fact that courts with no prior experience in implementing an interim system may take longer and incur greater costs. Furthermore, the finance director indicated that the current cost estimate does not address the fact that the timeline for statewide deployment has been pushed out due to development delays and a lack of funding to fully deploy CCMS, although the AOC is aware that it will have to pay increased support costs for the superior courts using the interim systems because of the delay.

The AOC also has not disclosed the nature of the CCMS-related costs for the justice partners that work with the superior courts. Its data integration manager for CCMS indicated the AOC does not plan to develop estimates of justice partner costs as part of the readiness assessment conducted to deploy CCMS to the early-adopter courts. The data integration manager also noted that if these justice partners desire to exchange data electronically with the superior courts, implementing CCMS may require state agencies—such as the California departments of Social Services and Justice (Justice)—and local government entities—such as county sheriffs and district attorneys—to modify their hardware and software to interface with CCMS. Because these are costs that will be ultimately borne by entities funded by California taxpayers, we believe that the AOC should disclose a description of the general nature of these costs to better inform the Legislature and the public.

If justice partners want to share data electronically with the superior courts, they may need to modify their hardware and software to interface with CCMS.

Finally, the AOC's financial system does not fully account for payroll costs associated with staff that performed a role on the CCMS project. Specifically, in our testing of 13 employees associated with the CCMS project, we noted that the AOC did not properly charge payroll costs for five information system division employees and one regional administrative director who spent a portion of their time working on the CCMS project during the period July 2002 through June 2010. From our analysis of the State Controller's Office payroll system data for this time period, we estimated the total gross salary for these six employees—excluding certain payroll expenses, such as employer contributions for retirement and Medicare—exceeded \$5.5 million. According to the AOC, except for a select group of employees working on grants, AOC employees do not complete timesheets that detail the projects they are working on. Consequently, because these six employees spent their time working on various functions, the AOC was not able to determine what portion of their time was spent on the CCMS project.

CCMS Is at Risk of Failure if the AOC Cannot Identify Additional Funding

The lack of funding to fully deploy CCMS places the AOC at serious risk of failing to meet its goals for CCMS. Although the AOC believes that development of the CCMS core portion will be complete by April 2011, and that development of the noncore portion will be finished by July 2011, it estimates needing funding of approximately \$1 billion to deploy it to 400 different court facilities within the 58 superior courts.¹² Further, the AOC estimates that an additional \$391 million will be needed to support the criminal and civil systems (interim systems), as well as CCMS, through the end of fiscal year 2015–16, the AOC's current estimate of when CCMS will be fully deployed.

However, as of September 2010, the AOC asserts that it has identified funding of roughly \$227.6 million for fiscal years 2010–11 and 2011–12. This amount includes \$24.4 million to finish CCMS development, \$117 million to support the interim systems and CCMS, and \$86.2 million to deploy CCMS at early-adopter courts. According to the assistant director of information services, the AOC plans to pay Deloitte Consulting LLP (development vendor) no more than \$55 million of the \$86.2 million it has identified in fiscal years 2010–11 and 2011–12 to pay for deployment of CCMS

Although the AOC estimates funding needs of approximately \$1 billion to deploy the system to 400 different court facilities within the 58 superior courts, it has only identified funding of \$86.2 million for fiscal years 2010–11 and 2011–12 to deploy CCMS at the three early-adopter courts.

¹² As the Introduction describes, CCMS essentially has two portions: The first portion, referred to as the *core portion*, provides the superior courts with the functionality to manage all case types. The second portion, referred to as the *noncore portion*, are the external components that provide the functionality that will allow superior courts to interface with state and local justice partners.

The finance director indicates the AOC has not identified funding to pay for CCMS deployment at the remaining 55 superior courts.

to the early-adopter courts. If any of these items cost more than the AOC currently anticipates, it will likely cause the AOC difficulties in carrying out its plans for CCMS during this period.

Even if the AOC succeeds in deploying CCMS to the early-adopter courts, the finance director indicates it has not identified funding to pay for CCMS deployment at the remaining 55 superior courts. Without full deployment, the AOC believes that the value of CCMS to the judicial branch is limited since most of its goals for and benefits from CCMS rely upon all superior courts using the system. Given the current lack of funding, AOC managers shared with us several alternative plans to minimize total project costs by deploying CCMS based on the level of funding available. For instance, the AOC is considering identifying priorities for CCMS deployment where cost savings could be realized, such as first deploying it to superior courts with failing case management systems. Further, the AOC is considering several options to cut expenses to support the interim systems and CCMS. In addition, to reduce the costs paid to the development vendor for CCMS deployment—estimated at \$600 million and included in the \$1.9 billion total project cost—the AOC may solicit bids from other vendors to assist with deployment, which it asserts could likely result in significant savings. In fact, the AOC did solicit bids for deployment of CCMS in 2008 and received two, one from its development vendor and one from the vendor that currently operates the California Court Technology Center. Even though the bid from the current development vendor was \$100 million higher than the other bid, the AOC's senior manager of business services in its finance division explained that the AOC selected the development vendor because it determined the development vendor's proposal to be the best value based on price, vendor experience, and other factors. Finally, the AOC is also considering taking over CCMS deployment for the remaining 55 superior courts as a means of reducing costs. However, according to the finance director, the AOC has not yet completed updated cost projections based on this approach, but he indicates that the AOC is actively examining strategies that will result in the most effective deployment at the most advantageous price.

Efforts to Obtain Future Funding for CCMS Have Been Unsuccessful

The AOC has made some attempts to identify funding to deploy CCMS to all 58 superior courts, although these efforts are still in the early stages and have yet to prove fruitful. In January 2010 it released a request for information for interested parties to assist the AOC in identifying feasible alternative funding mechanisms such as loans, leasing, and public-private partnerships; however, according to the administrative director of the courts (director), it

did not receive any formal proposals. In addition, the development vendor raised the possibility of financing deployment; however, the AOC director presumed that the development vendor would not be interested in providing financing unless it had a significant role in deployment. The director questioned the soundness of becoming overly dependent on a single vendor for such an effort.

The AOC contacted California's congressional leadership to apply for federal funding, and an earmark of \$1 million has been proposed for inclusion in the federal budget for federal fiscal year 2011 to help pay for deployment at San Diego. Although the amount may assist in deploying CCMS at this superior court, it constitutes a fraction of the total funding needed to deploy CCMS statewide. In addition, the AOC's chief deputy indicates that it has contacted the federal departments of Homeland Security and Justice to discuss the value that CCMS can provide to federal law enforcement, with the hope that these federal departments might provide funding to assist in deploying CCMS. As of December 2010 the AOC indicated that it had received a \$287,000 grant from Justice to pilot justice partner data exchanges with CCMS. Finally, the AOC is planning to work with the Office of the State Chief Information Officer to develop budget change proposals to obtain General Fund money to support deployment. Although these actions characterize the AOC's efforts to locate funding, without a strategy in place to fund CCMS deployment, the project's risk of failing to meet its goals remains high.

Recommendations

To ensure that the financial implications of the statewide case management project are fully understood, the AOC should report to the Judicial Council, the Legislature, and stakeholders a complete accounting of the costs for the interim systems and CCMS. This figure should be clear about the uncertainty surrounding some costs, such as those that the AOC and superior courts will incur for deployment of CCMS. Also, the AOC should require superior courts to identify their past and future costs related to the project, particularly the likely significant costs that superior courts will incur during CCMS deployment, and include these costs in the total cost. Further, the AOC should be clear about the nature of the costs that other entities, such as justice partners, will incur that are not included in its total. Finally, the AOC should update its cost estimate for CCMS on a regular basis as well as when significant assumptions change.

To address the funding uncertainty facing CCMS, the AOC should work with the Judicial Council, the Legislature, and the governor to develop an overall strategy that is realistic given the current fiscal crisis facing the State.

To better manage costs of future IT projects, the AOC should take the following steps:

- Estimate costs at the inception of projects.
- Employ appropriate budget and cost management tools to allow it to appropriately budget, track, manage, and estimate costs.
- Ensure that cost estimates are accurate and include all relevant costs, including costs that superior courts will incur.
- Disclose costs that other entities will likely incur to the extent it can reasonably do so.
- Update cost estimates on a regular basis and when significant assumptions change.
- Disclose full and accurate cost estimates to the Judicial Council, the Legislature, and stakeholders from the beginning of projects.
- Ensure that it has a long-term funding strategy in place before investing significant resources in a project.

Chapter 3

THE ADMINISTRATIVE OFFICE OF THE COURTS HAS NOT ADEQUATELY FOSTERED SUPERIOR COURTS' RECEPTIVENESS TO IMPLEMENTING THE CALIFORNIA COURT CASE MANAGEMENT SYSTEM

Chapter Summary

Although the Judicial Council of California (Judicial Council) has the authority to compel the superior courts to implement the California Court Case Management System (CCMS), the successful implementation of the system will require the Administrative Office of the Courts (AOC) to more effectively foster court support. Our survey of the seven superior courts¹³ currently using either the criminal or the civil system, referred to as the *interim systems*, revealed that some are skeptical of the AOC's ability to successfully implement the CCMS statewide. In addition, when implementing the interim systems, all seven superior courts reported that they encountered unexpected difficulties and various challenges. Further, although the deployment of the civil system began roughly four years ago, some of the superior courts using it reported that they continue to face significant challenges, including poor system performance. Some of the challenges that the superior courts encountered or continue to encounter, were so significant and disruptive to their operations that two superior courts are reluctant to deploy CCMS once it is developed. Despite these challenges, five superior courts reported experiencing increased efficiency and performance since deploying the system.

Further, our survey of the 51 superior courts that are not using an interim system indicated that 32 superior courts reported that their current case management systems will serve them for the foreseeable future and that 39 expressed uncertainty about the project. Although we recognize that the Judicial Council has the legal authority to require the superior courts to implement CCMS, successful implementation calls for more than legal authority; it requires support from the superior courts that will be using the system. The AOC has already taken some steps to involve superior courts in the development of the statewide case management project, but if the AOC does not do more to address superior courts' concerns, they may be hesitant to deploy CCMS.

¹³ The superior courts' views cited in this chapter are derived from responses to two surveys of court executive officers. The survey questions we asked appear in appendices B and C.

Finally, state-level justice partners indicated to us they look forward to CCMS as it will improve their information sharing with the superior courts. However, despite the AOC's efforts to involve them in the development of CCMS, if some local government justice partners are unable to afford to modify their existing systems to share information electronically with CCMS, a reduced number of electronic exchanges will occur among superior courts and justice partners, and the system's benefits will be diminished.

Some Courts Are Reticent to Adopt CCMS Due to Challenges With the Interim Systems

Although the Judicial Council has the authority to compel the superior courts to adopt CCMS, for the implementation of a new information technology (IT) system to be successful, it is important to persuade and convince the users of the system, in this case the superior courts, of the need and benefits it will offer. However, our survey of the seven superior courts currently using interim systems (see text box) found that these superior courts reported that they experienced challenges and difficulties in their implementation of the systems. Two courts indicated that they are reluctant to implement CCMS because of those challenges. Further, although most superior courts reported experiencing increased efficiency and performance since deploying the interim systems, the AOC may be hampered in achieving its goal of statewide deployment of CCMS due to the reservations reported by some courts that currently use the civil system.

Superior Courts Currently Using the Civil System:

- Los Angeles (in one court facility only)
- Orange
- Sacramento
- San Diego
- San Joaquin
- Ventura

Superior Court Currently Using the Criminal System:

Fresno

Note: Los Angeles has installed the civil system in only four of the 282 courtrooms that process civil system case types.

Superior Courts Using an Interim System Have Mixed Views on CCMS

Some superior courts using an interim system reported significant concerns about the AOC's ability to successfully deploy CCMS, while others remain supportive. The Superior Court of Los Angeles County (Los Angeles), which has implemented the civil system in only four courtrooms at one location, believes that the AOC's plan for CCMS has been overly ambitious and, due to the lack of a mature underlying product, a program management strategy, a solid business case, and a resource model to ensure its achievement,

the project is extremely risky. According to the Superior Court of Orange County (Orange), the AOC did not appear to have developed sufficient project management capacity to manage a development project of the size and complexity of CCMS and its pervasive impact on the day-to-day business operations of the courts as it evolved. Further, the Superior Court of Sacramento County (Sacramento) expressed its concerns with respect to the poor quality management of CCMS by the AOC, including what it perceives as major shortcomings in the contract with the development vendor negotiated by the AOC. The other responding courts generally expressed support for CCMS. For example, the Superior Court of San Diego (San Diego) reported overall satisfaction with the AOC's leadership. Similarly, in their responses, the Superior Court of Fresno County (Fresno), the Superior Court of San Joaquin County (San Joaquin), and the Superior Court of Ventura County (Ventura) expressed support of CCMS. Notably, Ventura and San Diego will be two of the three early adopters of CCMS.

Both Los Angeles and Sacramento asserted they will not adopt CCMS unless their concerns are resolved. Los Angeles reported that it has limited the deployment of the civil system to allow it to evaluate the basic functionality of the system but has delayed further deployment to avoid the risk of becoming dependent on an unfinished system. Los Angeles continues to seek assurance that the development vendor will be able to address outstanding performance issues and has requested from the AOC a budget and funding plan for the remainder of CCMS development and deployment. Los Angeles further stated that until it receives adequate responses to these concerns, it cannot consider any major deployment. The view of Los Angeles is important because it is one of five superior courts that was on the governance committees that was disbanded in July 2010 and because, as the largest court, it represented 29 percent of the State's caseload in fiscal year 2008-09. Similarly, Sacramento asserted that it will not adopt CCMS until the AOC makes significant improvements in the areas of performance, stability, and product management. We believe that the AOC's ability to effectively implement CCMS on a statewide basis will be strengthened if it is successful in resolving the concerns of superior courts already using the interim systems. The AOC's ability to entice other superior courts to adopt the system could be diminished if users of earlier versions continue to express reservations with CCMS.

According to the Superior Court of Orange County, the AOC did not appear to have developed sufficient project management capacity to manage a development project of the size and complexity of CCMS.

Superior Courts That Implemented an Interim System Reported Various Obstacles

Difficulties Reported by the Seven Courts That Use Interim Systems

- 1) Conversion of the case information on existing systems to the interim systems.
- 2) Additional staff resources needed for case processing.
- 3) Inadequate user manuals and training challenges.
- 4) Problems associated with interim system performance, including slow response times and system defects.

Source: Survey responses of the seven superior courts using an interim system.

The seven superior courts using an interim system reported various obstacles during and after deployment, some of which were common difficulties faced by nearly all of the superior courts. As described in the Introduction, deployment of the criminal system occurred in 2006; it was ultimately deployed to just one superior court—Fresno. Deployment of the civil system took place during 2006 and 2008. Eventually this system was deployed to superior courts in six counties: Los Angeles, Orange, Sacramento, San Diego, San Joaquin, and Ventura. The text box shows the common difficulties that these superior courts reported.

Challenges faced by several of the superior courts that implemented the civil system covered a broad spectrum, including some reporting that additional staff resources were required to implement the system. For instance, Sacramento reported that its implementation of the civil system resulted in the need to add nearly 14 more staff (a 38 percent increase) in its civil operations, primarily as a result of additional data entry tasks that did not exist in its previous case management system. In fact, Sacramento stated that other superior courts will need to consider the potential for additional staffing needs when deploying CCMS and explained that for a superior court that performs limited data entry, employing CCMS will require new business processes that result in additional tasks and the associated staff time required to complete the tasks. San Diego also explained that its previous case management system required only the entry of the primary plaintiff and respondent for each case; in contrast, the civil system requires the entry of all parties, which resulted in additional data entry time and increased time to process cases. Superior courts may be reticent to deploy the system if the effort entails additional staff or resources they may not be able to afford. However, if superior courts believe that efficiencies will result from CCMS, they will be more receptive to it.

These superior courts also reported facing challenges when learning to use the interim systems. San Diego indicated that it received insufficient written instructions on how to use the civil system's case assignment rules and work queues. Further, Orange established training databases so staff could practice different scenarios before the system was deployed, and it has implemented training courses for staff on an ongoing basis. Orange stated that although the system was primarily developed and optimized for clerks, it is somewhat cumbersome for the ways in which judicial

officers conduct business. Ventura also highlighted challenges related to training staff and judicial officers on how to use the system. The AOC and the superior courts may face similar training challenges with CCMS.

Several of these superior courts reported facing significant challenges with system performance in general, including slow response times and frequent crashing of the system. Fresno reported that the criminal system crashed on a regular basis during the first two years after implementation and commented that the system's stability was inconsistent, causing disruptions to courtrooms and clerk offices. Ventura stated that it too experienced downtime with the civil system, explaining that at times it needed to be shut down due to an infrastructure or data configuration issue. Both superior courts report that these problems are now resolved. Sacramento reported significant performance and stability issues, stating that it had to endure many outages that totally shut down the civil system, and reported that it continues to experience these issues.

Although the AOC and Deloitte Consulting LLP (development vendor) have worked to address defects associated with the interim systems, several superior courts reported concerns with defects and the process for resolving them. The development vendor has provided the six superior courts that use the civil system with nine different software releases since 2005 to correct defects and provide system enhancements. For example, the eighth and ninth releases, which were combined into one release, provided to courts in October 2009, were intended to correct problems with the minute order capture system¹⁴ included in the initial version of the civil system. However, Sacramento reported in its survey response that since deploying the civil system, the superior court has identified defects in every new release. Orange reported that although the defect resolution process has improved since the civil system was deployed, the process can be further improved by faster acknowledgement and resolution of defects. San Joaquin stated that the defect resolution process seems to be working, but it expressed frustration that not all defects can be resolved by the development vendor in a single release of the system. Courts that are considering deploying CCMS in the future may hesitate to do so because of the disruption in productivity that defects in the civil system have caused some courts.

The development vendor has provided the six superior courts that use the civil system with nine different software releases since 2005 to correct defects and provide system enhancements.

¹⁴ Minute orders are the written record that reflect a court's official action in legal proceedings and are essential to conducting court business.

The four large superior courts that have deployed the civil system each reported continuing challenges with the civil system; however, two of these courts believe the civil system has produced positive results.

The Large Superior Courts Experienced Both Challenges and Improvements With the Civil System

The four large superior courts that have deployed the civil system each reported continuing challenges with the civil system; however, two of these courts believe the civil system has produced positive results. Larger courts generally deal with a wide variety of legal matters resulting in complex operations. For large courts to be efficient, sophisticated automated processes are necessary to manage the high volume and wide-ranging legal proceedings. Although the other three smaller courts that have deployed an interim system reported benefits from increased functionality, two larger courts reported reduced performance when compared to their previous systems.

Orange reported needing to develop several custom applications to interface with the civil system in order to maintain the level of functionality experienced with its previous system. Orange also commented that the civil system continues to be unable to produce accurate data for statistical reports. Similarly, San Diego reported that the civil system did not meet some basic requirements for large courts, and it had to develop customized forms and reports. San Diego also explained that the minute order capture system as originally designed and developed created significant case processing problems for court staff.

Despite the challenges encountered, both superior courts cited improvements to their business processes due to the civil system. Orange explained that, in conjunction with its new document management system, the civil system has enabled its superior court to no longer maintain paper copies of case files. Further, Orange stated that clerks are now able to process cases in less time than they were able to under the previous case management system. San Diego reported that while some employees have found the transition challenging, others feel they now have access to more information electronically. San Diego also stated that as the superior court transitions to electronic filing of cases, imaging of documents, and providing more online access to the public, more benefits will be realized by judicial officers, court staff, and most importantly the public.

Los Angeles and Sacramento both maintain negative perceptions of the civil system. In particular, Los Angeles, which has only deployed the civil system in four small claims courtrooms at one location, indicated that the civil system has increased the time needed to input data, which has resulted in longer customer wait times. Sacramento included in its response several judges' perspectives, including that they liked the electronic access to case files. However, most comments were negative, including

that the civil system is extremely slow and cumbersome and that the system has not delivered the many improvements the AOC and the development vendor promised. As described earlier in this chapter, both courts are reluctant to adopt CCMS once it is developed, which creates an added challenge for the AOC to overcome these courts' perceptions regarding the interim systems and create a favorable perception toward implementing CCMS.

The Three Smaller Superior Courts Generally Believe the Interim Systems Are an Improvement

Although the three smaller superior courts that have implemented an interim system described some challenges, they generally expressed positive perspectives. Both Fresno and Ventura reported initial stability issues, but the problems have since been resolved, and they report their systems are now stable. San Joaquin also expressed satisfaction with the civil system, noting that staff like it better than the previous system because it is faster and more efficient.

Based on their responses, these mostly positive perceptions appear to be influenced by the increase in system functionality experienced after implementing the interim systems. Both San Joaquin and Fresno had older systems that they stated were in serious danger of failing, and the interim systems were a welcome solution to their needs. Fresno reported that it was much easier to make timely changes to the criminal system than to its previous case management system. Finally, Ventura stated it experienced increased functionality over its previous case management system. Although both Ventura and San Joaquin reported that they look forward to the release of CCMS, Fresno stated that it would prefer to deploy CCMS only after successful deployment at other courts and resolution of any problems that may arise.

The Larger Superior Courts Assert That Local Hosting Is Critical to Their Ability to Improve the Civil System's Performance

A central goal of the AOC is to host CCMS and all court case information at the California Court Technology Center (Technology Center), which it asserts will increase efficiency and maximize cost savings. As described in the Introduction, the Technology Center is located in Tempe, Arizona, and is a centralized data center that provides IT support to the courts, including the hosting of the interim systems for Fresno, Sacramento, San Joaquin, and Ventura. The remaining three superior courts that have deployed the civil system—Los Angeles, Orange, and San Diego—each installed the system's software on computers located in their jurisdictions rather than on the Technology Center's computers. The Office of the State

Both Fresno and Ventura reported initial stability issues, but the problems have since been resolved, and they now report stable systems.

Chief Information Officer (Information Office) recommended that CCMS should be hosted—to the extent possible—at a centralized site for all superior courts because allowing some courts to host their own application and database increases system complexity and negatively impacts system performance. The AOC has stated that the Judicial Council will require all courts, including the three superior courts that host the civil system locally, to host CCMS at the Technology Center.

Nevertheless, the superior courts that currently host the civil system locally reported that their ability to improve the civil system's functionality is dependent upon their ability to store case information and other case management systems on servers accessible to their staff. This is such a critical element to these courts that Orange and San Diego both reported that they would not consider moving to the Technology Center until the AOC can ensure they will experience the same levels of performance the courts currently experience. In addition, Orange also stated that before such a move, the court would want an equal or cheaper price than it currently pays for hosting the application, and to maintain the same level of agility to respond to business needs. In response to our question about the benefits of hosting its systems and case information locally, San Diego stated that it survived the challenges of the civil system deployment because of its ability to access court information and to locally manage the system in ways that made sense for the court. In fact, San Diego reported faster service delivery, more system reliability, and better flexibility to deploy fixes as benefits of local hosting. Orange reported developing several custom applications to modify the civil system and was only able to do so because it had local access to the civil system's database. Los Angeles asserted that it insists upon maintaining the capacity for records management locally as doing so is crucial to ensuring local responsiveness to changes in data and document management needs. Los Angeles further stated that it is unwilling to cede control over its document and data management systems to a third-party vendor contracted through another agency as is done with the Technology Center. Los Angeles indicated it requires local hosting to retain current levels of system effectiveness, reliability, and responsiveness. It also stated local hosting is consistent with the superior court's obligation under statute and rule of court to manage its records and daily processes. Los Angeles reported that it has received assurances from the AOC that it will not be required to host CCMS at the Technology Center. The strong opinions of these courts regarding hosting the system locally is another challenge the AOC will need to face if the Judicial Council requires all superior courts to host CCMS at the Technology Center.

Los Angeles is unwilling to cede control over its document and data management systems to a third-party vendor contracted through another agency.

Sacramento, a superior court that currently hosts the civil system at the Technology Center, reported the benefits that it believes local hosting could provide: improved performance, flexibility to provide timely solutions to system problems, and full access to its data. In August 2010 Sacramento entered into a formal agreement with the AOC to resolve the performance issues the court has faced in using the civil system, which it largely attributes to being hosted at the Technology Center. This agreement states that the AOC will take steps as necessary to achieve performance speeds that match or exceed those of Orange, a court that hosts the system locally. Under the agreement, if the AOC and the Technology Center are unable to replicate Orange's system performance, Sacramento will be allowed to locally host the civil system. In November 2010 the superior court and the AOC extended the deadline for replicating system performance until February 2011. Other superior courts that ultimately implement CCMS may have similar concerns; if so, the AOC needs to determine how it will alleviate them.

The three smaller superior courts that currently use the civil system indicated a benefit to being hosted at the Technology Center. San Joaquin reported not having the financial resources to purchase necessary hardware to locally host the civil system or to hire the additional staff required to support it. Similarly, Fresno reported not having the financial resources to host its own technology center or to hire the additional staff required to support it. Fresno and San Joaquin also reported they preferred having staff at the Technology Center make system changes required for new laws. San Joaquin noted that this was perhaps the most efficient way of handling statewide changes—make the changes once at the Technology Center rather than multiple times to different case management systems statewide.

Some Superior Courts Are Satisfied With Their Existing Systems

We surveyed the 51 superior courts that are not using an interim system and found that the AOC also needs to foster more effectively the superior courts' support for CCMS. Some superior courts that are not using an interim system believe their current case management systems meet their needs and will serve them for the foreseeable future; they have raised concerns about deploying CCMS. The viewpoint of these courts is important because they have no direct experience operating an interim system; rather, they are using case management systems they have had in place for several years. Of these 51 superior courts surveyed, 18 responded that their current case management systems are meeting all of their needs. For example, the Superior Court of Modoc County (Modoc) responded that it currently has a system that works well, and although it has weaknesses, it provides the court with dependable

Of the 51 superior courts not using an interim system we surveyed, 18 responded that their current case management systems are meeting all of their needs.

data. Modoc further explained that while the court is not opposed to CCMS, it would want the new system completely debugged before implementation.

Examples of Superior Courts' Perspectives on the California Court Case Management System

Benefits:

- "CCMS is a huge undertaking that will redefine the way we process court cases. With the workflow design we should be able to do more with less, making us more efficient. Features such as a document management system will increase productivity and reduce paper storage and expenses." (Superior Court of Mendocino County)
- "Long term, CCMS will be more cost-effective, provide uniformity in procedures, venue transparency, and implementation and promotion of best practices in all court operations." (Superior Court of Sonoma County)
- "Among the many advantages of moving to CCMS, the judicial branch will benefit from economies of scale in software development; create a uniform way of measuring workload to ensure that funding and judicial resources are deployed to the courts with the greatest need; and modernize the creation, preservation, and retention of court records." (Superior Court of Marin County)

Concerns:

- "Our court perceives no benefit to the AOC's plan to replace our case management systems with CCMS, and we would refuse its implementation as it is currently proposed." (Superior Court of Kern County)
- "Although there are some benefits to having connectivity from court to court, a negative impact on our productivity because of the new system is not worth the trade-off." (Superior Court of Yuba County)
- "Although the small courts participated in the design of CCMS, the design was primarily driven by the largest courts in the State. As a result, there is an extensive array of complex features and functionality that may be unnecessary for smaller courts. We are concerned that there may not be a way to simplify the application enough to make it cost-effective (for example increased costs are offset by the elimination of other expenses) for small and extra-small courts when compared with other, simpler, commercial off-the-shelf products." (Superior Court of Butte County)
- "Due to the court's current financial crisis, the court is concerned with implementation costs and ongoing expenses. Initial training and labor to migrate to a new system is also worrisome considering our court has had an 18 percent decrease in court staff." (Superior Court of Mendocino County)

Source: Responses to the Bureau of State Audits' survey of 51 courts that are not currently using an interim system.

In response to another survey question, 32 of the 51 superior courts reported that they believe their existing case management systems will serve them for the foreseeable future. For example, the Superior Court of San Francisco reported that it is constantly updating its case management system that covers civil and four other case types with new functions as required by court operations. The Superior Court of Amador County is continuing to upgrade its current system to leverage new technologies such as online access to case information and payment of fines and fees by credit card through the court's public Web site.

In response to the survey question asking for the court's perceptions of the AOC's plan to replace all courts' case management systems with CCMS, only 12 of 51 courts were generally positive in their responses about CCMS or did not discuss any potential challenges associated with CCMS deployment. The Superior Court of Inyo County responded that a statewide system could allow for an unprecedented level of public service by all judicial partners. As the text box shows, the Superior Court of Marin County also touted several of the system's benefits and the efficiencies that the system will bring to court operations.

Of the 39 superior courts that reported having some concerns regarding CCMS, many expressed the uncertainty they felt about the project. The Superior Court of Riverside County (Riverside) stated that it hopes that the same or an additional level of functionality will be incorporated into CCMS and that it will not cost more than its current case management system. Currently, Riverside explained that it uses an automated case management system in all areas of law that is fully integrated into all operational and administrative areas including finance, statistics, jury, collections, and office and courtroom support. Riverside reported that while it supports a statewide uniform case management system, its current system works well and the court would prefer to be later in the CCMS implementation schedule so

that non-automated courts could benefit from the new system first. In addition, the Superior Court of Kern County (Kern) reported that it would refuse to implement CCMS in its current form. Kern explained that in light of its view that there are documented failings of the civil system in Sacramento, particularly in connection with the Technology Center, and the legal requirements related to the court maintaining control over its case management data, the Kern court cannot be an adopter of CCMS without substantial further assurance that it meets all operational needs, including full local control. Kern reported that due to evident problems with the Technology Center, the court will not agree to offsite maintenance of its data. Moreover, Modoc and the Superior Court of Monterey (Monterey) stated they would like to delay implementing CCMS until it has been properly tested at other courts. Monterey responded that it would look to the successful implementation and operation of CCMS at a court of similar size before it adopts CCMS. Despite expressing these concerns, many of these 39 courts did see the benefit of all superior courts using a common integrated case management system.

These survey responses indicate that some courts have reservations about deploying CCMS and that the AOC faces the challenge of overcoming such reservations and communicating the need for superior courts to adopt the system. Its chief deputy director acknowledges that, in retrospect, the AOC might have performed better outreach to obtain and sustain court support. He also indicated that the presiding judge of each superior court changes every two years, which presents special challenges to continually inform new presiding judges about a project that began several years ago. However, to the extent the AOC does not resolve the types of concerns the superior courts reported to us and fails to better foster their support for CCMS, it may be developing a statewide case management system that many courts are hesitant to deploy. The AOC maintains that anything less than a full deployment of CCMS would only partially solve the current barriers to the equal access of justice; undermine other stated goals of the statewide case management project; and fail to alleviate the current complexities of operating, integrating, and maintaining multiple case management systems. The administrative director of the courts acknowledges the concerns of the superior courts, but to the extent the AOC can effectively deploy CCMS to the three early-adopter courts, he expects that the other courts will cooperate. Although we recognize that the implementation of a new system, especially one as large and complex as CCMS would likely have a significant impact on any organization, it is critically important to resolve the concerns and negative perceptions of the superior courts. The AOC has hired a consultant to conduct a cost-benefit analysis that will include a survey of all 58 superior

The AOC faces the challenge of overcoming reservations about CCMS and communicating the need for superior courts to adopt the system.

The issue of converting data from an existing system to CCMS is especially daunting when considering the number and variety of systems courts reported that they use—the 58 courts we surveyed reported using up to 108 case management systems.

courts. This survey is due for completion in February 2011. The AOC may be able to use its consultant's survey results to better understand the courts' perceptions towards CCMS.

Many Superior Courts Expressed Concerns About Data Conversion

Our survey of the 58 superior courts also revealed that 15 courts expressed concerns about converting data on their existing systems to CCMS. Catalysis Group, our IT expert, states that data conversion is generally a challenging process, particularly for larger IT systems such as CCMS. The issue of converting data from an existing system to CCMS is especially daunting when considering the number and variety of systems courts reported that they use. According to the assistant director of AOC's information services division (assistant director of information services), the difficulty in converting data will depend on the amount and the quality of that data. The assistant director of information services explained that before CCMS can be fully implemented, a court may need to validate and clean up the data in its existing systems, provided it makes business sense to do so. According to our IT expert, when converting data to a new system, care must be taken to assure that information is not lost or damaged during transfer.

These concerns have merit considering that two courts using the civil system reported difficulties converting data. For example, San Diego reported staff spent considerable time and effort to clean up data from its existing system to successfully convert them to the civil system. In another example, when Orange converted data from its previous system to the civil system, it reported finding nearly 100,000 documents without case records, or finding case records without documentation. Orange fixed these errors but reported that it added to the complexity and cost of conversion. Orange stated that while these problems were not caused by the new system, they had to be addressed during the conversion process. According to our IT expert, data conversion is a key step in the successful deployment of CCMS and the AOC may encounter challenges in converting courts' data given the vast array of unique and custom-built systems used by superior courts throughout the State.

The 58 courts we surveyed reported using up to 108 case management systems, many of which contain data that needs to be converted before courts can begin using CCMS. While 36 courts reported using only one system, 22 reported using two or more, reaching a high of eight case management systems in use by San Diego. The assistant director of information services believes that data conversion should become more efficient as deployment of CCMS progresses because court, AOC, and vendor staff will gain more experience with existing systems. However, our survey results

indicate that up to 46 of the 108 current case management systems may be used at only one superior court. Our IT expert indicates that each of the 46 unique systems will require more time and effort than subsequent conversions of the same type of system performed at different courts. Uncertainty at these courts will persist until the AOC gains a better understanding of data conversion issues particularly given that the development vendor reported in its December 2010 readiness assessment of the early-adopter courts that the data quality in various legacy systems is inconsistent and could limit the ability to effectively convert data.

The AOC Took Certain Steps to Involve Courts During the Development of the Project

Although the superior courts raised various concerns about the project, during the project's development the AOC took certain steps to involve them by conducting a high-level assessment that included the status of superior courts' case management systems, including superior court representatives in the governance structure, and using court staff in designing the system's requirements. According to the director of the AOC's information services division (director of information services), beginning in fiscal year 2000–01, the AOC conducted several studies to understand and define the need for a statewide case management system. He explained that the AOC gathered information from the courts regarding the current state of their case management systems prior to developing the statewide case management project. In the AOC's report on the need to deploy CCMS, it concluded from a 2001 survey that most of the superior courts' existing case management systems did not meet their basic needs. The director of information services indicates being unaware of any other systematic efforts to determine the status of courts' case management systems.

Further, as the Introduction discusses, the AOC initially involved only certain of the superior courts in the project's governance structure, which provided direction for the development of the statewide case management project. This governance structure included both the oversight and steering committees—consisting of the presiding judges and executive officers, respectively, of the superior courts of Los Angeles, Orange, Sacramento, San Diego, and Ventura and the director of the AOC's southern regional program office. In 2008 the governance structure was expanded to include nonvoting advisory members including representatives from Fresno and San Joaquin and a 14-member small court consortium.

In addition, the AOC's records show many superior courts contributed *subject-matter experts*, or staff proficient in various types of legal cases, during the development of the civil system

Beginning in fiscal year 2000–01, the AOC's director of information services stated that the AOC conducted several studies to understand and define the need for a statewide case management project.

and CCMS. These subject-matter experts have participated in the development of CCMS in various ways, including the design sessions, and they continue to remain involved in the testing phases of CCMS. These efforts have allowed many superior courts the opportunity to be involved in the design and development. However, despite the steps taken by the AOC to involve the superior courts in the development of CCMS, some of the responses to our survey indicate that all superior courts are not receptive, and some will still need to be persuaded and convinced of the system's benefits to ensure a successful implementation.

State Justice Partners Look Forward to CCMS, but the Extent to Which Local Governments Justice Partners Will Integrate Is Unclear

Examples of State Justice Partners:

- California Department of Justice
- California Department of Corrections and Rehabilitation
- California Department of Social Services
- Department of Child Support Services
- Franchise Tax Board
- Department of Motor Vehicles

Examples of Local Justice Partners:

- County jails
- District attorneys
- Law enforcement agencies and sheriffs
- Public defenders
- Probation officers
- City and county counsels

Note: The Administrative Office of the Courts' report on California Court Case Management System data exchanges by integration partner, June 2010.

A stated goal of CCMS involves the sharing of information electronically among superior courts and justice partners, examples of which are shown in the text box. To accomplish this goal of information sharing, CCMS includes 121 data exchanges to allow justice partners the ability to electronically share court case information. Based on the survey responses of 51 superior courts that are not using an interim system, 37 reported that they share information electronically with at least one justice partner. Of these 37 superior courts, 28 reported doing so with more than three justice partners. According to the AOC's manager of data integration, many local and state justice partners will need to make modifications to their systems to exchange data electronically with CCMS.

The AOC has made repeated efforts to involve justice partners in the development of CCMS. For example, justice partners from local and state entities participated in design development sessions to create the data exchanges that would allow the electronic transmission of information. The AOC also indicated that it conducted frequent presentations and made information available to justice partners on its Web site. We spoke with five state-level justice partners: the

California Department of Corrections and Rehabilitation, the California Department of Social Services, the California Department of Justice (Justice), the Department of Motor Vehicles, and the Department of Child Support Services (Child Support Services). All of the departments we contacted welcomed CCMS because they believe it will make their information sharing with the superior courts more efficient. For example, Child Support Services

indicates that it only receives electronic information from seven larger superior courts; information is received in paper form from all the remaining courts. Child Support Services anticipates that the electronic exchange of case documents with CCMS, once it is fully implemented, will be faster than the paper-based method employed at the other 51 courts; it will also be able to transmit case information to one location as opposed to seven different courts. Justice is currently modifying its existing system to interface with CCMS. The completed interface will allow for daily transmission of case information to it from CCMS, a process that is currently done electronically or by paper depending on the superior court.

According to the manager of data integration, the AOC has assessed local justice partners for the three early-adopter courts, identifying the gaps between systems and developed a high-level plan to bridge those gaps. Although the assessment does not include a cost estimate, the manager of data integration believes it will provide sufficient information for justice partners' IT staff to estimate the cost of any necessary modifications. The AOC has also contracted with a consultant to produce a cost-benefit analysis of CCMS that will include an assessment of the cost to justice partners at two of three early-adopter courts. For justice partners who cannot afford to integrate with CCMS, the AOC will provide a Web portal they can access free of charge. According to the assistant director of information services, the Web portal will allow justice partners to receive court case information. Although the portal does not allow justice partners to submit information to CCMS, he believes that in some cases CCMS will allow justice partners and courts to eliminate existing electronic interfaces. However, if some justice partners with existing electronic exchanges are unable to afford the necessary modifications, courts may lose the electronic exchange with those justice partners, which would undermine a significant benefit that CCMS is intended to provide.

In fact, the development vendor's readiness assessment for the three early-adopter courts, which was completed in December 2010, found that one court's justice partners do not have the funding to integrate their systems with CCMS. Further, the readiness assessment indicates that a number of justice partners for all three courts were concerned with their ability to commit to the currently planned CCMS deployment schedule. We present a summary of the results of the development vendor's readiness assessment of the three early-adopter courts in Appendix A.

Recommendations

Although the Judicial Council has the legal authority to compel the courts to adopt CCMS, to better foster superior court receptiveness to deploying CCMS, the AOC should do the following:

- Use the results from its consultant's survey of the superior courts to identify and better understand the courts' input and concerns regarding CCMS, including the manner in which the project has been managed by the AOC. To the extent the survey results indicate courts have significant concerns regarding CCMS or that they believe their case management systems will serve them for the foreseeable future, the AOC should take steps to address these concerns and overcome any negative perceptions and modify its deployment plan for CCMS accordingly.
- Continue to work with the superior courts that have deployed the civil system to ensure it is addressing their concerns in a timely and appropriate manner.
- Work with superior courts to address concerns about hosting data at the Technology Center. Further, the AOC should take steps to ensure that superior courts do not lose productivity or efficiencies by hosting data at the Technology Center.

The AOC should continue working with local and state justice partners to assist them in their future efforts to integrate with CCMS, and in particular provide local justice partners the information needed to estimate the costs involved.

Before embarking on future statewide IT initiatives and to ensure it secures appropriate support from users of the systems being proposed, the AOC should do the following:

- Determine the extent to which the need for the IT initiative exists, including the necessary information to clearly demonstrate the extent of the problem the IT initiative will address.
- Take steps to ensure that superior courts support the solution the AOC is proposing to address the need, which could include conducting a survey of courts to determine their level of support.
- If necessary, determine whether other stakeholders, including local and state justice partners, support the IT initiative.

Chapter 4

THE ADMINISTRATIVE OFFICE OF THE COURTS HAS NOT ENSURED ADEQUATE INDEPENDENT OVERSIGHT OF THE CALIFORNIA COURT CASE MANAGEMENT SYSTEM

Chapter Summary

Although the Administrative Office of the Courts (AOC) contracted with Sjoberg Evashenk Consulting, Inc. (consulting firm) to provide independent oversight of the statewide case management project, this contract did not require that this oversight be performed consistent with industry standards for a project of this size and scope. Under best practices for system development and implementation, entities normally contract with consultants to provide two types of independent oversight: *independent verification and validation (IV&V)*—used to ensure that software conforms to requirements and satisfies user needs—and *independent project oversight (IPO)*—used to ensure that effective project management practices are in place and in use. The level of rigor for independent oversight should be commensurate with the size, scope, complexity, and risk of the project. The AOC acknowledges that the statewide case management project is large, complex, and costly. The Judicial Council of California (Judicial Council) directed the AOC to continue the development of the statewide case management project in 2003, but the AOC did not contract for IV&V services until April 2004, and it did not contract for IPO services until July 2007. Although the AOC asserts that its approach provided independent oversight in accordance with standards of the Institute of Electrical and Electronics Engineers, Inc. (IEEE)¹⁵ and best practices, the AOC did not document its oversight plan. Further, the AOC relied on its staff—who cannot be considered independent in such a role—to provide portions of the oversight.

However, even with the limited oversight that it was engaged to perform, the consulting firm providing IV&V and IPO services raised significant concerns that the AOC did not adequately address. The AOC did not appropriately respond to concerns regarding its management of CCMS, schedule, and technical issues. Notably, quality problems discovered later contributed to an unexpected 10-month delay in the project schedule. In fact, Catalysis Group, our information technology (IT) expert, believes

¹⁵ The Institute of Electrical and Electronics Engineers, Inc. is a leading developer of international standards that support many products and services, including IT.

that because of the AOC's failure to address significant concerns and the quality problems experienced, CCMS may be at substantial risk of future quality problems.

The AOC Has Not Provided Proper Independent Oversight and Monitoring of the Statewide Case Management Project

The AOC has not secured adequate independent oversight of the statewide case management project even though the project began in 2002. The AOC did not contract for IV&V until April 2004. In July 2007 the AOC amended this aspect of the contract to include considerably more specificity in the IV&V services and added IPO services to the project. Nonetheless, the actual independent oversight that the AOC required has been less than would be expected for such a large, complex, and costly project.

Appropriate Project Oversight Can Provide for Early Detection of Problems in System Development

Purposes of Independent Verification and Validation

Verification processes provide objective evidence about whether the software and its associated products and processes do the following:

- Conform to requirements for correctness, consistency, and accuracy for all life-cycle activities.
- Satisfy standards, practices, and conventions during life-cycle processes.
- Successfully complete each life-cycle activity and satisfy all the criteria for initiating succeeding life-cycle activities.

Validation processes provide objective evidence about whether the software and its associated products and processes do the following:

- Satisfy system requirements allocated to the software at the end of each life-cycle activity.
- Solve the right problems.
- Satisfy intended use and user needs.

Source: Institute of Electrical and Electronics Engineers, Inc., Standard 1012.

For large state IT projects in California, departments customarily contract for IV&V services to provide oversight and insight into the development processes and products of system integration vendors. IV&V, as described by the IEEE standards, should be documented in a software verification and validation plan; be scaled in level of rigor based on complexity, criticality, or other project characteristics; and be performed by an organization that is technically, managerially, and financially independent of the organization developing the new system. IV&V determines whether the development processes and products—typically software—conform to requirements and whether the software satisfies its intended use and user needs. The text box further describes the purposes of IV&V. Although the AOC is not required to follow these standards, best practices recommend rigorous, robust IV&V for such large, complex projects as the statewide case management project, particularly when the entity managing the project—in this case, the AOC—lacks experience developing large, complex IT systems. According to our IT expert, IV&V gives a department technically proficient “eyes and ears” to oversee a development vendor

while an IT system is being developed, and it also provides early warning of discrepancies, issues, and problems that might not

otherwise be detected until late in testing or implementation. The IEEE standards indicate that without the early feedback that results from IV&V, detection of anomalies and consequential software system changes required to correct them are typically delayed until later in the software development process, resulting in greater costs and schedule delays.

Another best practice for monitoring IT projects is IPO. In its IT project oversight framework, implemented in February 2003, the Department of Finance (Finance) describes IPO as an independent review and analysis of project management practices to determine if the project will be completed within the estimated schedule and cost, and will provide the functionality required by the sponsoring business entity. IPO is intended to identify and quantify any issues and risks affecting these project components. According to Finance, IPO consists of three main components—review and assessment, reporting, and tracking—which are each described further in the text box. Finance’s IT project oversight framework notes two essential attributes of IPO—*independence and expertise*. For highly critical projects, the oversight must be conducted by consultants, not staff that report to the same organization as the project managers. Members of the oversight team must have experience as participants in project management and system engineering, among others, on multiple, similar projects. The framework also describes graduated oversight, with critical projects receiving additional oversight. The current framework, which the Office of the State Chief Information Officer (Information Office) now maintains, indicates that the Information Office will provide direction as to how project oversight will be conducted based on the complexity of the project.

Purposes of Independent Project Oversight

Review and Assessment processes to determine compliance with State of California or other industry standard project management practices.

Reporting processes to compile and report results on compliance with the appropriate project management practices and any other material findings, conclusions, or recommendations made as a result of the review and assessment.

Tracking processes to track the disposition of prior findings, recommendations, and identified deficiencies.

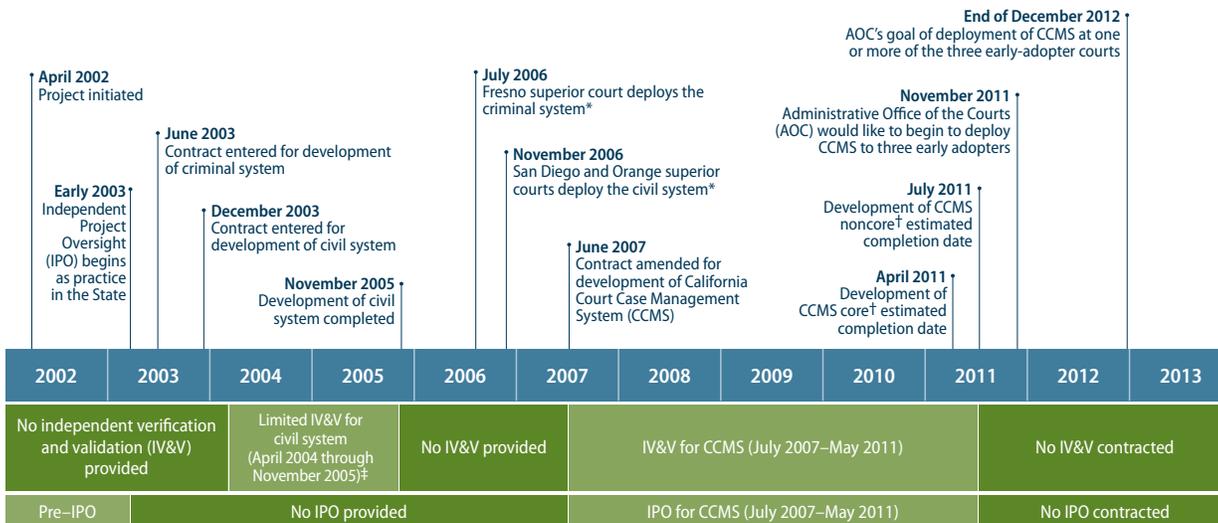
Source: The Department of Finance’s information technology project oversight framework implemented in 2003. The Office of the State Chief Information Officer currently maintains the framework on its Web site.

The AOC Did Not Secure IV&V Services for the Statewide Case Management Project Until 2004 and IPO Services Until 2007

Even though the AOC knew from the onset of the statewide case management project in 2002 that it would be significant in terms of cost, time, complexity, and impact on the superior courts, it did not secure IV&V and IPO services for significant parts of the project. The AOC was directed by the Judicial Council to continue the development of a statewide case management project in 2003, but did not contract for IV&V services until April 2004 and did not contract for IPO services until July 2007. The IEEE recommends that IV&V be performed in parallel with system development, starting at the very beginning of the process when

the need for the system is being defined and the development vendor is being selected and continuing through project closeout. As shown in Figure 5, gaps exist in the independent oversight because the AOC neglected to ever contract for IV&V or IPO services for the development of the criminal system¹⁶ and did not contract for IV&V until four months after the development of the civil system began. Also, it had no IPO services for the civil system. Further, the AOC did not contract for IV&V or IPO services for the deployment of the criminal or civil systems. Moreover, it did not contract for IV&V and IPO services until a month after the AOC amended its contract with the development vendor to begin CCMS development.

Figure 5
Independent Oversight Gaps During the Statewide Case Management Project



Sources: Bureau of State Audits' review of the contracts of the AOC with development vendors and the consulting firm providing IV&V and IPO services, as well as the AOC's report to the Legislature titled *Status of the California Court Case Management System and the Phoenix Program 2009*, April 2010.

- * Deployment dates were provided by the superior courts and represent the date they began using any part of an interim system in a live operational court environment.
- † As the Introduction describes, CCMS essentially has two portions: The first portion, referred to as the *core portion*, provides the superior courts with the functionality to manage all case types. The second portion, referred to as the *noncore portion*, are the external components that provide the functionality that will allow superior courts to interface with state and local justice partners.
- ‡ According to our IT expert, the statement of work for IV&V services procured in 2004 did not envision the full range of services consistent with the Institute of Electrical and Electronics Engineers, Inc., Standard 1012.

¹⁶ The consulting firm did review the system's fiscal aspects and oversaw user validation and product acceptance tests, but the statement of work in its contract with the AOC does not characterize the consulting firm's efforts as IV&V.

In comparison, other large state IT projects normally receive much more continuous oversight. For example, as our January 2008 status letter on the Financial Information System for California (FI\$Cal) project¹⁷ indicated, the State procured IV&V and IPO services at the beginning of the procurement phase of the FI\$Cal project.¹⁸ Thus, IV&V and IPO were in place to oversee the State's efforts to select the development vendor for the FI\$Cal project. As previously mentioned, the statewide case management project did not benefit from IV&V and IPO until after the vendor was selected for the civil system and development of CCMS had begun.

According to our IT expert, the AOC's decision to partition the project and provide oversight for the phases in this fashion discourages an integrated view of the project and decreases opportunities for early detection and correction of issues that cross multiple project phases. Our IT expert notes that issues with the requirements of the system, its design, and the building processes used by the development vendor may affect deployment of the system. However, issues that may arise during project deployment may be considered outside the scope of the IV&V being performed during development, even though the issues may be much more difficult and expensive to correct when addressed during deployment. For example, in December 2008 the consulting firm reported a concern questioning how the AOC will make system updates to courts that have customized or changed the configuration of their local system so that it no longer mirrors the AOC system. The consulting firm reported that the AOC stated that those concerns are operational and maintenance issues, and the issues are outside the scope of the consulting firm's efforts. Our IT expert believes that by not requiring the consulting firm to monitor concerns that span different project phases, including the critical deployment phase, the AOC risks experiencing quality issues that it could have avoided or minimized if it had provided for continuous oversight from the start of the project.

Nonetheless, as Figure 5 depicts, the AOC still has not contracted for IV&V and IPO for the deployment of CCMS. In its April 2010 *Review of the California Court Case Management System*, the Information Office recommends that the scope of the IV&V and IPO be expanded to include review of planning and management of post-CCMS development activities. According to the director of the AOC's southern regional program office, as of December 2010, the timing and details of IV&V and IPO will be defined as the specifics of the CCMS deployment strategy are worked out.

By not requiring the consulting firm to monitor concerns that span different project phases, the AOC risks experiencing quality issues that it could have avoided or minimized if it had provided for continuous oversight from the start of the project.

¹⁷ The Bureau of State Audits issued this letter report titled *FI\$Cal Status Letter*, (Report 2007-039) in January 2008.

¹⁸ As of July 2010, the total projected cost for completion of the FI\$Cal project was \$1.6 billion, an amount similar to the projected cost of \$1.9 billion, the AOC's most current estimate as of January 2010, for the statewide case management project.

According to our IT expert, IPO and IV&V services should be performed by separate entities to allow the IPO to evaluate objectively the IV&V contractor to ensure that industry standards and best practices are followed.

Further, because the AOC uses the same consulting firm to provide both IV&V and IPO oversight, it risks limiting the effectiveness of the IPO services. We believe these two functions should be performed by separate entities to allow the IPO to evaluate objectively the IV&V contractor. According to our IT expert, the IPO services provide independent oversight over the IV&V services to ensure that industry standards and best practices are followed.

Additionally, rather than seeking bids from vendors that specialize in providing IV&V and IPO services, the AOC amended an existing contract with a consulting firm that was already providing it with consulting and audit services. In turn, this consulting firm hired two consultants to perform the IV&V and IPO services, with assistance from the consulting firm's staff. The AOC stated that it did consider seeking separate bids, but it deemed larger national firms too costly and not the best fit based on criteria such as technical competency, previous IV&V and IPO experience on major projects, experience working with California's executive branch, and knowledge of the California court system. Although the AOC confirmed that the consulting firm met these criteria, by failing to put these services up for bid, it does not know if other firms, equally qualified to provide these services, would have bid to provide them.

The AOC Asserts the Consulting Firm Was Never Intended to Be the Exclusive Provider of IV&V and IPO Services for CCMS

The AOC stated that it never intended for the consulting firm to provide the sole IV&V or IPO services, nor did the consulting firm's contract include sufficient hours for its staff to do so. The AOC affirmed that it initiated a verification and validation approach in 2007 to monitor CCMS development that was intentionally multifaceted and designed to provide appropriate oversight and monitoring of the development vendor by the AOC's CCMS project management personnel, staff and contractors from the AOC's information services division, the AOC's internal audit services unit, other AOC management and staff, superior courts' staff, as well as the consulting firm. The AOC further asserted that its efforts were designed consistent with IEEE standards. However, the AOC acknowledges that no documented plan exists to describe how this oversight was to be performed.

Also, the AOC has provided no evidence that the oversight it asserts was provided was done in a concerted, deliberate, structured manner rather than as a by-product of normal day-to-day responsibilities of project and AOC staff. Nor do the consulting firm's monthly status reports, governance committee minutes, or other AOC documents mention this approach. For example, a presentation made by the senior audit manager to the CCMS

oversight committee in October 2008 described comprehensive IV&V and IPO services that appear consistent with IEEE and best practices. This presentation did not indicate that any other entities or individuals would be involved in performing these efforts. Furthermore, as we discuss later in this chapter, many of the IV&V and IPO services described in the AOC's presentation were not practiced consistent with industry standards and best practices.

We question the effectiveness and adequacy of the AOC's oversight because of the AOC's lack of any documented plan, as well as the quality issues detected during testing that resulted in an unexpected 10-month delay to the project. Our IT expert advised that using AOC staff to perform IV&V and IPO services on a project of the size, scope, and complexity of the CCMS is problematic because most of the staff that the AOC indicated were involved also have a direct or indirect role related to the project. Therefore, they lack the independence to provide objective oversight of CCMS development. Our IT expert also concluded that the lack of any documentation for the AOC's oversight plan is troubling because it is unclear whether AOC management understood the plan and because it is difficult to hold staff accountable when the tasks they were supposed to perform are not documented. Our IT expert acknowledged that the AOC's approach may be acceptable for the development of a simple, low-cost, low-risk project; however, for a project of the size, scope, and complexity of CCMS, this approach carries great risk.

In reviewing the hours charged by the consulting firm to CCMS oversight activities between August 2007 and October 2010, our IT expert agreed that the amount of effort put forth was insufficient to represent comprehensive IV&V and IPO services for a project of the size, scope, and complexity of CCMS. The hours charged averaged the equivalent of about 60 percent of a person's time working on the project each month. Our IT expert noted that on the FI\$Cal project, which is still in the planning stages during which fewer such services are needed, two staff are working full-time on IV&V and another staff member is working almost full-time on IPO.

The IV&V and IPO Services Contract Did Not Require Those Services to Be Practiced Consistent With Best Practices and Industry Standards

In reviewing the consulting firm's monthly status reports to the AOC, our IT expert characterized the services provided by the consulting firm as a "technical review of selected work products," as opposed to the more comprehensive IV&V that is practiced when IEEE standards are required to be followed. The contract that the AOC and its consulting firm entered into as of July 2007 expressly requires the consulting firm to perform specific tasks

The AOC's oversight approach may be acceptable for the development of a simple, low-cost, low-risk project; however, for a project of the size, scope, and complexity of CCMS, the approach carries great risk.

related to IV&V but does not expressly call for conformity with IEEE standards. One such task requires the consulting firm to evaluate the source code for the system. The source code is the set of programming language statements that define how the IT system will work. The contract expressly requires the consulting firm to review a statistically valid sample of source code to provide early feedback on compliance with coding standards and to compare the code with design requirements. The consulting firm has only reviewed a sample of the source code files that were provided to the consulting firm by the development vendor. Although the AOC asserted that this satisfies the requirements of this contract task, our IT expert advised that in order for this IV&V procedure to be effective, the sample should have been selected randomly by the consulting firm rather than being provided by the development vendor. That way, the independence goal of IV&V is more likely to be satisfied. Moreover, the sample needs to be taken throughout development, rather than at one point in time. As Table 5 shows, our IT expert concluded that despite the fact that AOC is satisfied with the work performed under the contract and believes that its terms were fulfilled, the contract did not require many key IV&V services to be practiced in a manner consistent with best practices and industry standards.

Table 5
Degree to Which Customary Independent Verification and Validation Services Were Practiced on the California Court Case Management System

CUSTOMARY INDEPENDENT VERIFICATION AND VALIDATION (IV&V) SERVICE	PURPOSE	PRACTICED?	EXPLANATION OF PARTIAL PRACTICE OR ABSENCE OF PRACTICE
Software verification and validation plan	Describes the scope and approach of the verification and validation (V&V) effort.	✗	The AOC indicates no software V&V plan was prepared.
Management and technical review support	Support project management and perform technical reviews of intermediate and final work products.	●	
Software requirements review and evaluation	Evaluate requirements for correctness, consistency, completeness, accuracy, readability, and testability.	◐	Although Sjoberg Evashenk Consulting, Inc. (consulting firm) did engage in some requirements review and had related findings, apparently it did not map system requirements to software requirements or review the requirements specification.
Traceability analysis	Review and confirm that system requirements can be traced among the design, software code, and test plans. Analyze identified relationships for correctness, completeness, consistency, and accuracy.	◐	The consulting firm did not have access to the tool that manages requirement traceability to the test cases until October 2010, although it did perform other activities related to business rules traceability.

CUSTOMARY INDEPENDENT VERIFICATION AND VALIDATION (IV&V) SERVICE	PURPOSE	PRACTICED?	EXPLANATION OF PARTIAL PRACTICE OR ABSENCE OF PRACTICE
Concept V&V	Perform the tasks associated with delineation of a specific implementation solution to solve the user's problem. Select and allocate architecture requirements to hardware, software, and user interface components. Verify allocation of system requirements and validate the selected solution.	✗	This task typically occurs before the vendor is selected, but IV&V was not contracted until after Deloitte Consulting LLP (development vendor) was selected.
Acquisition support V&V	Procure support, including definition of need to acquire a system, support for procurement (request for proposal, supplier selection, and management of acquisition process). Perform V&V tasks related to scoping the V&V effort, planning for interactions with the vendor, reviewing system requirements, and acceptance testing support.	✗	This task typically occurs before the vendor is selected, but IV&V was not contracted until after the development vendor was selected. Also, we see no evidence that IV&V reviewed amendments to the development vendor's contract.
Criticality/integrity analysis	Verify that software integrity levels, which define the importance of the software to users, have been assessed and are correct.	✗	The consulting firm's monthly status reports from July 2007 through October 2010 do not refer to criticality analysis.
Verification of interface requirements	Confirm that requirements, design, and software code for interfaces with other systems are correct, consistent, complete, accurate, and testable.	✗	The consulting firm's monthly status reports from July 2007 through October 2010 do not indicate that the consulting firm reviewed requirements for interfaces.
System test plan generation/review	Review system test plan to validate the system requirements traceability and conformance to appropriate standards.	✗	The consulting firm's monthly status reports from July 2007 through October 2010 do not indicate that the consulting firm developed an independent system test plan or reviewed the development vendor's system test plan for consistency with local requirements and process standards.
Acceptance test plan generation/review	Review acceptance test plan to assure that the software correctly implements the system requirements.	◐	The consulting firm's monthly status reports for July 2007 through June 2010 do not indicate review of product acceptance test plans. When confirming this finding with the AOC, we were directed to the consulting firm's August 2010 status report, which indicates that this plan was received and reviewed. Given that acceptance testing was originally to start earlier in 2010 and that an unexpected 10-month delay resulted from quality problems identified during testing, we believe that conducting this test plan review in August 2010 did not represent a timely review. Therefore, we note this service as only partially practiced.
Configuration management assessment	Verify that the configuration management process—which manages the changes to software documentation and code, among other things—is complete and adequate.	◐	The consulting firm's assertion that it did not have access to the development vendor's software development process documentation and did not go to the development site would preclude review of the configuration management process, although the consulting firm did review the configuration management plan and made observations about document management on the project.
Security analysis	Assure that system security requirements are identified and addressed.	✗	The consulting firm's monthly status reports from July 2007 through October 2010 do not indicate that the consulting firm performed a security analysis on the design, although the AOC asserted that its information services division addressed system security requirements.

CUSTOMARY INDEPENDENT VERIFICATION AND VALIDATION (IV&V) SERVICE	PURPOSE	PRACTICED?	EXPLANATION OF PARTIAL PRACTICE OR ABSENCE OF PRACTICE
Risk analysis	Identify technical and managerial risks and make recommendations to reduce, eliminate, or mitigate them.	●	
Software design evaluation	Review the system design for correctness, consistency, completeness, accuracy, readability, and testability.	◐	The consulting firm indicated that it had limited access to software design, which was not specifically identified in its statement of work, however, it performed other activities related to design. The AOC asserted that it relied on extensive information services division efforts in this area.
Source code and source code documentation evaluation	Participate in software code review sessions and review a representative sample of software code and corresponding documentation to assure that it is correct, consistent, complete, accurate, readable, and testable.	◐	Although the development vendor provided it with a sample of source code, the consulting firm reported it did not have unrestricted access to the source code and documentation. The consulting firm reviewed the provided code against coding standards but not against other documentation or process standards.
Component test plan generation/ review	Review component test plan to assure validation of software components against requirements.	◐	The consulting firm's monthly status reports for July 2007 through June 2010 do not indicate that it reviewed component or integration test plans. When confirming this finding with the AOC, we were directed to the consulting firm's July and August 2010 monthly status reports, which indicate that these plans had been received and reviewed. Given that much of the component testing should originally have been performed in 2009, before the unexpected 10-month delay that resulted from quality problems identified during testing, we believe that conducting these test plan reviews in July and August 2010 did not constitute timely reviews. Therefore, we note this service as only partially practiced.
Integration test plan generation/review	Review integration test plan to assure validation of software components against system requirements and design as they are incrementally integrated with each other.	◐	The consulting firm's monthly status reports for July 2007 through June 2010 do not indicate a review of component or integration test plans. When confirming this finding with the AOC, we were directed to the consulting firm's July and August 2010 monthly status reports, which indicate that these plans had been received and reviewed. Given that much of the integration testing should originally have been performed in 2009, before the unexpected 10-month delay that resulted from quality problems identified during testing, we believe that conducting these test plan reviews in July and August 2010 did not constitute a timely review. Therefore, we note this service as only partially practiced.

Source: Our information technology expert's review of the consulting firm's IV&V and IPO monthly status reports. Customary IV&V services and definitions are from the Institute of Electrical and Electronics Engineers, Inc., Standard 1012.

● = Practiced.

◐ = Partially practiced.

✗ = Not practiced.

The AOC disagreed that these customary IV&V services were not practiced consistent with best practices, asserting that they were satisfactorily performed through the combined efforts of its own staff and its consulting firm. Moreover, the AOC asserts that the coordinated performance by its own staff and the consulting firm has provided adequate IV&V for this project. Nonetheless, for a project of this size and complexity, our IT expert concludes that the actual performance of certain IV&V elements was not in accordance with industry standards, and in many cases, there

is no evidence to demonstrate that some elements of IV&V were practiced at all. Moreover, for a project of this size, scope, and complexity, our IT expert advised that best practices call for a single, independent entity to perform the full complement of IV&V services. As a result, the limited scope of the IV&V services that were required by the AOC severely restricts the value of IV&V as an early warning system for quality problems. This assertion is evidenced by the problems the consulting firm observed with system requirements, design, and software quality—described later in the chapter—which may have contributed to an unexpected 10-month project delay in the scheduled completion of CCMS.

Likewise, our IT expert found deficiencies in the IPO services required by the AOC under the contract with its consulting firm. The AOC insists that the services provided by the consulting firm satisfy the specific contract tasks related to IPO services, and we acknowledge that the contract does not expressly call for conformity with certain industry standards or best practices. As shown in Table 6 on the following page, our IT expert has concluded that many customary IPO services were not practiced in a way that is industry standard for a project of this size and complexity. Our IT expert believes that the AOC's failure to contract for reasonable and customary IPO services to be performed in a manner consistent with best practices may have resulted in missed opportunities to promptly detect and report problems, which may have contributed to the unexpected 10-month project delay described later. For example, although customary IPO services include a review of the planning and tracking of the development of the system, including reviewing the business case, project plan, schedules, and contracts, the IPO services that were required and that were provided were primarily limited in scope to the development vendor's contract, rather than the entire development effort. Moreover, the consulting firm did not have access to the development vendor's detailed internal schedule and resource plans.

According to the AOC, the services provided by the consulting firm satisfied the requirements of the contract between the two parties. Regardless of whether the contract was satisfied, our IT expert has advised us that if the IPO services had included a review of Deloitte Consulting LLP's (development vendor) internal processes and the AOC's project management processes, as is the customary practice, then concerns with the development vendor's processes, practices, and outcomes, described later in this chapter, might have been identified and addressed sooner. This, in turn, may have minimized or avoided the resulting unexpected delays in the development of the system. Although the AOC has asserted that its staff did provide these services in tandem with its consulting firm, its plan for this coordinated IPO effort is undocumented, its staff cannot be considered independent, and there is no documentation evidencing such a review ever took place.

The limited scope of the IV&V services that were required by the AOC severely restricts the value of IV&V as an early warning system for quality problems.

Table 6
Degree to Which Customary Services of Independent Project Oversight Were Practiced on the California Court Case Management System

CUSTOMARY INDEPENDENT PROJECT OVERSIGHT (IPO) REVIEW SERVICES FOR HIGHLY CRITICAL PROJECTS	DEFINITION	PRACTICED?	EXPLANATION OF PARTIAL OR ABSENCE OF PRACTICE
Planning and tracking	Review and assessment of documented business case, project plans, schedules, estimates, budgets, staffing plans, contracts, issues/problems and their resolution, and mechanisms to track project progress against planned baselines.	◐	Sjoberg Evashenk Consulting, Inc.'s (consulting firm) review and findings were limited primarily to Deloitte Consulting LLP's (development vendor) contract and did not cover the entire development, including the Administrative Office of the Court's (AOC) effort. Furthermore, the consulting firm did not have access to the development vendor's detailed internal schedule and resource plans.
Procurement	Review and assessment of the procurement of a development vendor, including the sufficiency of detail in the scope of work and requirements specifications.	✗	The consulting firm was engaged after the AOC procured a development vendor for the California Case Management System (CCMS), and we see no evidence that independent project oversight (IPO) reviewed amendments to the development vendor's contract.
Risk management	Review and assessment of risk management efforts in place as well as their use and effectiveness.	●	
Communication	Review and assessment of communication plans, status reports, and escalation policies and practices.	●	
System engineering	Review of select systems engineering practices, including the following: <ul style="list-style-type: none"> • User involvement throughout the project. • Existence and compliance with software development life cycle and software engineering standards. • Requirements management and traceability. • Defect tracking. • Quality assurance processes. • Deliverable inspections. • Retention and use of independent verification and validation (IV&V) services. The review of these practices represents overlap with some IV&V services, but it provides an independent check on the diligence of IV&V.	◐	The consulting firm did not have ongoing, unfettered access to many of the internal software development life-cycle activities, processes, and standards and was unable to assess appropriateness or compliance. Because the consulting firm was also performing IV&V services, it was not in a position to independently review the thoroughness of the IV&V services.

Sources: Our information technology expert's review of the consulting firm's IV&V and IPO monthly status reports. Customary IPO services and definitions from the Department of Finance's Information Technology Project Oversight Framework, Appendix F, High Criticality Project checklist.

- = Practiced.
- ◐ = Partially practiced.
- ✗ = Not practiced.

The Consulting Firm's Monthly Status Reports Were Not Distributed During a Six-Month Period During Development

Although the consulting firm provided monthly status reports to the AOC for CCMS, the reports were not distributed to key decision makers at the AOC during the six-month period from November 2007 to April 2008. In its invoice submitted for services provided in December 2007, the consulting firm indicated that the then-product director of CCMS took exception with the

October 2007 report. As a result, the September, October,¹⁹ and November 2007 reports were not distributed to the CCMS oversight and steering committees. In its February 2008 invoice, the consulting firm made the following statement about significant challenges it faced in providing IV&V and IPO services:

“While we continue to conduct our IV&V and IPO efforts and prepare monthly status reports, we have had significant issues working with the CCMS product director and executive sponsor. We continue to highlight several issues where no progress has been made and no real attempts at corrective action to address the risks we noted have been taken—however, our attempts to meet with key project team members have been met with some resistance. However, we were able to meet with the executive sponsor on February 25, 2008, to discuss how to resolve issues, establish reporting protocols, and better understand expectations. It was agreed that we would have a “refresh” meeting with all the key players and, in essence, start towards a more collaborative working relationship.”

Subsequently, in May 2008, the consulting firm generated a status report that covered the previous six months. Withholding the distribution of the consulting firm’s monthly status reports to the governance committees for the six-month period is troubling because the consulting firm had begun to raise significant concerns. Specifically, in its October 2007 report, the consulting firm stated in its opinion that the AOC appears to have relinquished too much control over certain project elements to its development vendor, that the courts and the AOC have limited experience and knowledge of IT project management, that it is unclear how day-to-day project management is being conducted, and that IV&V and IPO issues reported are being left unresolved for too long. Because the monthly status reports for the six-month period were not distributed, the oversight and steering committees were not informed of significant IV&V and IPO concerns in a timely, unfiltered manner.

In response to our questions about this incident, the AOC asserted that the CCMS project management team and internal audit services had concerns about the monthly status reports—as distinct from the underlying IV&V and IPO work performed by the consulting firm about which neither the project management team nor internal audit services had significant concerns—primarily with their structure, format, and presentation of information, with the goal to make the monthly status reports more understandable to the steering and oversight committees. The AOC explained that

The consulting firm stated that it continued to “highlight several issues where no progress has been made and no real attempts at corrective action to address the risks we noted have been taken . . .”.

¹⁹ The AOC provided us final monthly status reports for September and October 2007.

between September 2007 and April 2008, development of CCMS was ramping up to full speed with numerous activities underway, including joint application development sessions, scheduling and design, and revisiting and recrafting project management plans and other frameworks from the civil system. The AOC stated that the consulting firm continued to provide services throughout that time, communicated its observations informally, and its draft reports were distributed to the AOC. The AOC also contends that there were no IV&V or IPO issues that were considered critical or warranted escalation during this period. Moreover, the AOC asserts that there was no obstruction of the reports' distribution, but simply a good faith and successful effort to improve the quality of the consulting firm's reports for the benefit of the governance committee members who received them. Nevertheless, our IT expert reviewed the monthly status reports before and after the six-month period and noted only minor differences in their format and structure. We also noted that in the September 2008 meeting of the steering committee, the minutes indicate a committee member asked if independent oversight was still in place and why the committee was not receiving the consulting firm's reports. The product director at that time responded that the AOC had previously agreed with the oversight committee to not provide the monthly status reports but rather only provide a "rolled-up" report. After some discussion, the minutes indicate that the AOC agreed to provide the monthly status reports to the committee going forward.

The AOC Failed to Sufficiently Address Independent Oversight Concerns

Despite the failure of the AOC to require IV&V and IPO services that are more closely aligned with IEEE standards and best practices for CCMS, the consulting firm raised significant concerns that the AOC does not appear to have sufficiently addressed. Under its contract, the consulting firm is to provide a monthly written status report of CCMS recapping its activities, areas covered, matters of importance, and a matrix of areas of concern it has identified. The report also includes a project oversight checklist that notes whether the AOC and the development vendor are performing customary project management practices. The monthly status reports do not prioritize identified concerns but rather present them chronologically as they are observed. As shown in Table 7, as of October 2010, the consulting firm had closed 12 of the 13 areas of concern it had raised since 2007. However, our IT expert's review of monthly status reports issued by the consulting firm from July 2007 to October 2010 found four concerns in particular that represented significant risk to the project, which the AOC does not appear to have appropriately addressed before the concerns were closed. Further, our IT expert

The consulting firm raised significant concerns that the AOC does not appear to have sufficiently addressed.

identified two additional concerns that were closed but it is unclear whether the issues were adequately addressed. Lastly, one concern raised by the consulting firm in April 2010 is still open as of October 2010 with no action taken by the AOC.

Table 7
Appropriateness of the Actions Taken by the Administrative Office of the Courts to Address Areas of Concern Raised by the Consulting Firm

MONTH FIRST REPORTED	AREA OF CONCERN RAISED	MONTH CLOSED	ACTION TAKEN BY THE ADMINISTRATIVE OFFICE OF THE COURTS TO ADDRESS THE CONCERN AS OF OCTOBER 2010*	EVALUATION OF APPROPRIATENESS OF ACTION TAKEN
July 2007	Schedule: Schedule is aggressive and should be reviewed to ensure that ample time has been allocated to each phase of the project.	June 2009	While the Administrative Office of the Courts (AOC) has already extended the schedule through contract amendments, it has accepted the project risk because neither the schedule nor budget can be changed.	Not appropriate: Closing this finding with a note about "accepting the risk" is not a prudent project management strategy. There is ample evidence that the schedule was aggressive, and in the two years following the identification of this issue, the schedule unexpectedly slipped approximately 10 months. It does not appear that the underlying cause of this finding was addressed, and this was because there was insufficient time and resources assigned to complete identified work. By failing to address the underlying cause, the AOC and Deloitte Consulting LLP (development vendor) may have rushed tasks essential for the creation of a quality product and paradoxically increased both the time and resources required to complete the project.
August 2007	Joint application development schedule: Development vendor should prepare a detailed schedule that sets realistic time frames needed to develop each functional area of the application and get agreement from relevant parties.	April 2008	Scheduling has improved to the point that this is no longer an area of concern.	Appears appropriate.
September 2007	Requirements gathering: The joint application development schedule should include a plan for how work flows and interrelationships are addressed so that requirements are not missed.	June 2008	The AOC implemented a requirements review process that would address some of the concern; however, since the final design was nearing completion, the consulting firm stated it saw little value in fully mitigating this concern.	Not appropriate: This finding expressed a concern that requirements might be missed with the process. Closing this because "final design is nearing completion" does not address the problem that the final design may fail to address portions of the problem. This closure indicates a desire to meet schedule targets rather than to assure the development of a quality work product.
October 2007	Project oversight activities: The AOC should assign a person the role of day-to-day management to ensure issues are resolved in a timely manner; do not impact downstream work efforts; and do not conflict with other project activities, legal provisions, or branch policy.	August 2008	The individual ultimately responsible for all project management activities was identified.	Unclear: This finding suggested that the AOC was not effectively managing the systems integration project with its development vendor in several significant ways. Although the concern was closed after an individual was assigned to the role, subsequent findings suggested that the problems were not addressed.

continued on next page...

MONTH FIRST REPORTED	AREA OF CONCERN RAISED	MONTH CLOSED	ACTION TAKEN BY THE ADMINISTRATIVE OFFICE OF THE COURTS TO ADDRESS THE CONCERN AS OF OCTOBER 2010*	EVALUATION OF APPROPRIATENESS OF ACTION TAKEN
October 2007	Joint application development session documentation: Use a new mechanism to ensure consistent documentation of joint application development session minutes including areas of discussion, issues raised, agreements reached, and results of actions taken.	August 2008	Although the AOC took some limited steps to address this concern, the consulting firm stated that since the final design is nearing completion, it sees little value in mitigating this concern.	Not appropriate: This concern related to the ability of the development team to understand the results of the requirements process. To close the concern by saying that design is nearly complete did not address the underlying implications that the design may be incorrect because of ambiguity in the joint application development session documentation. This situation further indicates that the project was trying to sustain the schedule at the expense of product quality.
October 2007	Governance structure: Clarify and establish complete governance structure to eliminate confusion related to issue escalation process and decision making.	May 2008	The consulting firm stated that a governance model was distributed and appears to be in use and effective.	Appears appropriate.
April 2008	Unclear requirements: Review and clarify the requirements to avoid confusion during later activities, such as software coding and testing.	June 2009	Data is being captured by the AOC during early testing that should assist in defining the extent of the problem and any future concerns will be raised as part of the testing assessment.	Not appropriate: This concern was the most significant finding related to project quality and indicates that the problem definition is unclear. The explanation for closure did not address the confirmation or refutation of the finding, nor did it note the significant potential consequences of the finding on overall product quality. Unclear requirements can lead to two kinds of issues. The first is that the design incorrectly represents the intent of the requirement. This error may be identified in testing if the people building the test cases are subject matter experts that are aware of the intent. The second type of issue is that the problem definition is incomplete. This weakness may not be detected until later in the life cycle when the system is in production. These errors are expensive to correct and they were not addressed by the closure explanation offered. This closure suggests a lack of understanding of the significance of the finding.
December 2008	Standardization and configuration: How requirements for standardizing and configuring the application will affect the design and maintenance of the application is unclear.	February 2009	The AOC stated that this concern is an operational and maintenance issue and is outside the scope of the consulting firm's effort. However, the AOC established a work group to determine whether configurable items are statewide standards or local configurations, but it believes these decisions will not impact the design.	Unclear: Although the AOC indicated that this concern was outside the scope of Sjoberg Evashenk Consulting, Inc.'s services, it should ensure that this concern is addressed by the independent verification and validation (IV&V) consultant during deployment.
December 2008	Single point of contact for information services division (division): A contact person should be established to track and manage progress on division-related activities.	February 2009	An individual with the authority to make decisions on behalf of the division was identified.	Appears appropriate.

MONTH FIRST REPORTED	AREA OF CONCERN RAISED	MONTH CLOSED	ACTION TAKEN BY THE ADMINISTRATIVE OFFICE OF THE COURTS TO ADDRESS THE CONCERN AS OF OCTOBER 2010*	EVALUATION OF APPROPRIATENESS OF ACTION TAKEN
March 2009	Justice partners interface plan: Determine the progress of the common state interfaces being reviewed by justice partners and assess the progress for impact on project schedule.	July 2009	The AOC clarified that the statewide justice partners will participate in testing the product.	Appears appropriate.
March 2009	Document management plan: Determine the progress of the generic interface to support any existing document management solution and assess the progress for impact on project schedule.	July 2009	The AOC has clarified that the lead courts that use the FileNet document management software are scheduled to test the system's generic document management interface.	Appears appropriate.
April 2010	Quality assurance report metrics: Include a definition or interpretation of all metrics shown in the reports.	Open	No change in this action item occurred.	Not appropriate: In the aftermath of significant quality issues detected by the AOC in December 2009 that apparently went undetected or unreported in the software development process for the preceding two years, the failure to promptly address IV&V concerns about the content and usefulness of quality assurance metrics reports was unreasonable.
August 2010	Product acceptance test plan: Either modify the plan or establish risks for points identified by the IV&V and IPO team and implement appropriate corrective actions.	October 2010	The IV&V and IPO team reviewed version 1.4 of the plan and found all previous concerns had been remedied.	Appears appropriate.

Sources: Our information technology expert's review of the consulting firm's IV&V and IPO monthly status reports.

* Action taken is based on the consulting firm's IV&V and IPO monthly status reports.

According to our IT expert, the AOC's inadequate response to these concerns may have resulted in missed opportunities to minimize and avoid schedule delays and quality issues in the development of CCMS. The consulting firm raised substantial and persistent questions about the project schedule and the quality of the system's requirements and design, which are key elements in the software development process and are described in the text box. For example, the consulting firm reported concerns regarding potential gaps in the requirements, which if not mitigated, may leave inadequate time to address such gaps or the system's completion date may need to be delayed. The consulting firm also raised concerns that most sections of the system design lacked completeness and would be difficult to test. Further, the consulting firm reported that the system design was not consistently traced back to the requirements it was intended to address, leading the consulting firm to conclude that the development vendor would be unable to write the

Definitions of Key Elements in the Software Development Process

Requirement—An essential condition that the system must satisfy.

Design—A process of defining the hardware and software architecture, components, modules, interfaces, and data for a system to satisfy specified requirements.

Testing—The running of a system or software program against a predetermined series of data to arrive at a predictable result for the purpose of establishing the acceptability of the system or program.

Source: *The IBM [International Business Machine] Dictionary of Computing, 1994.*

software without assistance from court experts. Although these concerns were significant and consistently identified in numerous reports, the consulting firm noted that the AOC did not completely address the concerns and instead moved forward with the development of the system. Moreover, the consulting firm reported in September 2008 that if design issues were not adequately addressed, more time would be spent for testing, and the risks of not meeting the CCMS product end date, as well as not including all the required functionality in the end system product, would increase.

When asked why it believed its responses to these four concerns were appropriate, the AOC stated that each concern was carefully reviewed and was closed based on thorough discussions and evaluation of risks. The AOC also stated that in closing these concerns it determined that they would not present a risk to the successful completion of the CCMS project and should not impact the successful functioning of CCMS. The AOC further stated that the monthly status reports are presented to the oversight and steering committees and no other actions besides those included in the reports have been noted.

Nevertheless, according to our IT expert, the recent project history of the development of CCMS suggests quality issues are likely present in both the product and the development vendor's process for developing the system. In particular, in December 2009 the development vendor and the AOC were in the process of conducting integration testing of CCMS, which in general serves the purpose of incrementally linking and testing system software modules to assure their proper functioning in the complete system. The consulting firm reported that during integration testing, AOC staff performing the testing identified four to five times the number of errors reported by the development vendor. Although the AOC extended testing by four weeks, the consulting firm further reported that the testing effort continued to run late, outstanding defects were not resolved, and the application appeared unstable and experienced downtime. Similarly, in January 2010 the consulting firm reported the high error rate may partially indicate that test procedures were not reviewed as thoroughly as needed. As a result, in February 2010 the development vendor added four senior managers to the project because, according to minutes of the March 2010 steering committee meeting, the development vendor was not happy with the results of the integration testing and was committed to making CCMS a high-quality product. In fact, the development vendor undertook a project-wide replanning effort, which resulted in the scheduled acceptance of the core application, used for daily operations of the court, being unexpectedly delayed seven months and noncore CCMS project deliverables, which include the statewide reporting data warehouse and justice

The consulting firm reported that during integration testing, AOC staff performing the testing identified four to five times the number of errors reported by the development vendor.

partner interfaces, being unexpectedly delayed 10 months.²⁰ AOC officials assert that the development vendor is responsible for the AOC's costs resulting from the 10-month delay. The AOC further states that there is a provision in the development contract to address the cost incurred by the judicial branch as a result of a delay for which the development vendor is responsible. The AOC has provided its estimated cost associated with the delay to the development vendor and is in active negotiations to bring closure to this issue. However, upon our request, the AOC declined to provide us with the estimated cost associated with the delay citing confidentiality concerns over the negotiations.

According to our IT expert, the fact that the quality issues previously described were not identified until the integration testing phase is indicative of a lack of proactive and transparent management of the process and product quality on the part of both the development vendor and the AOC. In fact, our IT expert believes that if the AOC had appropriately addressed the IV&V and IPO concerns regarding the system requirements and design of CCMS, these quality issues might have been identified and addressed much sooner in the development process. Further, in reviewing the development vendor's monthly status reports on the development of CCMS and the corresponding steering committee meeting minutes for the period covering April 2009 through September 2009, we noted that these status reports and minutes give no indication that problems with the quality of CCMS existed.

Our IT expert believes if the AOC continues not to address significant concerns raised by the consulting firm providing IV&V and IPO services, and if it does not ensure that the scope and quality of these services are appropriate for a project of this size, the AOC cannot be assured that the development vendor is reporting accurately on the quality and development of CCMS. In fact, based on the findings present in the July 2007 through October 2010 IV&V and IPO reports, quality problems with the civil system, and the quality problems with CCMS reported to date, our IT expert believes that CCMS may be at substantial risk of future quality problems as a result of the AOC's failure to appropriately address concerns raised by the consulting firm and the quality issues thus far experienced.

In light of the concerns identified by the consulting firm providing independent oversight, the quality and performance issues reported during the initial implementation of the civil system, the

CCMS may be at substantial risk of future quality problems as a result of the AOC's failure to appropriately address concerns raised by the consulting firm and the quality issues thus far experienced.

²⁰ As the Introduction describes, CCMS essentially has two portions: The first portion, referred to as the *core portion*, provides the superior courts with the functionality to manage all case types. The second portion, referred to as the *noncore portion*, are the external components that provide the functionality that will allow superior courts to interface with state and local justice partners.

quality and process compliance concerns reported by the vendor's internal quality assurance review, and the quality issues discovered during CCMS testing in December 2009 and January 2010, we believe that prior to proceeding with deployment of CCMS at the three early-adopter courts, there would be value in conducting an independent review of CCMS software and components to determine the extent of any quality issues and problems. We do not expect that conducting this review would require a halt in the project; rather, we would expect this review could be performed in concert with the remaining development and testing effort without significant disruption to the project.

Recommendations

To provide for an appropriate level of independent oversight on CCMS, the AOC should expand and clarify the scope of oversight services and require that oversight consultants perform oversight that is consistent with best practices and industry standards.

To ensure that no gaps in oversight occur between CCMS development and deployment, the AOC should ensure that it has IV&V and IPO services in place for the deployment phase of CCMS. Further, to allow for independent oversight of the IV&V consultant, the AOC should use separate consultants to provide IV&V and IPO services.

To ensure no significant quality issues or problems exist within CCMS, the AOC should retain an independent consultant to review the system before deploying it to the three early-adopter courts. This review should analyze a representative sample of the requirements, code, designs, test cases, system documentation, requirements traceability, and test results to determine the extent of any quality issues or variances from industry standard practices that would negatively affect the cost and effort required of the AOC to operate and maintain CCMS. If any quality issues and problems identified by this review can be adequately addressed, and system development can be completed without significant investment beyond the funds currently committed, the AOC should deploy it at the early-adopter courts during the vendor's warranty period.

To ensure that future major IT projects receive appropriate independent oversight over technical aspects and project management, the AOC should take the following steps:

- Obtain IV&V and IPO services at the beginning of the projects and ensure this independent oversight is in place throughout and follows best practices and industry standards appropriate for the size and complexity of the project.
- Employ separate firms for IV&V and IPO services to allow for the IPO consultant to provide independent oversight on the IV&V consultant as well as the project team's response to IV&V findings.
- Ensure that the staff performing IV&V and IPO services have experience and expertise that is commensurate with the size, scope, and complexity of the project they are to oversee.
- Ensure that independent oversight is not restricted in any manner and that all parties—the IV&V and IPO consultants, senior management, the project management team, and the development vendor—understand that the IV&V and IPO consultants are to have complete access to all project materials.
- Address promptly and appropriately the concerns that independent oversight consultants raise.

We conducted this audit under the authority vested in the California State Auditor by Section 8543 et seq. of the California Government Code and according to generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives specified in the scope section of the report. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Respectfully submitted,



ELAINE M. HOWLE, CPA
State Auditor

Date: February 8, 2011

Staff: John Baier, CPA, Audit Principal
Laura G. Boll
Aaron Fellner, MPP
Scott R. Osborne, MBA
Maya Wallace, MPPA
Jordan Wright, MPA

IT Expert: Catalysis Group

Legal Counsel: Sharon Reilly, Chief Counsel
Donna Neville, Associate Chief Counsel

IT Audit Support: Michelle J. Baur, CISA, Audit Principal
Sarah Rachael Black, MBA

For questions regarding the contents of this report, please contact Margarita Fernández, Chief of Public Affairs, at 916.445.0255.

Appendix A

RISKS IDENTIFIED IN THE DECEMBER 2010 READINESS ASSESSMENT OF THE SUPERIOR COURTS THAT ARE EARLY ADOPTERS OF THE CALIFORNIA COURT CASE MANAGEMENT SYSTEM

One of the key objectives of the California Court Case Management System (CCMS) early-adopter (early-adopter courts) readiness assessment was to identify the risks that will impact the project’s scope and timeline. The readiness assessment highlighted several risks that could prevent the successful deployment of CCMS at the three early-adopter courts. For example, the superior courts have indicated that staff do not have availability to work on deployment tasks given current vacancy levels. The readiness assessment also highlighted risks that indicate a lack of executive alignment and support for the project schedule. Table A summarizes the risks identified during the assessment. The risks have been categorized as either superior court-specific risks that require court actions or CCMS deployment program-level risks that require Administrative Office of the Courts’ actions.

Table A
Risks Identified in the December 2010 Readiness Assessment of the Superior Courts That Are Early Adopters of California Court Case Management System

CCMS RISK	IMPACT ON SUPERIOR COURT			CCMS PROGRAM IMPACT
	SAN DIEGO	VENTURA	SAN LUIS OBISPO	
Executive commitment	●	◐	○	●
Schedule	●	◐	○	●
Local justice partner participation	●	●	◐	●
Availability of court resources	●	●	◐	●
Data conversion	●	●	●	●
Facilities	◐	◐	●	●
Program governance	●	●	◐	●
Enhancement release	●	◐	○	●
Common production configuration	●	●	●	●
Administrative Office of the Courts/ California Court Technology Center support readiness	TBD*	◐	◐	◐
Technical infrastructure and environments	◐	◐	◐	◐

Source: Report by the development vendor, Deloitte Consulting LLP, titled *CCMS Early-Adopter Readiness and Integration Assessment Project*.

○ = Limited risk.

◐ = Identified risk.

● = Significant risk.

* The Superior Court of San Diego County has not decided where it will host the system, therefore, the risk cannot be evaluated.

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Appendix B

THE BUREAU OF STATE AUDITS' SURVEY OF THE SEVEN SUPERIOR COURTS THAT USE AN INTERIM VERSION OF THE STATEWIDE CASE MANAGEMENT PROJECT

The Bureau of State Audits conducted a survey of the seven superior courts currently using either the criminal or the civil system, which together constitute the interim systems of the statewide case management project. This survey appears below and includes questions that cover various topics. Chapter 3 of this report presents some of the survey's results.



Bureau of State Audits' survey on the Court Case Management System (CCMS)

- 1) Please identify the automated case management system(s) (CMS) currently in use by the court. If the court uses more than one CMS, please identify the case types processed by each system in the table below. For instance, "Example Case Management System Beta" is used to process Civil, Family, and Probate case types.

System Name	Year Installed	Case Types						
		Traffic	Civil	Family	Criminal	Juvenile	Probate	Other Case Types
ECMSA V2.3 (Example Case Management System Alpha)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECMSB V1.2 (Example Case Management System Beta)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 2) Is the court planning to implement any new case management systems during the next 12 months?

Yes No

- 3) Is the court planning to decommission any of its existing case management systems during the next 12 months? If yes, which ones and why?

4) Currently, what proportion of the court’s judicial officers who hear case types covered by CCMS actually use the application (e.g. _____ judicial officers out of a total of _____ judicial officers)?

(a) What system(s) do the remaining judicial officers, who hear case types covered by CCMS, use in place of CCMS? Why?

5) Currently, in how many courtrooms that hear case types covered by CCMS is the application being used (e.g. _____ courtrooms out of a total of _____ courtrooms)?

6) What are the total staffing costs that your court has incurred related to CCMS from the date that the court first started participating in the CCMS project through June 30, 2010?
\$ _____.

(a) With respect to the total staffing costs identified above, please provide a breakdown of the costs incurred in the following areas since the court first started participating in the CCMS project (by fiscal year if possible):

	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Staffing costs for CCMS development (e.g. application design and testing)					
Staffing costs for CCMS deployment (e.g. training, adapting business processes, user acceptance testing)					
Staffing costs for CCMS maintenance and support (e.g. testing, release management, and daily maintenance and support)					
Other staffing costs related to CCMS					

7) What are the total CCMS costs incurred by the court through June 30, 2010 for equipment and hardware, including the cost of computers, scanners, servers, network and data storage? This amount should exclude any payments from the AOC on behalf of the court.
\$_____.

8) Excluding Deloitte, has the court engaged with a third-party consultant regarding implementation of CCMS? If so, please include the name of the consulting firm(s), the total amount paid through June 30, 2010, the total amount of the contract(s), and the reason they were hired.

Name of Consultant: _____

Spent through June 30, 2010: \$_____.

Total amount of the contract: \$_____.

9) To the extent feasible, please list the amounts the court spent on maintenance costs in fiscal years 2008–09 and 2009–10 for the automated systems the court listed in the table above in Question 1, excluding maintenance costs related to CCMS or costs paid by the AOC. Maintenance costs are the costs for day-to-day operation of the case management systems:

- Personnel costs—programmers, operators, and analysts
- Hardware costs—lease, maintenance, or purchase costs for computers used to support the systems (generally not PCs unless they are dedicated to case management system operation)
- Software costs—maintenance, purchase, or licensing costs for software needed to support the case management systems
- Vendor/Contractor costs—contract costs to support/maintain the systems

Maintenance costs for fiscal year 2008–09	
Maintenance costs for fiscal year 2009–10	

10) Prior to deployment of V2 or V3, did Deloitte Consulting conduct a readiness assessment at the court to estimate the cost of deploying the application?

Yes No

(a) If “yes,” did Deloitte’s readiness assessment of the deployment costs include court level costs such as personnel, training, and equipment?

(a) If yes, were the court's actual deployment costs similar to the estimates? Please provide the court's perspective on any variance between the estimated and actual cost.

11) Which of the V2 or V3 case types did the court implement, and how long did it take to fully deploy the system across all applicable case types.

Case Types	Deployment Time
V2 Traffic <input type="checkbox"/>	
V2 Criminal <input type="checkbox"/>	
V3 Civil <input type="checkbox"/>	
V3 Small Claims <input type="checkbox"/>	
V3 Probate <input type="checkbox"/>	
V3 Mental Health <input type="checkbox"/>	

(a) Briefly describe the impact of adopting V2 or V3 on the court's day-to-day business operations. Specifically, describe any unexpected difficulties that the court encountered.

12) If the court's CCMS is locally hosted in the county:

(a) What are the benefits (financial or other) associated with hosting locally?

(b) Is the court planning to host V4 at the California Court Technology Center (CCTC)?

Yes No

i. If no, why not?

- 13) If the court's CCMS is hosted at the CCTC:
- (a) What are the benefits (financial or other) associated with hosting V2 or V3 at the CCTC?
 - (b) What is the total annual expense the court has been charged by the AOC for CCMS-related CCTC services? \$_____.
 - (c) Does the court want to host locally? If so, please provide the reasons why.
 - (d) Is the AOC paying any expenses related to hosting the court's CCMS at CCTC? If so, how much is the AOC paying annually, and how did this arrangement occur?
- 14) If your court used a CMS prior to V2 or V3 for similar case types, do most users see V2 or V3 as an improvement? Please explain your response.
- 15) Describe the court's experience with the CCMS defect resolution process and indicate the court's level of satisfaction with that process.
- (a) If applicable, what parts of the process would the court like to see changed?

16) One of the key features of CCMS V4 is that court case information and documents will be available to view online. Information and documents related to individual V4 cases can be seen by courts in other counties as well as local and state justice partners, including district attorneys, public defenders, law enforcement, and child welfare agencies. In an effort to determine the value of this functionality to trial courts, please indicate whether it would be beneficial to court operations to provide justice partners access to information electronically by checking the appropriate boxes. Also, please indicate whether the court currently provides the ability to review documents online to each justice partner.

Justice partner	Beneficial to court operations	Somewhat beneficial to court operations	Unnecessary to court operations	Currently sharing information electronically
Other trial courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
District attorney	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public defender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Child welfare agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sheriff's Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other law enforcement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Probation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Department of Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Department of Motor Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Franchise Tax Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17) Has the court received any formal or informal agreement from any of the local justice partners (including District Attorney, Public Defender, Sheriff, and Police) to use CCMS?

Yes No

(a) If yes, please identify which justice partners.

18) Please describe the court's perceptions of the AOC's plan to replace all courts' case management systems with CCMS V4, including the benefits the court believes will result from converting its case management systems to CCMS V4 as well as the challenges that the court believes may arise as a result of converting to CCMS V4.

19) Please provide any additional comments that the court believes are relevant to our review of CCMS V4.

Appendix C

THE BUREAU OF STATE AUDITS' SURVEY OF THE 51 SUPERIOR COURTS THAT DO NOT USE AN INTERIM VERSION OF THE STATEWIDE CASE MANAGEMENT PROJECT

The Bureau of State Audits conducted a survey of the 51 superior courts that currently do not use the criminal or the civil system, which together constitute the interim systems of the statewide case management project. This survey appears below and includes questions that cover various topics. Chapter 3 of this report presents some of the survey's results.



Bureau of State Audits' survey on the Court Case Management System (CCMS)

- 1) Please identify the automated case management system(s) (CMS) currently in use by the court. If the court uses more than one CMS, identify the case types processed by each system in the table below. For instance, "Example Case Management System Beta" is used to process Civil, Family, and Probate case types.

System Name	Year Installed	Case Types						Other Case Types
		Traffic	Civil	Family	Criminal	Juvenile	Probate	
ECMSA V2.3 (Example Case Management System Alpha)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECMSB V1.2 (Example Case Management System Beta)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 2) Is the court planning to implement any new case management systems during the next 12 months?

Yes No

- 3) Is the court planning to decommission any of its existing case management systems during the next 12 months? Which ones and why?

continued on next page ...

- We believe the systems meet all identified needs.
 - We believe the systems meet some, but not all of the identified needs of the court. (Please describe the needs that are not met.)

 - We believe that the systems fail to meet needs.
- 7) Does the court believe it will be necessary to replace its current case management system over the next seven years?
- No – Our systems should serve us for the foreseeable future.
 - Yes – Immediately. (Please indicate why.)

 - Yes – Over the next three years. (Please indicate why.)

 - Yes – In the next four to seven years. (Please indicate why.)
- 8) The AOC is in the process of developing the Court Case Management System Vision 4 (CCMS V4). Ultimately, the AOC plans to deploy CCMS V4 to all courts, with the intention that it will replace their current case management systems. Has the court conducted any research, or developed any plans, related to adopting alternative or additional case management systems other than CCMS V4 in the future?
- 9) A key component of CCMS V4 is that it will include an electronic document management system (DMS). The DMS is intended to allow courts to essentially become “paperless” by providing them with the capability to maintain documents electronically rather than in hard copy. Further, the DMS is intended to provide courts with the ability to quickly access information electronically from other courts and justice partners, such as the Department of Justice, as necessary.
- (a) Does the court currently use a DMS?
- Yes No

(b) If the answer to (a) is yes, please describe:

(i) Whether the DMS has improved the efficiency of your court's operations, and if so, how it has done so.

(ii) Whether the DMS has decreased costs incurred for supplies, including paper and other consumables, as well as costs for document storage. If the DMS has decreased costs incurred for consumables, please provide an estimate of these cost savings, if available, for fiscal year 2009–10.

10) The following questions relate to the AOC's involvement of the courts in its development of CCMS V2, V3, and V4:

(a) Did the AOC ask the court to participate in the development of CCMS V2, V3, and/or V4? Participation could include involvement in strategic planning, budget development, system design, and the specification of functional requirements. (Please specify the system(s) in your response)

Yes, the AOC asked the court to participate in the development of CCMS V2, V3, and/or V4. Please describe the ways in which the court participated and when it was involved.

No, the AOC did not ask the court to participate in the development of CCMS V2, V3, or V4.

The AOC asked the court to participate in the development of CCMS V2, V3, and/or V4 and the court declined. Please explain what this participation would and included and why the court declined to participate.

(b) Does the court believe that the AOC has provided sufficient opportunity for the court to be involved in the development of CCMS V2, V3, and/or V4? Please explain your response.

- 11) One of the key features of CCMS V4 is that court case information and documents will be available to view online. Information and documents related to individual V4 cases can be seen by courts in other counties as well as local and state justice partners, including district attorneys, public defenders, law enforcement, and child welfare agencies. In an effort to determine the value of this functionality to trial courts, please indicate whether it would be beneficial to court operations to provide justice partners access to information electronically by checking the appropriate box. Also, please indicate whether the court currently provides the ability to review documents online to each justice partner.

Justice partner	Beneficial to court operations	Somewhat beneficial to court operations	Unnecessary to court operations	Currently sharing information electronically
Other trial courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
District attorney	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public defender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Child welfare agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sheriff's Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other law enforcement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Probation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Department of Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Department of Motor Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Franchise Tax Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 12) Please describe the court's perceptions of the AOC's plan to replace all courts' case management systems with CCMS V4 including the benefits the court believes will result from converting its case management systems to CCMS V4 as well as the challenges that the court believes may occur as a resulting of converting to CCMS V4.
- 13) Has the court determined the effort necessary to convert its data systems and work flow processes to CCMS V4 when it is available? If yes, please describe what that effort will entail.
- 14) Please provide any additional comments that the court believes are relevant to our review of CCMS V4.

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(Agency response provided as text only)

Judicial Council of California
455 Golden Gate Avenue
San Francisco, California 94102

January 18, 2011

Ms. Elaine M. Howle*
California State Auditor
Bureau of State Audits
555 Capitol Mall, Suite 300
Sacramento, California 95814

Re: Judicial Council Response to Bureau of State Audits Draft Audit Report on the California Court Case Management System, Audit # 2010-102

Dear Ms. Howle:

The Judicial Council and its staff agency, the Administrative Office of the Courts (AOC), welcome the opportunity to respond to the Bureau of State Audits draft audit report of the California Court Case Management System (CCMS). The Judicial Council is joined in this response by the chairs of its Court Technology Advisory Committee and the CCMS Executive Committee. We all appreciate the staff time and effort the bureau has dedicated to the comprehensive review of this critically needed system. We acknowledge that it was difficult for your staff and ours to search, find, review, and analyze the thousands of documents related to a project of this duration and magnitude.

We are largely in agreement with the bureau's recommendations, and our responses to the recommendations are set forth in the attached document. The response was prepared by the AOC with the participation of Judicial Council members and the chairs of the council's technology committees, and approved after review by all signatories to this letter. The bureau's recommendations will assist us as we move forward with the deployment of CCMS. We disagree, however, with a few recommendations and findings that we believe do not accurately characterize CCMS or that reflect a misunderstanding of its history, origins, purposes, or progress. We address many of these issues in the attached response. You will see in our response that as the judicial branch continued on its path to becoming a cohesive statewide branch of government in recent years, our processes and protocols have matured and been revised to meet the growing responsibilities of the branch and of the projects and services we deliver for the courts and all Californians. Consequently, we are pleased to report that we have already instituted or begun to implement many of the bureau's recommendations.

①

We were also pleased that during the bureau's review, members of your staff were able to attend a CCMS demonstration. CCMS is not simply about project planning, software development, risk mitigation, and governance models. It is a revolutionary system that will reduce costs and dramatically improve operational efficiency for the trial courts and services to the public. It will change the way Californians understand and interact with their court system, the way the courts conduct business with the public and justice system partners, and the way the public and these partners access the courts and court and case information. It will provide law enforcement, child welfare, and other social service programs an opportunity to improve the services they provide to the public by giving them access to comprehensive and up-to-date information that is critical to their jobs.

* California State Auditor's comments begin on page 129.

Ms. Elaine M. Howle

January 18, 2011

Page 2

CCMS was developed with the input of industry leaders and more than 200 dedicated experts from 29 trial courts around the state. The final product will showcase the expertise of those individuals and provide the access to the California courts to which everyone, whether litigant, justice system partner, or legislative or executive branch agency, is entitled. Moreover, we know that the eyes of other state judicial systems and federal agencies are on CCMS, as California has been a pioneer in judicial system reform and innovation for more than 15 years.

CCMS is a single statewide case management system that will eventually replace more than 70 different case management systems of varying levels of capability and age currently in use in California's trial courts. CCMS leverages the latest technologies to provide benefits not only to the courts themselves, but also to millions of Californians, by greatly expanding electronic services and enabling a standardized approach to doing business across the state. CCMS will address the problems that have arisen from old, locally implemented technology solutions that, for the most part, could not share information within a county, much less across county lines or statewide. CCMS moves the judicial branch further toward ensuring equal access to justice for all Californians, regardless of their county of residence.

CCMS will have far-reaching impacts that will make California's entire justice system work more effectively. First, it will enable courts to improve the way they perform their day-to-day business. It will transform trial courts' paper-based processes—where interactions with the courts occur primarily through the mail or over the counter and response time can be measured in days—to an electronic environment where interactions occur electronically and much more rapidly. For court staff and judges, it will transform the way all cases are received and adjudicated and the way courts communicate with case participants. CCMS will provide judges with critical information as they are hearing cases and making decisions about releasing criminal defendants, placing children in foster care or reunifying them with their parents, ordering custody or visitation of children, and issuing protective or restraining orders. CCMS will save valuable court resources, a benefit that is more critical than ever in this economic climate. Resources currently used to enter data and search for paper case files will be redirected as data are updated electronically and case files are accessible electronically by judges and court staff simultaneously from wherever their offices are located.

CCMS will also provide much needed advantages and efficiencies to state and local law enforcement agencies, child welfare services, child support services, and all who participate in the court system as litigants, jurors, attorneys, victims, and witnesses. It will improve the quality of justice and reduce costs for litigants and lawyers. The benefits CCMS will deliver are too numerous to list here, but among those that cannot be overstated is how CCMS will enhance public safety. Problems that have existed for decades due to the inability to exchange up-to-the-minute information with law enforcement will be alleviated. Probation, parole, and law enforcement agencies and correctional institutions will be able to receive real-time data about court orders, convictions, protective orders, probation terms, and sentencing, providing them current and comprehensive information with which to do their jobs and better protect themselves and the public. CCMS will give law enforcement officers patrolling the streets more accurate information about individuals who have outstanding warrants or domestic violence restraining orders against them. They will learn of outstanding warrants and people in violation of firearms restrictions or probation terms. CCMS will provide information to improve the accuracy of background checks for individuals applying for jobs at schools or child-care facilities, and improve the exchange of criminal history information with the U.S. Department of Justice and departments of justice in all 50 states. CCMS creates the opportunity for a better-informed law enforcement community and, as a result, a better protected public.

Ms. Elaine M. Howle
January 18, 2011
Page 3

CCMS will provide e-government services for an integrated justice system. It will provide greater access and transparency of court records for the public, the Legislature, the Bar, and justice system partners. It will significantly improve the quality of justice available in California courts.

As with any large, complex statewide technology project, developing and deploying CCMS is not an inexpensive proposition. According to figures provided by the Office of the State Chief Information Officer (OCIO), \$1.5 billion was spent on the recently completed statewide child support system, and \$1.6 billion is estimated for the Financial Information System for California. Regarding CCMS, the OCIO states, "... the sheer magnitude of its size as well as the functional complexity of its operations makes [it] one of the largest Information Technology projects the state has ever initiated." It is estimated to cost \$1.3 billion when statewide deployment is complete. (Office of the State Chief Information Officer, *Review of the California Court Case Management System*, April 2010.) Total expenditures through fiscal year 2010–2011 for the CCMS project are estimated at a little more than \$330 million. When looking more broadly at additional costs not considered part of the CCMS project—i.e., adding in costs attributable to the development, deployment, and maintenance and support of the interim criminal and traffic system (V2), and maintenance and support of the interim civil system (V3)—total estimated expenditures through the end of FY 2010–2011 will be approximately \$545 million. ②

We recognize that we must always be good stewards of public funds, and even more so in the current fiscal climate. We believe that the Judicial Council has admirably fulfilled this obligation. Far from a project without oversight and input, CCMS has been a subject of discussion at virtually every Judicial Council meeting over the past four years. It is a formal agenda item at least once per year. Status updates are provided and direction from the council is sought. The council allocates funds for the support and continuation of CCMS. In light of the fiscal realities and significant budget reductions faced in the past few years, the council has reallocated more than \$200 million in funding planned for CCMS and other technology projects to support court operations and has scaled back initial deployment plans to begin with just three early adopter courts. This is a fiscally responsible plan to begin to deliver this much needed and long overdue case management system to California's trial courts and those who rely on them. ③

CCMS oversight has come from outside the branch as well, through annual reports to the Legislature, significant discussions with the Legislature's budget committees, review by the OCIO and Legislative Analyst's Office (LAO), and informational hearings of the Assembly Committee on Accountability and Administrative Review. Although we respect the bureau's opinions, we are somewhat perplexed by some of the recommendations that contradict the direction and recommendations we received from several oversight entities on how to proceed with CCMS. In 2004, the LAO recommended that CCMS adhere to the same project planning and management processes as executive branch information technology (IT) projects. The then-Chief Information Officer strongly disagreed. The Legislature was not persuaded by the LAO and did not adopt its recommendation. We now find ourselves, six years later, responding to the bureau's disagreement with the position taken by the Chief Information Officer in 2004 and its suggestion that we should have acted differently. ④

We want to conclude with one point: CCMS will work. That has been proven by the interim civil case management system, V3. Through the iterative approach used to develop CCMS, we gained valuable

Ms. Elaine M. Howle
January 18, 2011
Page 4

information along the way and made significant enhancements to the platform that will be CCMS.V3 works—it works every day. The six courts using the V3 interim civil system are processing 25 percent of the state's civil filings. The system has been used for civil cases since 2006, processing more than 7 million filings and 1 million cases.

We understand that courts implementing CCMS will face major challenges in transitioning to the new system. It will affect almost every aspect of their operations. Undertaking this amount of change can be daunting, and change management is a difficult process. We are committed to working closely with the courts and our justice partners as we move forward and will be responsive to their needs and concerns with this transition.

The Judicial Council appreciates the time and effort your office has taken to understand the history and future of the project and to provide recommendations on how best to move forward.

If you have any questions about our response, please contact Justice Terence L. Bruiniers, Chair, CCMS Executive Committee, at 415-865-7342 or terence.bruiniers@jud.ca.gov or Mark Moore, Executive Program Director, AOC CCMS Program Management Office, at 415-865-4010 or mark.moore@jud.ca.gov.

Sincerely

(Signed by: Tami Cantil-Sakauye)

Chief Justice Tami Cantil-Sakauye
Chair of the Judicial Council

(Signed by: Terence L. Bruiniers)

Justice Terence L. Bruiniers
Chair, CCMS Executive Committee

(Signed by: Richard D. Huffman)

Justice Richard D. Huffman
Chair, Executive Planning Committee

(Signed by: Kenneth K. So)

Judge Kenneth K. So
Vice-Chair, Executive Planning Committee

(Signed by: Sharon J. Waters)

Judge Sharon J. Waters
Chair, Litigation and Management Committee

Judge Winifred Younge Smith
Vice-Chair, Litigation and Management Committee

(Signed by: Marvin R. Baxter)

Justice Marvin R. Baxter
Chair, Policy Coordination and Liaison Committee

(Signed by: James E. Herman)

Judge James E. Herman
Vice-Chair, Policy Coordination and Liaison Committee

(Signed by: Douglas P. Miller)

Justice Douglas P. Miller
Chair, Rules and Projects Committee

Judge Erica R. Yew
Vice-Chair, Rules and Projects Committee

(Signed by: Ming W. Chin)

Justice Ming W. Chin
Chair, Court Technology Advisory Committee

(Signed by: Edith R. Matthai)

Edith R. Matthai
Member, Judicial Council

(Signed by: Sue Alexander)

Commissioner Sue Alexander
Member, Judicial Council

(Signed by: Joel S. Miliband)

Joel S. Miliband
Member, Judicial Council

(Signed by: Stephan H. Baker)

Judge Stephan H. Baker
Member, Judicial Council

(Signed by: Frederick K. Ohlrich)

Frederick K. Ohlrich
Member, Judicial Council

(Signed by: Keith D. Davis)

Judge Keith D. Davis
Member, Judicial Council

(Signed by: James N. Penrod)

James N. Penrod
Member, Judicial Council

(Signed by: Kevin A. Enright)

Judge Kevin A. Enright
Member, Judicial Council

(Signed by: Michael M. Roddy)

Michael M. Roddy
Member, Judicial Council

(Signed by: Terry B. Friedman)

Judge Terry B. Friedman (Ret.)
Member, Judicial Council

Judge Robert James Moss
Member, Judicial Council

(Signed by: Teri L. Jackson)

Judge Teri L. Jackson
Member, Judicial Council

Judge Mary Ann O'Malley
Member, Judicial Council

(Signed by: Ira R. Kaufman)

Judge Ira R. Kaufman
Member, Judicial Council

Judge David S. Wesley
Member, Judicial Council

(Signed by: Alan Carlson)

Alan Carlson
Member, Judicial Council

(Signed by: Kim Turner)

Kim Turner
Member, Judicial Council

Miriam A. Krinsky
Member, Judicial Council

(Signed by: William C. Vickrey)

William C. Vickrey
Secretary of the Judicial Council

Attachment to Judicial Council Response to Bureau of State Audits Review of the California Court Case Management System (CCMS) Audit #2010-102

Introduction

On behalf of the Judicial Council, the Administrative Office of the Courts (AOC) welcomes the opportunity to respond to the draft audit report of the California Court Case Management System by the Bureau of State Audits (BSA). The AOC is largely in agreement with the BSA's recommendations, and in many instances, has previously adopted practices and policies consistent with the recommendations made. Although the AOC does not agree with some of the report's findings and conclusions, it appreciates BSA's willingness to correct many of the factual inaccuracies it has identified in the draft report. The AOC did not respond to all of the findings in the report, focusing instead on those that do not accurately characterize CCMS or that reflect a misunderstanding of its history, origins, purposes, or progress. The recommendations are numbered and appear in the same order as in the draft report, followed by the responses. Recommendation text is taken verbatim from the draft report.

⑤

Chapter 1. Project Planning

Comments on Chapter 1 Findings

Before discussing where CCMS stands today—finalizing development of a single statewide case management system for California's superior courts—it is important to understand how it was initiated and how it has evolved. The development of CCMS was triggered by the actions and business demands of superior courts that found themselves with failing or inadequate case management systems that needed to be replaced so that the courts could continue to operate.

When the state assumed responsibility for funding the trial courts in 1998, more than 130 variations of 70 independently operated systems were used in California's trial courts, having been developed by counties, courts, and private commercial vendors. Information technology services were provided to the courts by county information technology departments, and the level of technology varied widely from court to court depending on the resources and technological capabilities provided by the county government. Court users could not expect and did not receive the same level of services or the same access to court or case information across the state. Many of the systems in place had become outdated and no longer met the needs of the courts, justice partners, or California's court users. The cost of maintaining older, disparate, and incompatible systems was not economical, and many courts had little or no control over escalating costs and no recourse for failing systems. The multiplicity and proliferation of systems was inconsistent with the expectation, expressed by then-Governor Pete Wilson and repeated by Governors Gray Davis and Arnold Schwarzenegger, that the judicial branch would consolidate its technology platforms and improve its ability to exchange information with state and local justice partners.

Even before the implementation of state trial court funding, the Legislature found that "the management of civil and criminal cases, including traffic cases, and the accounting for funds in the trial courts requires these courts to implement appropriate levels of administrative automation." (Gov. Code, § 68090.8.)

In 2000, the Judicial Council adopted a Tactical Plan for Court Technology to put in place a plan to achieve the efficiencies and economies expected from courts operating as a unified branch of state government. The plan called for the formation of court technology groups to acquire or develop common

case management systems. One of these groups was the Southern California Technology Group (SCTG), which comprised 10 courts.

Over the next two years, several options were considered for moving toward a limited number of case management systems, but ultimately in 2002, the courts in the SCTG reached a unanimous decision to develop or acquire a single comprehensive case management system that would meet the requirements of all California courts and support any size court in the state. Authority to pursue this single solution was delegated to the Southern Courts Oversight Committee, which included leadership of the Superior Courts of San Diego, Los Angeles, Orange, and Ventura Counties. As the scope of the project expanded from a regional to a statewide solution, this group was later renamed the CCMS Oversight Committee and was expanded to include representatives from the Superior Courts of Alameda and Sacramento Counties. The committee developed the vision for a common case management system that would, over time, evolve with changing technology to meet the growing business demands of the courts and the state. The CCMS Oversight Committee and its vision guided CCMS from the V2 criminal and traffic system through the final product, based on thousands of hours of collaborative work by court subject-matter experts, to ensure that the program met the needs of the California courts and court users.

Assessments of existing court technology found that many courts were relying on old case or calendar management systems that were expensive to maintain, difficult to modify, limited in functionality, and technologically outdated. The Tactical Plan for Court Technology noted that the executive and legislative branches were unwilling to provide technology funding to perpetuate 58 or more different approaches to the same problem. They expected the judicial branch to propose a comprehensive solution that addressed the evolving needs of the branch, and which would incorporate e-business solutions similar to those being adopted and implemented by other state government agencies. As a result, the SCTG and later the CCMS Oversight Committee did not generate statewide planning documents, such as a business case or cost benefit analysis. And the Legislature chose not to require it to do so. In 2004, as part of its annual budget analysis, the Legislative Analyst's Office (LAO) raised concerns that the CCMS project was not following executive branch project management processes and protocols and therefore was subject to greater risk exposure. The LAO recommended that the AOC be required to follow the same project planning and project management practices that applied to executive branch agencies when proposing complex information technology projects, including completing a cost benefit analysis before proceeding further. The state's Chief Information Officer at the time, J. Clark Kelso, disagreed with the LAO's analysis, concluding that "having made the business decision to become a statewide organization [through trial court funding and unification], the courts need to realign their technology to support that new business model." He observed that the project appeared to be properly managed and questioned the benefits that would be achieved by requiring different practices and protocols. The Legislature's budget committees considered the LAO's recommendations but did not concur. Rather than adopting the LAO's recommendation and directing the Judicial Council to cease expenditures on CCMS and institute executive branch processes, the Legislature instead chose to require only annual reporting of CCMS expenditures to the Legislature. BSA may now disagree with what the Chief Information Officer advised in 2004 and what the Legislature required of the branch, but the judicial branch appropriately moved forward, consistent with the direction provided at that time.

In moving ahead with CCMS, the AOC structured the contract with the development vendor in a manner that would effectively control costs in the best interests of the state. The contract was the product of months of negotiations intended to ensure the best and most cost-efficient terms possible. The contract reflects best practices, including the following:

- **Fixed price.** The contract sets a fixed price for each deliverable. This pricing methodology is recognized as less expensive than paying for deliverables on a time-and-materials basis. Until a deliverable completely meets the stated acceptance criteria, the AOC does not pay for it.
 - **Payment retentions.** The AOC retains a portion (10% or 15%) of each invoiced amount to ensure the completion of the entire project and will release the retention payments only upon final acceptance of the system.
 - **Implicit services.** The contract requires the vendor to provide all services that are necessary to and implicit in the provision of the deliverables, whether specifically stated or not. This provision eliminates the vendor's ability to request additional money for services that were implied but not expressly set forth in the agreement.
- ⑦ • **Amendment process.** The contracting process was designed with the expectation that there would be multiple amendments. The AOC executes amendments to define further contractual obligations only when sufficient detail becomes available and when planned services need to be added to the contract (such as deployments to courts and specific system enhancements). This approach is constructed for the purpose of protecting the financial interest of the judicial branch and the state from being contractually obligated to certain costs and activities before the full extent of the requirements are known.

The AOC recognizes that the executive branch does not typically issue as many amendments to its contracts as the AOC has done in the CCMS project. However, the contract was originally structured not only to address system development, but also maintenance and support, enhancements and system upgrades, civil and criminal system deployment, and knowledge transfer. Most of the amendments (74 of 102) were for court-paid deployments (45) and for court-requested enhancements (29). Several amendments were created to transfer knowledge from the vendor to the AOC to enable the AOC to provide maintenance and support of a mature system at a much lower cost. Just as a requirement for discrete deliverables is considered to be a best practice in procurement, using an amendment for a discrete scope of activities is also a best practice because the work and schedule are well defined and easier to manage and, overall, the contract is easier to administer.

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The CCMS vendor has prepared deployment readiness assessments for the three early adopter courts. These assessments will provide the AOC with much more complete information for future solicitations for deployment of CCMS in the remaining courts. The AOC believes that all deliverables under the CCMS contract are well defined and will ensure that future deliverables, whether part of the existing development contract or part of a future deployment contract, are also fully defined.

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Like BSA, the AOC recognizes the importance of effectively structuring the warranty for a project of the size, scope, and complexity of CCMS. Based on experience with the warranty for the interim civil case management system (V3), the CCMS warranty has been structured so as to protect the investment made by the judicial branch. Presently, the CCMS warranty will begin no later than eight months after system acceptance or upon the productive use of the system in a court, whichever occurs first. Under the current deployment plan, the warranty will cover nine months of early adopter court deployment activity, during which time the courts will be building the parameters set within CCMS to govern how casework is processed through the system, training users on the system, and conducting user acceptance testing of CCMS. All of this activity will be done using and testing CCMS functionality. Any defects discovered during

this phase will be covered by the warranty. The early adopter courts will use the system in production, live in the court, for approximately three additional months before the warranty expires. Any defects identified during this period will also be covered by the warranty.

9

Responses to BSA Recommendations

Recommendation 1: To understand whether CCMS is a cost-beneficial solution to the superior courts' case management needs, the Administrative Office of the Courts (AOC) should continue with its planned cost-benefit study and ensure it conducts the study before spending additional significant resources on the statewide case management project.

Response: Agree. In October 2010, the AOC engaged the Grant Thornton firm to perform a cost benefit analysis for developing CCMS and deploying it in all 58 superior courts in California. The analysis is expected to be completed in February 2011. The AOC will use the results of the analysis and the underlying cost benefit model to develop recommendations regarding the CCMS deployment strategy for key decision makers. The AOC additionally concurs that the cost benefit analysis should be updated at key junctures and has already directed that the analysis be updated after deployment to the three early adopter courts before further deployment decisions are finalized.

Recommendation 2: The AOC should ensure that the cost benefit study includes a thorough analysis of the costs and benefits of the statewide case management project, including a consideration of costs and benefits it believes cannot be reasonably quantified.

Response: Agree. The contract for the cost benefit study directs that a thorough analysis be completed and the methodology being applied by the contractor is designed to deliver these results. The analysis will include:

- All the elements that would typically be included in the Economic Analysis Worksheet of a Feasibility Study Report submitted by an executive branch agency;
- Information derived from a survey sent to all 58 superior courts concerning their existing case management-related business processes (48 courts responded);
- Analysis of survey results relating to costs for courts' current case management systems. To date, 23 courts have completed this survey and participated in follow-up telephone interviews;
- Evaluation based on site visits made to 6 courts, selected as a representative sample of courts based on their case management systems and court operations;
- Costs likely to be incurred by courts for deployment of CCMS, primarily related to staff compensation;
- Costs of integrating CCMS with the justice partners of 2 of the 3 early adopter courts. While performing a full cost analysis of every justice system partner in every county is not in itself cost-effective or feasible, a review of the costs in 2 early adopter courts will provide an empirical basis for estimating the potential costs for justice partners in other counties; and
- A discussion of costs and benefits that are qualitative in nature or otherwise cannot reasonably be quantified.

Recommendation 3: The AOC should carefully evaluate the results of the study and present a recommendation to the Judicial Council regarding the course of action that should be taken with CCMS.

- ③ **Response: Agree.** The Judicial Council is regularly updated on the status and the progress of the development of the case management system and makes decisions about the allocation of funding to support its further development and deployment. In December 2010, the Judicial Council, through the action of its Executive and Planning Committee, adopted a revised governance and management model for CCMS to support the completion of development and the deployment phase. As the project moves into its final phases, broader participation is necessary to ensure the smoothest transition possible for courts, court users, and justice system partners. The new governance model, as recommended by the Office of the State Chief Information Officer (OCIO), provides explicit direction for decisionmaking and reporting by and to the CCMS Executive Committee, its advisory committees, and the Judicial Council—the executive sponsor of CCMS—to secure the necessary guidance and direction for moving forward with the project. The results of the cost benefit analysis will be delivered to the appropriate CCMS governance committees and the Judicial Council for appropriate action.
- ⑩

Under the governance model, day-to-day management of the CCMS program has been consolidated into a new CCMS Program Management Office (PMO) led by an executive program director reporting directly to the Chief Deputy Director of the AOC. This model is consistent with the strong recommendation made by the OCIO. The CCMS PMO will be responsible, under the direction of and consistent with the policies and priorities developed by the governance committees, for application development, testing, and ongoing CCMS maintenance and support. In addition, court deployments, budget forecasts, project management reporting, and e-business portfolio management will be overseen by the CCMS PMO, which is ultimately responsible to the Judicial Council. The governance model consists of an executive committee (the CCMS Executive Committee) and three advisory committees (the CCMS General Administrative Advisory Committee, the CCMS Operational Advisory Committee, and the CCMS Justice Partner Advisory Committee) composed of trial court judges, appellate court justices, trial court executive officers, and appellate court clerk/administrators, with state and local justice partner and bar participation. These committees will provide oversight of the CCMS program, including the program budget, application functionality, implementation priorities, and e-business initiatives. Working with the CCMS PMO, the executive committee will keep the Judicial Council informed about the progress and overall health of the program as well as make any recommendations necessary to ensure that CCMS is successfully implemented.

Recommendation 4: The AOC should fully share the results of the study as well as its recommendations to all interested parties, such as the superior courts, justice partners, the Legislature, and the Information Office.

Response: Agree. It is the intent of the AOC to be fully transparent with the cost benefit study and to share it with the Legislature, the Governor, the superior courts, the OCIO, justice partners, and all other interested parties. Consistent with the rule 10.500 of the California Rules of Court, this report will be publicly available.

Recommendation 5: The AOC should update the cost benefit analysis periodically and as significant assumptions change.

Response: Agree. As key developments occur (e.g., after the deployment to the three early adopter courts) and if there are changes in significant assumptions, the AOC will update the analysis. The new governance model makes it clear that any changes to the CCMS program budget that increases the total cost of the program will require approval by the AOC Project Review Board (discussed below) and the Judicial Council.

Recommendation 6: To ensure the statewide case management project is transparent, the AOC should make sure all key decisions for future activities on CCMS are documented and retained.

Response: Agree. All key decisions will be documented and all documentation provided to or produced by the CCMS governance committees and the CCMS PMO will be retained throughout the life of the CCMS project. All available documentation predating this new governance model will also be retained throughout the life of the CCMS project. Additionally, the CCMS PMO will report to the Judicial Council on a quarterly basis. The reports to the Judicial Council will include the health of the program from a scope, schedule, budgetary, and resource perspective as well as any specific recommendations that the council should consider. All reports to the council will be posted on the California Courts public website. Other documentation will be available to the public in a manner consistent with rule 10.500 of the California Rules of Court, which strives for transparency of judicial administrative records and to ensure the public's right of access to such records.

Recommendation 7: To ensure its contract with the development vendor protects the financial interests of the State and the judicial branch, the AOC should consider restructuring its current contract to ensure the warranty for CCMS is adequate and covers a time period necessary to ensure that deployment of CCMS has occurred at the three early-adopter courts and they are able to operate the system in a live environment.

Response: Agree in part. The AOC agrees that the warranty needs to be of sufficient duration to allow CCMS to be operating in a live environment before the expiration of the warranty. The AOC has already negotiated a 12-month system warranty for CCMS that will begin no later than 8 months after system acceptance or upon productive use of the system in a court, whichever occurs first. The AOC is negotiating with the vendor to provide additional latitude about the start and end of the warranty period but otherwise does not anticipate restructuring the current contract.

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Recommendation 8: If the Judicial Council determines that CCMS is in the best interest of the judicial branch and it directs the AOC to deploy the system statewide, assuming funding is available, the AOC should ensure that any contract it enters into with a deployment vendor includes the following: cost estimates that are based on courts' existing information technology (IT) environments and available resources to assist with deployment activities; well-defined deliverables; and adequate responsibility is placed on the vendor for conducting key steps in the deployment of the system.

Response: Agree. Any deployment contract will take into account assessments of each court's existing IT environment and available resources. Information gathered through the deployments to the early adopter courts will enable the AOC to accurately estimate deployment costs. The AOC will also ensure that any deployment contract requires the vendor to provide all services necessary to complete the deliverables due under the contract and that all deliverables are well defined. The AOC will negotiate the most favorable terms possible when entering into a deployment contract, including placing appropriate responsibility on the vendor. However, in discussions with the OCIO after its 2010 review of CCMS, the OCIO raised concerns that the prior, unexecuted deployment contract placed too much responsibility on the deployment vendor and strongly recommended that the courts and the AOC assume greater responsibility. The AOC will take into account both the BSA and OCIO recommendations on this issue and will consider all options for deployment to best protect the financial interests of the branch, including consideration of not outsourcing deployment services for some smaller court deployments.

Recommendation 9: The Judicial Council should ensure that the governance model for CCMS ensures that approval of contracts and contract amendments that are significant in terms of cost, time extension, and/or change in scope occur at the highest and most appropriate levels, and that when contracts or contract amendments above these thresholds are approved, that the decision makers are fully informed regarding both the costs and benefits.

Response: Agree. The CCMS governance committees, the CCMS PMO, and the AOC Project Review Board (PRB), will have structured protocols in place to ensure that all significant contract amendments, changes in cost and scope, and extensions to time frames will be approved at the appropriate levels based on full and complete information, including costs and benefits associated with the contract or contract amendments. As described in response to recommendation 3, the governance committees are charged with providing oversight of the CCMS program, including the program scope, program budget, application functionality, implementation priorities, and deployment schedules. The CCMS governance model document includes summaries of responsibilities for each of the governance committees, as well as for the CCMS PMO, including responsibilities for key decisionmaking. The document also requires the elevation of other decisions, as appropriate within the governance model, to the Administrative Director of the Courts or the Judicial Council.

Recommendation 10: To ensure any future IT projects are in the best interest of the judicial branch and the State, the AOC should do the following: complete a thorough analysis of the project's costs and benefits before investing any significant resources and time into its development, and update this analysis periodically and as significant assumptions change; document and retain all key decisions that impact the project in general, including the goals of the project; and better structure contracts with development and deployment vendors to protect the financial interests of the judicial branch and ensure the contracts provide for adequate warranty periods.

Response: Agree. The AOC has been working diligently with the OCIO since its review of CCMS. The AOC has taken steps to integrate the OCIO's recommendations into its existing technology project management process. This includes working with the OCIO on project concept documents and project charters for future IT projects and using project planning documents more similar to those typically used for executive branch IT projects.

The AOC will continue to work with the best qualified legal counsel to ensure that its development and deployment contracts protect the financial interests of the judicial branch and the state. Moreover, the AOC will include appropriate warranty periods in its IT projects and will ensure that any future development and deployment contracts address the length and timing of a warranty period to ensure necessary protection.

Chapter 2. Project Budget and Cost

Comments on Chapter 2 Findings

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Since the initiation of CCMS, cost management and review processes have been in place that were appropriate to the size, scope, and complexity of the project. As the vision of the project evolved from a proposed regional case management system to a comprehensive statewide system that includes 121 justice partner data exchanges, a public Internet portal, statewide data warehouse, and court reporter and interpreter scheduling, the cost management and review processes were enhanced to reflect the project's increased scope, complexity, and resource needs. The evolution of these review processes includes the following:

- In 2004, the AOC developed a uniform system to compile all cost estimates and make decisions to identify funding sources based on these aggregated costs.
- Beginning in 2007, various major projects, including CCMS, the California Courts Technology Center, and Phoenix (financial reporting system), were approaching critical junctures, with planned increases in activities and expenditures. At that time it was determined that a comprehensive examination of cost information, assumptions, and plans related to statewide projects should be undertaken.
- Beginning in May 2007, the AOC initiated a review of all cost assumptions and estimates for major projects. Revised project budgets and funding plans were developed and a uniform ongoing process for reviewing, making recommendations on, and managing future technology portfolio funding changes was established. This effort resulted in preliminary estimates for all projects, including a specific estimate for CCMS through project completion.

Projected costs for CCMS, as reflected in this new estimate, had increased markedly over prior estimates. The increase in costs, however, was due to expansion of the project scope and higher-than-expected deployment costs, not lack of project management or control over the vendor. For example, increased costs were driven by:

- Significant expansion of the scope of the project to cover all case types handled by the superior courts; (12)
- Addition of enhanced deployment services, including deploying document management systems to the courts;
- Inclusion of a significantly more robust set of justice partner data exchanges (from the initial plan of 92 to 121 data exchanges); and
- Expansion of justice partner integration options to better address court needs and support for the justice partner integration efforts (described more fully in recommendation 21).

The Judicial Council communicated the increased estimated total project costs to the Legislature as part of the annual budget process. At meetings and forums conducted around the state in January 2008, courts were informed of the CCMS cost estimate and the need for courts to directly contribute additional funds to support the project. By early fall 2008, consistent with the budget development process, the council submitted a Budget Change Proposal (BCP) to the Department of Finance that identified a projected funding shortfall for technology, including identifying future year shortfalls for CCMS. The Governor and the Department of Finance were also briefed regarding the revised project cost estimate and the potential funding gap for completion of statewide deployment. The BCP was transmitted to the Legislature in January 2009 as part of the fiscal year 2009–2010 Governor’s proposed budget process. During the first week of February 2009, the AOC briefed key legislators and staff, as well as staff at the Legislative Analyst’s Office, regarding CCMS cost estimates, potential financing options, and project status. (13)

Another result of the 2007 review of the cost estimates for the IT projects under way was the implementation in FY 2007–2008 of an Information Technology Investment Management Program (ITIMP), managed by the PRB. ITIMP provides enhanced and centralized project review processes to manage resource allocation decisions throughout the judicial branch and helps ensure that approved trial court

initiatives provide positive business value and are managed in order to realize that value. ITIMP requires project costs and any subsequent operational costs to be identified at project inception, with budgets and expenditures recorded in the AOC's Oracle financial system. Any changes in the scope, budget, or timeline of a project are identified to allow for the PRB's review and determination of whether recommendations should be made to the council regarding continuation of the project. With this technology cost review and management process in place, the estimated costs and budget for CCMS, as well as other major projects, are revised and updated as project changes with cost implications are identified or approved.

⑭ Consistent with its dedication to full and transparent reporting, the Judicial Council is committed to keeping the Legislature and the Governor fully informed of the costs associated with its major projects. CCMS project costs are currently reported to the Legislature in the annual report on the status of the project and in other periodic updates. Costs reported but shown as distinct from the CCMS project are:

- V2 development, deployment, and maintenance;
- V3 maintenance; and
- Maintenance costs for CCMS and document management systems.

The V2 and V3 interim systems, like other court interim and legacy systems, will be replaced by CCMS. As with the costs for other legacy systems, including licensing, maintenance, and support, V2 and V3 costs described above are not included as CCMS project costs. V3 development and deployment costs, however, are included as CCMS project costs, and reported as such because both V3 functionality and system architecture were used in the design of CCMS. V3 serves as the platform on which CCMS was designed, so these costs are considered and reported as costs properly accounted for as CCMS project costs. Additionally, including ongoing operations and maintenance costs as CCMS project costs would inappropriately overstate the actual project costs. The AOC and the courts are taking steps to expand the information reported to estimate and account for costs incurred by the courts that are not otherwise captured.

⑮ BSA may disagree with this method of identifying CCMS project costs, but it is inaccurate to assert that the AOC did not inform the Legislature about the true costs of the system. The most recent annual report to the Legislature identifying CCMS costs set forth clearly both project costs, estimated at \$1.3 billion, as well as other costs, including ongoing operations costs that are properly not included as project costs, and costs of some of the interim systems (V2, V3) that CCMS will replace. In total, these project *and nonproject* costs total \$1.9 billion.

⑯ BSA correctly cites deployment costs reported previously as \$1 billion based on prior but incomplete vendor estimates. However, as discussed with BSA, the AOC anticipates that deployment costs will be significantly lower than this earlier estimate. This expectation is based on consideration of modified deployment options and lowered risk once the system is fully developed and successfully deployed to early adopter courts. The AOC will update the deployment cost estimate as part of the cost benefit analysis currently in progress.

The AOC has established strong budgetary and cost management processes, which have been enhanced over time. In consideration of BSA's recommendations, these processes will be further strengthened.

Responses to BSA Recommendations

Recommendation 11: To ensure that the financial implications of the statewide case management project are fully understood, the AOC should report to the Judicial Council, the Legislature, and stakeholders a complete accounting of the costs for the interim systems and CCMS. This figure should be clear about the uncertainty surrounding some costs, such as those that the AOC and superior courts will incur for deployment of CCMS.

Response: Agree. The AOC issues an annual report to the Legislature on case management project costs. Beginning with the report for FY 2008–2009, the AOC included the costs for the CCMS project, V2 and V3 one-time and ongoing costs, and ongoing operations and maintenance costs, projected through the full deployment of CCMS. In future reports the AOC will also include all identifiable costs related to CCMS incurred by the trial courts. It will work with the courts to identify and report, on an ongoing basis, the costs they are incurring for other local interim case management systems. Finally, the AOC will identify in this report costs that have a significant level of uncertainty. Consistent with the distribution of prior years' reports, these reports will be submitted to the Judicial Council and the Legislature and posted on the California Courts public website. (15)

Recommendation 12: The AOC should require superior courts to identify their past and future costs related to the project, particularly the likely significant costs courts will incur during CCMS deployment, and include these costs in the total cost.

Response: Agree. The AOC has already modified the trial courts' financial reporting system, Phoenix, to enable courts to track current and future case management system costs distinct from other technology expenditures. In addition, the AOC provided guidance to the trial courts to assist them to identify costs specific to development, deployment, and ongoing operations. The AOC will work with the trial courts to identify any additional expenditure information not already included in its reporting for prior fiscal years. Although a substantial portion of court costs for the deployment of CCMS has been identified and captured in the costs already projected and reported, the AOC will be better able to estimate and refine case management system costs likely to be incurred by the trial courts based on information gathered from early adopter and subsequent court deployments. It will include such costs in the total cost estimates where applicable. (17)

Recommendation 13: The AOC should be clear about the nature of the costs that other entities, such as justice partners, will incur that are not included in its total.

Response: Agree. The AOC currently identifies the nature of costs that justice partners will incur to integrate with CCMS and will continue to do so. As part of its strategy for the successful deployment of CCMS, the AOC has offered and provided assistance to justice partners and simplified interfaces with CCMS to the greatest extent possible. The assistance included:

- Helping justice partners determine the resources they might need to integrate with CCMS;
- Designing the interfaces using nationally recognized data exchange standards;
- Creating a justice partner–focused website that details requirements and design documentation, schemas, and mappings for the 121 external justice partner data exchanges; and

- Identifying on the website the types of resources required to successfully implement data exchanges, including staff with subject-matter expertise about their agency's business, technical staff to support the technology, and costs to make the necessary changes to existing information management systems such as records management systems, probation systems, or jail and inmate management system software.

To ensure broader understanding of the types of costs justice partners may incur to integrate with CCMS, the AOC will begin including this information in the annual CCMS report to the Legislature. In addition, as discussed in response to recommendation 2, as part of the comprehensive cost benefit analysis of the CCMS project currently being performed, the AOC will evaluate integration costs likely to be incurred by the justice partners of two early adopter courts. It would not be feasible to assume responsibility for predicting costs for the numerous justice partners around the state.

18

Additionally, the CCMS Justice Partner Advisory Committee is charged with ensuring that the implementation of CCMS occurs in a manner that maximizes state and local justice partner participation. As part of its responsibilities, the committee will communicate with state and local justice partners to gain a more comprehensive understanding of the costs justice partners may incur and provide feedback to the CCMS PMO. The advisory committee will also be working with justice partners to help ascertain the administrative and financial benefits, in addition to costs, accruing as a result of CCMS deployment or enhancements.

Recommendation 14: Finally, the AOC should update its cost estimate for CCMS on a regular basis as well as when significant assumptions change.

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Response: Agree. The AOC currently updates its cost estimates on a regular basis or when significant assumptions change. As part of the AOC's Information Technology Investment Management Program, the estimated cost and allotted budget for CCMS are reviewed monthly and revised and updated when scope or other project changes with cost implications are identified or approved. (See also the response to recommendation 5.)

Recommendation 15: Moreover, the AOC should ensure that its accounting system accurately reflects the costs for all staff working on the project, particularly those staff who charge only a portion of their time to the project.

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Response: Agree in part. The AOC concurs that staff providing direct support for the project should be accounted for as CCMS project costs. The AOC currently reports staff costs in this manner and will review its reporting to ensure that there are no discrepancies. We believe, however, that senior executives, such as directors and assistant directors who have a broad span of administrative responsibilities over various programs, projects and initiatives, should not be included in CCMS project costs.

Recommendation 16: To address the funding uncertainty facing CCMS, the AOC should work with the Judicial Council, Legislature and Governor to develop an overall strategy that is realistic given the current fiscal crisis facing the State.

Response: Agree. The AOC, as directed and authorized by the Judicial Council, has modified its strategy and will continue to do so in light of current and foreseeable future economic realities as well as the needs of courts whose current systems are at imminent risk of failing. The AOC will continue to work with the

Legislature and the Governor to explore all potential approaches for securing sufficient funding to complete the statewide deployment of CCMS. Such options may include consideration of project financing, as well as state, federal, local, and private funding.

The Judicial Council, in coordination with legislative and executive branch leadership, has demonstrated prudence and flexibility in its overall funding strategy in light of the fiscal crisis, redirecting more than \$200 million in the last two fiscal years from funding that would have been available for technology projects to cover reduced court funding, and scaling back initial CCMS deployment plans to three early adopter courts. By completing these early deployments, the AOC also reduces risk for later deployments, which will foster a more competitive bid process for CCMS deployment and protect the interests of the judicial branch and the state. (21)

Recommendation 17: To better manage costs of future IT projects, the AOC should take the following steps: estimate costs at the inception of projects; employ appropriate budget and cost management tools to allow it to appropriately budget, track, manage, and estimate costs; ensure that cost estimates are accurate and include all relevant costs, including costs that superior courts will incur; disclose costs that other entities will likely incur to the extent it can reasonably do so; update cost estimates on a regular basis and when significant assumptions change; disclose full and accurate cost estimates to the Judicial Council, the Legislature, and stakeholders from the beginning of projects; and ensure that it has a long-term funding strategy in place before investing significant resources in a project.

Response: Agree. The AOC's ITIMP already incorporates many of the steps identified in the recommendation. As part of ITIMP, the estimated cost and allotted budget for all major projects are reviewed monthly and revised and updated as scope or other project changes with cost implications are identified or approved. The AOC will revise the ITIMP to incorporate the consideration of the fiscal impact on local courts and justice partners. (22)

Chapter 3. The Courts' Perspective

Comments on Chapter 3 Findings

CCMS is an enormous leap forward in case management processing within the California judicial branch. The system will make uniform for the first time, court management records across the entire state, providing a consolidated view of the work of our courts. CCMS will eliminate more than 70 disparate commercial and custom-built case management applications that, out of necessity and in response to the then-county-based structure of the courts, do not share information across county lines, much less allow for statewide reporting of data of interest to the executive and legislative branches. A 2001 assessment of court case management systems determined that many of the systems then in place were outdated, difficult and expensive to maintain, and unable to meet the courts' needs. Additionally, many of the systems did not meet the demands of court users or provide comparable levels of access or system capabilities across the state.

CCMS is built using the most current technology and design methods. CCMS users will navigate and interact with the application much like they interact with their online banking, bill paying, and shopping websites. CCMS will significantly change the way courts process case information. Records and files that are paper based require physical movement, duplication, and storage. They will be replaced with electronic images and files that can move throughout the court system effortlessly and electronically. Litigants will be able to file a case, receive notifications, and view and exchange documents electronically. Paper records will be available on demand.

Undertaking this amount of change can be daunting, and change management is and always will be a difficult and challenging process. The AOC understands that courts implementing CCMS will face major challenges in transitioning to the new system because it will affect almost every aspect of their operations. Courts have valid and understandable concerns in adopting a new case management system. These concerns are further affected by data conversion issues that are always a part of transitioning from a legacy system to a new system, the need to revise current and long-standing operational and business processes, and essential training of court staff to use the new system. Additionally, competing priorities, depleted budget reserves, and several consecutive years of budget reductions add another layer of complexity.

The AOC has in place many methods for communicating with the courts—formally and informally—that facilitate back-and-forth communications so that concerns about the impacts of transitioning to a new system can be raised and addressed. These communication channels are detailed in the responses below. The AOC strives to share information necessary to demonstrate the benefits of CCMS. It also focuses on how to best help alleviate courts' concerns and respond to their needs. Over the last several years, CCMS has been raised as a topic at virtually every Judicial Council meeting and has been a formal agenda item at least once every year. The council has thoughtfully considered the input of courts in directing that efforts continue toward completion of a single, statewide case management system. The Judicial Council and the AOC are committed to continued improvements in communications among the courts, the council, and the AOC to ensure that there is ample opportunity to provide input and receive feedback in order to gain an even more comprehensive understanding of all viewpoints and mitigate any concerns related to deploying CCMS.

The adoption of the new CCMS governance model will help with these efforts. The governance committees include representatives from 27 superior courts across the state, from small to large and rural to urban courts, and various state and local justice partners. The new model was adopted because it is critical to have even broader involvement in decisionmaking and oversight processes as the system is deployed.

The AOC realizes the importance of improving the frequency, content, and channels of communication within the branch and to justice partners, the Legislature, the OCIO, and the executive branch. It plans to conduct numerous demonstrations of CCMS throughout the state and publish more detailed progress reports that identify the current challenges, opportunities, and successes with the project. It will also provide formal updates at judicial branch regional meetings and continue informal discussions with the courts about CCMS. The CCMS PMO will engage the Trial Court Presiding Judges Advisory Committee and the Court Executives Advisory Committee in a continuing dialogue to gain feedback on the performance of the project and will collaborate with the Court Technology Advisory Committee to ensure that CCMS program implementation and evolution conform to branch technology strategy.

The AOC will carefully analyze information and feedback about CCMS in order to make recommendations to the Judicial Council for deploying CCMS in a manner that effectively balances the competing priorities, interests, and concerns and achieves the promised objectives and benefits.

Responses to BSA Recommendations

Recommendation 18: Although the Judicial Council has the legal authority to compel the courts to adopt CCMS, to better foster superior courts' receptiveness to deploying CCMS, the AOC should use the results from its consultant's survey to better understand the courts' input and concerns regarding CCMS, including the manner in which the project has been managed by the AOC. To the extent that survey results indicate courts have significant concerns regarding CCMS or that they believe their case management systems will

serve them for the foreseeable future, the AOC should take steps to address these concerns and overcome any negative perceptions and modify its deployment plan for CCMS appropriately.

Response: Agree. Participation and input from the courts are vital to the success of CCMS. Surveys are just one example of many tools the Judicial Council, its advisory committees, the CCMS governance committees, and the AOC rely on to gather information, seek input, learn about local court concerns, and identify trends in order to develop a cohesive deployment strategy. This is true for CCMS and all branchwide projects and initiatives. The results from the Grant Thornton survey issued as part of the cost benefit study will be used to refine a variety of deployment alternatives for consideration by the AOC, the CCMS governance committees, and the Judicial Council. Along with the experience gained and lessons learned from deployment of CCMS at the early adopter courts, further information on the impact of CCMS implementation on court business processes, courts' concerns regarding the timing for deployment of the system, status of existing legacy systems, anticipated cost savings, and needs of the court users will all be factors given great weight in assessing the several deployment alternatives.

The CCMS governance committees—composed of 3 appellate justices, 19 trial court judges, 20 trial court executive officers, and 2 appellate court clerk/administrators, as well as state and local justice partners, representing 27 superior courts and 4 Courts of Appeal from across the state—will play a critical role in ensuring that the perspectives and concerns of the superior courts are given complete attention in determining viable deployment strategies. The committee members will also serve a vital role to bring information to the courts about the benefits of CCMS and the advantages it will have on court operations and the delivery of court services to the public. The direct experience gained from prior court deployments, ongoing dialogue with the courts, changing economic conditions, and justice partner feedback will help refine the deployment strategy as the project moves forward.

Recommendation 19: The AOC should continue to work with the superior courts that have deployed the civil system to ensure it is addressing their concerns in a timely and appropriate manner.

Response: Agree. The AOC currently supports the interim civil system (V3) and will continue to do so for courts using the system. The application support team maintains records of all requested enhancements and reported defects. After a determination of the severity of defects or enhancements logged by the courts, they are prioritized and changes are made according to set criteria and available funding. Going forward, the CCMS Operational Advisory Committee is responsible for setting the priorities for defects and enhancements. In addition, in 2011 the AOC will transition application support for the civil system from Deloitte to the AOC Information Services Division. This transition will allow the AOC to provide ongoing support of the interim civil system at significantly lower cost to the branch. Transitioning support of the interim criminal and traffic system to the AOC Information Services Division, accomplished in September 2009, has proven cost effective, and the Superior Court of Fresno County has expressed satisfaction with the quality of the support provided. The CCMS PMO has dedicated staff assigned to work with courts using the interim civil system to address their needs and concerns.

Since deployment of the interim civil system, there have been numerous releases to improve the functionality and enhance the system in response to suggestions raised by the V3 courts. For example, the most recent release included the functionality for electronic filing, which has provided extraordinary benefits for the courts. In addition, where unique problems have been identified by particular users, the AOC has provided dedicated project teams to work with those courts to identify and resolve the issues.

Recommendation 20: The AOC should work with superior courts to address concerns about hosting data at the Technology Center. Further, the AOC should take steps to ensure that superior courts do not lose productivity or efficiencies by hosting data at the Technology Center.

Response: Agree. The AOC is committed to ensuring that the performance of systems hosted at the CCTC is comparable to performance of a locally hosted system. It presently works closely with the courts, and will continue to do so, to address all of their concerns, including those directly related to the CCTC. Ongoing efforts include:

- Providing CCMS end-user support to each locally and centrally hosted court;
- Improving access to court data through the implementation and maintenance of a reporting database;
- Enhancing CCMS to provide near real-time updates to the reporting databases, improving the accuracy and timeliness of the data needed for local decisionmaking and reporting;
- Upgrading the hardware and software platforms to improve performance and system availability;
- Providing supplemental funding; and
- Providing technical support as required.

The CCMS Operational Advisory Committee will work directly with the CCMS PMO and the courts to review, modify, and add service level metrics as needed to ensure that centrally delivered services are provided in a manner that is fully responsive to the courts' business needs.

Hosting at the CCTC also provides dramatic benefits to the courts and the viability of the statewide system. Hosting at a remote location is a best practice to ensure data security and the integrity of the software. Through the CCTC, the data and application are maintained at two seismically stable locations, connected through multiple redundant data lines, in two distinct geographic regions so as to protect against localized incidents (such as fire, flood, or other natural disaster) that could affect the availability of the system and the security of the data. This is a technology center model toward which the State of California is moving.

Recommendation 21: The AOC should continue working with local and state justice partners to assist them in their future efforts to integrate with CCMS and, in particular, provide local justice partners the information needed to estimate the costs involved.

Response: Agree. The AOC has a data integration team dedicated to working with state and local justice partners to prepare them to integrate with CCMS. This team participates in justice partners' association meetings, conferences, and other events to create awareness about CCMS and highlight the benefits of integration. The CCMS justice partner data integration team also disseminates information about tools, resources, and information to support their integration efforts. The outreach team routinely meets with state agencies, including the California Highway Patrol, Department of Motor Vehicles, Department of Justice, Department of Child Support Services, Department of Corrections and Rehabilitation, and local justice partners such as district attorneys, public defenders, probation departments, and sheriffs.

In addition, the AOC has developed and maintains a justice partner integration website. The site provides information about the 121 CCMS data exchanges and offers instructions for their implementation. All justice partners have access to the site, which identifies resources they may need to integrate with CCMS. The information provided helps partners estimate their costs of integrating with CCMS.

To further assist justice partners, the AOC has negotiated an agreement with TIBCO, the vendor of the software tool used to build the data exchanges. If justice partners need similar tools to integrate their systems with CCMS, the AOC has arranged for them to contract with TIBCO at a deeply discounted rate. CCMS also supports less complex data integration solutions for those justice partners who cannot implement a web services infrastructure. This minimizes the potential impact on existing infrastructure and lessens the integration cost burden.

As described in response to recommendation 13, the CCMS Justice Partner Advisory Committee—which includes state and local justice partners representing law enforcement, social service agencies, and the criminal and civil bars—is charged with ensuring that the implementation of CCMS and its data exchanges maximizes state and local justice partner participation and minimizes disruptions to existing automated processes between courts and their justice partners. This provides a mechanism for justice partners to influence the future evolution of CCMS and related e-business initiatives and, wherever possible, makes available specific information regarding the anticipated benefits and cost savings to justice partners as CCMS is deployed. Committee members will work with a variety of state and local justice partners to identify challenges to integrating with CCMS so that solutions may be provided. The AOC envisions committee members as ambassadors of the branch's justice partners and effective liaisons so that the branch does everything necessary to ensure that the statewide benefits of CCMS to the courts, justice partners, and all Californians will be realized.

Recommendation 22: Before embarking on future IT projects and to ensure it secures appropriate support from users of the systems being proposed, the AOC should do the following: determine the extent to which a need for the IT initiative exists, including the necessary information to clearly demonstrate the extent of the problem the IT initiative will address; take steps to ensure that superior courts support the solution the AOC is proposing to address the need, which could include conducting a survey of courts to determine their level of support; and if necessary, determine whether other stakeholders, including local and state justice partners, support the IT initiative.

Response: Agree. The AOC has both formal and informal processes and procedures in place to identify and assess the need for statewide technology improvements for the judicial branch in partnership with the courts. It is committed to these processes and will continue to leverage these opportunities. Regional meetings provide a solid foundation for the AOC and the courts to share information to learn about, better understand, and evaluate statewide technology needs. Moreover, the Judicial Council's Court Technology Advisory Committee, Trial Court Presiding Judges Advisory Committee, and Court Executives Advisory Committee provide additional avenues of communication that enhance the exchange of information between and among the AOC and the courts to influence the direction and strategies for future statewide technology improvements. Frequent, informal communications with the regional offices and the courts, as well as statewide meetings of presiding judges and court executive officers, surveys, and other communication channels too numerous to list here, build on that foundation to ensure that vital feedback loops are in place.

As technology project needs are identified through these many communication channels, project concept documents are drafted that include statements of the problem, anticipated costs and benefits of the IT solution, impacts on courts and court operations, and known risks. After review of the project concept, the PRB evaluates, prioritizes, and approves (or rejects) branchwide technology projects. Additionally, in response to a recommendation made by the OCIO, the AOC is revising its project tools, processes, and documents to better parallel how other state technology projects are managed and reported.

The PRB ensures that all branchwide technology projects follow a structured analysis protocol, producing the information required to adequately assess the need for and value of the project proposal. Court and stakeholder surveys are just one tool available in conducting the analysis. This analysis protocol provides the mechanisms to mitigate risks and to effectively deliver information about the benefits that an IT project will deliver.

Chapter 4. Project Oversight of CCMS

Comments on Chapter 4 Findings

On behalf of the Judicial Council, the AOC remains committed to ensuring that, together with the courts, it is able to deliver the highest-quality statewide court case management system, one that meets the needs of the courts and the expectations of the public and that protects the interest of the state. To accomplish these objectives, the AOC instituted and performed project oversight that is consistent with industry guidelines, standards, and best practices in a cost-effective manner. As a result of enhanced testing and review activities being conducted, the AOC is confident that the final product will be of the highest quality and that a well-functioning system will be ready to deploy in the coming months.

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Industry standards, guidelines, and best practices do not direct that Independent Verification and Validation (IV&V) and Independent Project Oversight (IPO) work be performed exclusively by separate, external entities. The AOC performed extensive verification and validation (V&V) efforts, which included IPO and IV&V work by an external consultant, for V2, V3, and CCMS during the development of each product. The V&V efforts performed were, and continue to be, consistent with existing industry standards and guidelines and were conducted appropriately. Although executive branch agencies may contract out all IV&V and IPO efforts to separate entities, industry standards recognize the method used by the AOC—using V&V efforts in combination with supplemental IPO and IV&V—as a viable model for complex information technology projects.

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The AOC considered all authoritative guidance available when developing its V&V approach, including the Department of Finance *Information Technology Project Oversight Framework*, industry guidelines of the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Standard 1012-2004 *Standard for Software Verification and Validation*, and the Project Management Institute's *Project Management Body of Knowledge*. These authoritative industry standards provide critical guidance to be used and customized in developing V&V approaches. Additionally, to ensure effective project oversight, the AOC selected a consultant with extensive experience with the State of California generally, and the judicial branch specifically, and who had previously conducted IPO and IV&V for V2 and V3 and had extensive other IPO and IV&V private industry experience.

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Although BSA asserts that certain customary IV&V or IPO practices were not performed or only partially performed, this appears to be based on a disagreement over the AOC's approach to V&V (performed in concert with, not solely by, external entities) and when and how the practices were actually accomplished

or evaluated. BSA's view may be impacted by the limited analysis and evaluation of the significant V&V efforts conducted. For example, the AOC acknowledges that its outside consultant was not involved in the procurement process. However, the AOC Business Services manager, AOC Office of the General Counsel, and outside legal counsel with special expertise in technology transactions were involved in all contract discussions, negotiations, and finalization of amendments. Those participants are independent from the development vendor, consistent with industry best practices, standards, and IEEE guidance. The IPO and IV&V contract specifically excluded these contract-related activities from its scope given the extensive independent oversight employed in this activity.

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The AOC understands that the delay to April 2011 for completion of the core development work, attributable to the discovery of a significant number of defects, is a cause for concern. But this delay was not a result of insufficient project oversight. It was primarily the consequence of the development vendor accepting a known risk by deciding to begin coding before completion of the final functional design. The AOC has undertaken extensive efforts, described in the response to recommendation 25, to mitigate those concerns to ensure that after final testing, CCMS will be a high-quality product with all the attendant benefits that the AOC has pledged.

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BSA identified a six-month period at the initiation of the CCMS project in which the IPO and IV&V status reports were not forwarded to the governance committees. However, the reports contained nothing that the project team considered to require escalation. The team did have significant concerns that, among other things, the technical nature in which the information was presented did not meet the needs of the oversight and steering committee members and the information was not presented in a manner that would be of value to them. As a result, while discussions occurred that led to a useful revision of how the information was presented, reports were not provided to the governance committees until the changes and processes were reviewed and agreed to. A color-coded project scorecard (a presentation/format change not previously in the reports) evaluating each development process area was one of the most significant changes resulting from these discussions. Of course, if the reports had contained information requiring immediate escalation, such action would have been taken immediately.

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The AOC and the steering and oversight committees took seriously their obligation to review and assess areas of concern raised by the IPO/IV&V team. The AOC believes that appropriate action has been taken with regard to the specific concerns noted by BSA, including the aggressive schedule, unclear requirements, requirements gathering, and joint application design session documentation. Each was carefully reviewed and, after being maintained on "watch status" for an extended period, was closed based on thorough discussions and an evaluation of any risks. In closing these concerns, the AOC determined that they did not present a risk to the successful completion of the CCMS project and should not affect the successful functioning of CCMS.

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Responses to BSA Recommendations

Recommendation 23: To provide for an appropriate level of independent oversight on CCMS, the AOC should expand and clarify the scope of oversight services and require that oversight consultants perform oversight that is consistent with best practices and industry standards.

Response: Agree in part. The AOC strongly agrees that project oversight should be performed consistent with best practices and industry standards, although it does not agree that this can be done only by external contractors. The AOC maintains that the comprehensive, multifaceted approach used for the verification and

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validation process—which includes IPO and IV&V, as well as using AOC and court experts independent of the vendor—is entirely consistent with industry standards and guidelines and best practices for information technology projects of the size and complexity of CCMS. Following its review of the objectives, activities, and costs of CCMS, the OCIO in its April 2010 report concluded that “in general, the project appears to be using industry best practices for software development and project management for the scope of building the CCMS V4 product.” Similarly, J. Clark Kelso, when he was the state Chief Information Officer, referring to CCMS in a letter to the Legislative Analyst in February 2004, found that “the AOC is aggressively managing its major IT projects through a combination of high-level executive sponsorship and oversight and the execution of contracts for project development with globally recognized project developers and consultants. These contractors follow well-recognized project management methodologies that focus on monitoring and managing changes in scope, budget, and schedule.” Additionally, in a midcourse review conducted of the statewide administrative infrastructure initiatives under way by the judicial branch, KPMG found that the AOC “has applied strong risk management practices at the day-to-day project level.”

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As noted in the response to recommendation 24, the AOC will soon enter into contracts with separate entities for IPO and IV&V services related to CCMS deployment. Additionally, the CCMS General Administrative Advisory Committee will review monthly IV&V reports to assess the effectiveness, performance, challenges, and risks to the CCMS program. This committee will report this information quarterly to the CCMS Executive Committee for review and action where appropriate.

Recommendation 24: To ensure that no gaps in oversight occur between CCMS development and deployment, the AOC should ensure that it has IV&V and IPO services in place for the deployment phase of CCMS. Further, to allow for independent oversight of the IV&V consultant, the AOC should use separate consultants to provide IV&V and IPO services.

Response: Agree. The AOC will contract with separate entities to provide IV&V and IPO services for the deployment of CCMS. The AOC understands the need to move forward with contracts for these services and plans to do so as expeditiously as possible. The AOC is in discussions with the OCIO regarding approaches for providing IPO and IV&V for postdevelopment activities and values the input of the OCIO concerning the best providers of these services. In the interim, the AOC is conducting IPO and IV&V on postdevelopment activities and initial deployment plans and activities, but it will transition these services to outside entities upon entering into the necessary contracts.

Recommendation 25: To ensure no significant quality issues or problems exist within CCMS, the AOC should retain an independent consultant to review the system before deploying it to the three early adopter courts. This review should analyze a representative sample of the requirements, code, designs, test cases, system documentation, requirements traceability, and test results to determine the extent of any quality issues or variances from industry standard practices that would negatively affect the cost and/or effort required of the AOC to operate and maintain CCMS. If any quality issues and problems identified by this review can be adequately addressed and system development can be completed without significant investment beyond the funds currently committed, the AOC should deploy it at the early adopter courts using the vendor’s warranty period.

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Response: Disagree. Retaining another consultant is not necessary in light of the rigorous and extensive testing that is occurring, and would provide no additional value. When the AOC and the courts discovered numerous quality issues with the application code during preliminary vendor testing, the AOC required that a rigorous and extensive effort be introduced to verify that the application code met the requirements

of the final functional design (FFD). The vendor agreed, and is responsible for the costs associated with correcting the quality issues and any costs incurred by the branch as a result of the project's delay. A four-to-six-week functional assessment and replanning effort was conducted in which the vendor assigned a senior management team to assess the problems with the code and the validation of the FFD and to determine how to remediate the defects and functional gaps (a "find-and-fix" phase). Having completed this find-and-fix phase for the core application, the vendor is currently completing the same process for the CCMS data exchanges, data warehouse, public portal, and data migration components of the application (the external components). During this period, the AOC has augmented the existing product acceptance testing team of 41 members with an additional 19 professional consultant testers, for a total of 60 testers. It has also augmented the acceptance testing team by adding 8 automation consultant testing specialists who program and run automated test scripts. The AOC also instituted weekly, or more often if needed, senior executive management meetings in addition to the regularly scheduled project management meetings. The purpose of these meetings is to monitor the progress being made by the vendor by reviewing project status, quality metrics, and defect resolution. Issues continue to be resolved quickly or escalated as appropriate. This has significantly improved the AOC's CCMS project oversight. Six months of unit and systems testing and 11 months of integration and product acceptance testing will have been completed by the time CCMS is delivered to the deployment team for rollout to the early adopter courts. The following phases were done or are in progress to ensure the highest-quality product possible:

- *CCMS core application final functional design validation (FFDV) defect find\fix and retest phase:* Started March 2010 and completed August 2010.
- *CCMS core integration testing phase:* Started August 2010 and will be completed February 2011 when the exit criteria have been satisfied.
- *CCMS core product acceptance testing phase:* Will start February 2011 and be completed April 2011 when the exit criteria have been satisfied.
- *CCMS external component FFDV phase:* Started July 2010 and will be completed February 2011.
- *CCMS external component integration testing phase:* Will start January 2011 and be completed May 2011 when the exit criteria have been satisfied.
- *CCMS external component product acceptance testing phase:* Will start May 2011 and be completed July 2011 when the exit criteria have been satisfied.

AOC and court subject-matter experts have participated in both vendor integration testing and product acceptance testing. A suite of approximately 19,000 test scripts was developed jointly by the vendor, the courts, and the AOC to validate the CCMS application through both integration testing and product acceptance testing. The system will not be accepted by the AOC until it meets very rigorous exit criteria, as determined by the AOC and the courts, in both the integration and product acceptance testing phases. The established criteria dictate that there be zero severity 1 defects (a defect that renders the entire application not usable); zero severity 2 defects (a defect that results in one or more components of the application not working, but that can be overcome with a work-around); and no more than 50 severity 3 defects (a minor defect to a noncritical component that results in no significant impact on the user). The courts are participating in product acceptance by executing the test scripts and identifying defects according to the established quality management criteria.

- 24 As a result of this rigorous and extensive testing and retesting, additional independent oversight is not warranted. Further evaluation and analysis by another independent consultant will not provide additional value but will further delay deployment of the system.

Recommendation 26: To ensure that future major information technology projects receive appropriate independent oversight over technical aspects and project management, the AOC should take the following steps: obtain IV&V and IPO services at the beginning of the projects and ensure this independent oversight is in place throughout and follows best practices and industry standards appropriate for the size and complexity of the project; employ separate firms for IV&V and IPO to allow for the IPO consultant to provide independent oversight on the IV&V consultant as well as the project team's response to IV&V findings; ensure that the staff performing IV&V and IPO services have experience and expertise that is commensurate with the size, scope, and complexity of the project they are to oversee; ensure that independent oversight is not restricted in any manner and that all parties—the IV&V and IPO consultants, senior management, the project management team, and the development vendor—understand that the IV&V and IPO consultants have complete access to all project materials; and promptly and appropriately address concerns that independent oversight consultants raise.

Response: Agree. The AOC strongly agrees that it is critical that information technology projects receive the necessary and appropriate project oversight. The AOC commits to timely obtaining and maintaining the appropriate independent project oversight services based on the size, scope, and complexity of the project and to ensuring that complete access is granted to all necessary materials. Additionally, the AOC concurs with the importance of the identification of concerns raised by the vendors and that concerns be reported and monitored to ensure they are appropriately addressed. Consistent with the AOC's current practice, concerns will be taken off "watch status" only after careful consideration and discussion of all risks and mitigation efforts occur to ensure that system function is not affected. In accordance with Government Code section 68511.9, the AOC is working closely with the OCIO on CCMS, will continue to work closely with that office on all IT projects that are projected to cost in excess of \$5 million, and will carefully consider all OCIO recommendations for such projects, including recommendations relating to oversight and risk mitigation. Additionally, the AOC will continue to follow the parameters of the *Information Technology Project Oversight Framework* in the OCIO's *State Information Management Manual* and all appropriate industry guidance. The AOC will assess each project for its risk, sensitivity, and criticality and will give great deference to the OCIO's guidance to determine the manner and extent of project oversight that will be implemented.

Comments

CALIFORNIA STATE AUDITOR'S COMMENTS ON THE RESPONSE FROM THE JUDICIAL COUNCIL OF CALIFORNIA, ADMINISTRATIVE OFFICE OF THE COURTS

To provide clarity and perspective, we are commenting on the response to our audit from the Judicial Council of California (Judicial Council), Administrative Office of the Courts (AOC). The numbers below correspond to the numbers we placed in the margins of the response.

We conducted our audit of the AOC's oversight of the statewide case management project in accordance with generally accepted government auditing standards, which require that we obtain sufficient and appropriate evidence to support our audit conclusions. Therefore, we stand by our audit conclusions and recommendations.

①

The AOC mischaracterizes the true cost of the statewide case management project by separating the cost of the most recent version of the project—the California Court Case Management System (CCMS)—from earlier costs that it incurred in developing the criminal and civil systems (interim systems). As we discussed on pages 26 through 27, the AOC asserts that the statewide case management project was developed using an iterative approach that focused on building the project in sections while the AOC and court staff gained incremental system development experience and knowledge, and that the functionality from the interim systems is included in CCMS. As a result, we believe the \$1.9 billion total cost estimate, which includes development, deployment, and support costs for all three systems, more accurately reflects the true cost of the statewide case management project.

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We were unable to confirm whether the Judicial Council gave direction or made decisions on the statewide case management project because the Judicial Council meeting minutes did not contain sufficient details for us to make that determination.

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The AOC misunderstands our finding and recommendation related to the statewide case management project's lack of a cost-benefit analysis. The AOC is correct in that the 2004 Legislative Analyst's Office (LAO) report included a recommendation calling for the Legislature to adopt legislative language that would have required the AOC to use the state's IT process. However, we did not conclude that the AOC should adopt the state's IT process as the LAO had recommended. Rather, our review found that the AOC lacked adequate documentation to justify the need for the statewide case management project and has never conducted a cost-benefit analysis. Thus, we concluded on page 26 that before spending

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\$407 million and investing eight years to develop the statewide case management project, the AOC should have identified the business needs the project was intended to address and conducted a cost-benefit analysis or similar project planning document to ascertain whether the project was a cost-beneficial solution.

- ⑤ As a normal part of our quality control process, we shared a draft copy of the audit report with the AOC for its review and comment. For any concerns the AOC identified, we made a change where it was warranted based on the audit evidence.
- ⑥ We disagree that the AOC always followed best practices in its contracting. Although the AOC uses some generally accepted contracting practices, we have noted specific concerns with how the AOC contracted with Deloitte Consulting LLP (development vendor). These concerns include combining services related to all three systems (criminal, civil, and CCMS) into one contract as noted on page 29, difficulties in tracking the total contract cost, which resulted in the AOC identifying the need to reduce the contract cost by \$43 million as noted on page 31, failing to ensure that the warranty period was effective when superior courts began using the civil system in a live operational environment as noted on pages 32 through 33, and inadequately defining deliverables for the CCMS readiness assessment at the early adopters of CCMS (early-adopter courts) as noted on pages 35 through 36.
- ⑦ We believe that intentionally planning to allow for multiple contract amendments—102 in this case—does not demonstrate any best procurement practices we are aware of and reflects the AOC's lack of understanding of the full scope of the project and the specific needs of the AOC and the courts. Allowing for such a large number of successive amendments, 85 between 2006 and 2008 as shown in Table 2 on page 30, demonstrates the AOC's inability to develop a robust and well-defined plan for CCMS and the interim systems. Moreover, as we state on page 29, by amending the contract to encompass services for all three systems, the AOC has become increasingly dependent on the development vendor for its knowledge and expertise.
- ⑧ We stand by our IT expert's conclusion that the contract amendment in question does not adequately define project deliverables related to the readiness assessment. As noted on pages 35 through 36, our IT expert concluded the project plan and conversion objectives required under the contract amendment do not require the development vendor to include the level of detail and specificity the AOC would need to deploy CCMS on its own or with the assistance of a different vendor.

As noted on page 36, the results of the readiness assessment indicate the AOC faces significant challenges to deploy CCMS at the three early-adopter courts. Moreover, it is important to note that any delays in CCMS deployment may prevent the deployment from occurring during the warranty period. Thus, the AOC will need to carefully monitor the warranty period that it has negotiated with the development vendor to mitigate the risk of deploying CCMS at a time when the warranty period is no longer active.

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As a point of clarification, according to the Judicial Council's *CCMS governance model*, which was finalized in December 2010, although the Judicial Council has assumed the role of executive sponsor of the project, it has designated the administrative director of the courts (director) as the lead executive over the CCMS project as noted on page 14. In this role, the director is responsible for appointing all members of the four committees in the new governance model.

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We disagree with the AOC's assertion that "cost management and review processes have been in place that were appropriate to the size, scope, and complexity of the project." Although the Judicial Council directed the AOC to continue development of the statewide case management project in 2003, the AOC did not prepare a cost estimate for it until prompted by an LAO review in 2004 as we noted on page 40. Further, as noted on page 43, the AOC has lacked adequate centralized budgeting and oversight for the project, which was confirmed by two AOC managers, including the current director of the finance division. Moreover, the AOC's current estimate of the total project cost fails to include expenses that the superior courts will incur during deployment and has not been updated since January 2010.

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We do not agree that the increase in project cost was due to an expansion of project scope, as the AOC asserts. In 2003 the Judicial Council directed the AOC to continue development of the statewide case management project to include all case types. Although the AOC could assert that it did not initially estimate the project's cost to include the full scope of the project, the AOC knew since 2004 that all case types would be included in the project, as shown in the AOC's 2004 vision of the project in Figure 3 on page 28.

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As noted on page 42, although the AOC's budget change proposal identified the future costs of CCMS and other technology projects through fiscal year 2012-13, it did not include a total cost for CCMS and the statewide case management project.

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We disagree that the AOC has kept "the Legislature and the governor fully informed of the costs associated with its major projects." As Table 3 on page 42 shows, there are significant

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differences between the cost of the statewide case management project that the AOC reported to the Legislature and the AOC's internal cost estimates of the total project cost. Although the AOC did report to the Legislature in compliance with the Government Code, it failed to provide additional information on the increasing total cost of the project, which would have been beneficial to the Legislature. Moreover, as noted on page 44, the AOC's April 2010 report did finally include details on the cost of the project; however, it presented expenditures to date and the cost to complete the project in three separate exhibits located on different pages that correspond to different project elements, making it difficult for report users to identify the total cost of the project. Furthermore, we disagree with the AOC's exclusion of the cost related to the interim systems from the total cost of the statewide case management project because the AOC has asserted that these systems were iterative products in the development of CCMS, as noted on pages 26 through 27.

- ⑮ We acknowledge that the AOC included more robust information in its most recent report to the Legislature, submitted in April 2010. As we stated on page 44, the April 2010 report did finally include details on the cost of the project; however, it presents expenditures to date and the costs to complete the project in three separate exhibits located on different pages that correspond to different project elements, making it difficult for report users to identify the total cost of the project. Thus, as noted on page 49, we recommended that the AOC report to the Judicial Council, the Legislature, and stakeholders a complete accounting of the costs for the interim systems and CCMS to ensure that the financial implications of the statewide case management project are fully understood.
- ⑯ Although the AOC asserts it will take steps to lower the deployment cost for CCMS, as noted on page 48, the AOC has not yet updated its cost projections. Nor did the AOC provide us with any evidence to support this assertion.
- ⑰ We appreciate that the AOC will work with the superior courts to identify additional costs related to the statewide case management project, but we disagree that the AOC has already identified a substantial portion of those costs. As noted on page 45, the seven superior courts that have implemented the criminal and civil systems reported to us that they spent nearly \$44 million in staffing, equipment, and consulting costs to test, deploy, and support the interim systems beyond the roughly \$49 million that the AOC has identified that those superior courts paid directly to the development vendor.

The AOC mischaracterizes our recommendation. We do not expect the AOC to be able to predict the actual costs that state and local justice partners may incur when they implement CCMS. Rather, we found that the AOC has not disclosed the nature of the CCMS-related costs for the justice partners that work with the superior courts as discussed on page 46. For example, state or local justice partners may need to modify their hardware and software so that they can share data and information with CCMS. Because these costs will be ultimately borne by entities funded by California taxpayers, we recommended on page 49 that the AOC be clear to the Judicial Council, Legislature, and stakeholders about the nature of the costs that other entities, such as justice partners, will incur that are not included in the cost of the statewide case management project.

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We disagree with the AOC's assertion that it "currently updates its cost estimates on a regular basis or when significant assumptions change." In fact, the AOC has not updated the current \$1.9 billion estimate of the total cost for the statewide case management project since January 2010, as shown in Figure 4 on page 41, despite significant events occurring since that time. These events include a delay in the deployment timeline due to development delays noted on page 46 and the lack of funding to fully deploy CCMS discussed on pages 47 and 48.

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We disagree with the AOC's argument that the time senior executives spend on CCMS should not be tracked and reported with other staffing costs for CCMS. The involvement of senior executives can vary based on their responsibilities, but if any of them spend a significant portion of their time on the project, the AOC would be remiss to not track the cost of their efforts as part of the cost of CCMS. Further, these costs can be significant. As noted on page 47, the total gross salary for six employees who spent a portion of their time on the project, but were not charged to it, exceeded \$5.5 million between July 2002 and June 2010.

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The timing of CCMS deployment at the three early-adopter courts is in question given the risks of delay that were raised in the December 2010 readiness assessment, as we noted on page 36.

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The AOC asserts that it has already incorporated many of our recommendations, yet we observed several important processes that are still missing. These include the fact that the AOC's cost estimate for CCMS does not include estimated superior court costs or disclose the nature of the costs that justice partners will likely incur as discussed on pages 45 through 46, and the AOC has not updated its current cost estimate, which it prepared in January 2010, to reflect the delays in development as noted on

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page 46. Furthermore, the AOC's long-term funding strategy for deploying CCMS statewide is largely absent, as noted on pages 47 through 48.

- ②③ Based on its response, we believe the AOC does not fully understand the purpose and importance of independent verification and validation (IV&V) and independent project oversight (IPO) on a project of the size, scope, and complexity of CCMS. As we indicated on page 68, IV&V services should be documented in a software verification and validation plan; be scaled in level of rigor based on complexity, criticality, and other project characteristics; and be performed by an organization that is technically, managerially, and financially independent. Further, as discussed on page 69, the IT project oversight framework that was in place when the contract with the development vendor was executed notes that for high criticality projects—of which the statewide case management project surely qualifies—the oversight must be conducted by consultants, not staff, who report to the same organization as the project managers and that members of the oversight team must have experience as participants in project management and system engineering on multiple, similar projects. Because the AOC did not create a plan or follow the other best practices, it did not perform “project oversight that is consistent with industry guidelines, standards, and best practices.”
- ②④ We appreciate the development vendor's and AOC's testing efforts. However, our IT expert advises that until the system is deployed and found to be fully functional by at least one court, the level of quality and performance of CCMS are unknown. As we indicated on pages 85 through 86, based on the concerns identified by the consulting firm and quality issues discovered during testing, among other things, we believe there would be value in conducting an independent review of CCMS software and components to determine the extent of any quality issues. The review that our IT expert recommends would assess the processes used to create the system as well as confirm the quality of the system itself. As we recommended on page 86, this review should analyze a representative sample of the requirements, code, design, test cases, system documentation, requirements traceability, and test results to determine the extent of any quality issues or variances from industry standard practices that would negatively affect the cost and effort required of the AOC to operate and maintain CCMS. This review is not intended to duplicate the vendor or AOC's testing efforts, but rather it is intended to review the products and processes of the development effort to determine whether CCMS was built using appropriate software engineering practices for a system of this size and complexity. Our IT expert advises that the future cost of operating and maintaining CCMS when finished is related to the quality of the underlying software engineering, and

we believe this assessment, normally provided as part of ongoing IV&V, will provide the AOC with information to support future project decisions.

The AOC implies that IV&V and IPO services have been provided continuously throughout the statewide case management project. However, as shown in Figure 5 on page 70, significant gaps exist in the provision of IV&V and IPO services. The AOC did not contract for IV&V services until April 2004 and did not contract for IPO services until July 2007. Further, the AOC did not provide for IV&V or IPO services during the deployments of either the criminal or civil systems.

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We do not question the consulting firm's experience, rather we question whether the contract the AOC formed with this consulting firm called for the level of independent oversight services that we believe are needed for a project of this size, scope, and complexity. On page 73, we noted that the hours charged by the consulting firm for both the IV&V and IPO services for CCMS only amounted to about 60 percent of one person's time on the project each month. In contrast, even though the FI\$Cal project—a project of roughly similar size and complexity—is in the planning stage where fewer oversight services are needed, our IT expert notes that the equivalent of three staff are providing oversight services: two staff work full-time on IV&V and another staff person works almost full-time on IPO.

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In its response, the AOC refers to "significant [verification and validation] efforts conducted" by its staff on CCMS. However, we were unable to review these efforts for several reasons. As noted on page 72, the AOC lacks a software verification and validation plan that the Institute of Electrical and Electronics Engineers, Inc. (IEEE), Standard 1012, states would define and document its verification and validation effort. Such a plan would also describe the organization of the AOC staff's effort, including the degree of independence required. The IEEE, Standard 1012, does indicate that many different verification and validation structures will work well as long as project responsibilities, data flows, and reporting flows are defined and documented. Because the AOC has no such plan, we could not analyze or evaluate the verification and validation efforts the AOC asserts were conducted. Further, the AOC provided us no reports resulting from the staff's efforts it asserts were performed, and as we indicated on pages 72 through 73, there is no mention of such AOC staff effort in any of the oversight documents provided to us.

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The AOC's example illustrates its lack of understanding about the role of independent oversight. The purpose of independent oversight is not to participate in or direct the project activity, rather,

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it is to oversee those who do participate in the project and to report on the quality and appropriateness of the participants' actions. In the AOC's example, the participation of business services management and legal counsel is a normal duty of those individuals during contract negotiations, in contrast to the oversight by individuals who are independent of the negotiation process.

- ②⑨ The AOC misunderstands the definition of independence under industry standards, best practices, and IEEE, Standard 1012. Specifically, Annex C of IEEE, Standard 1012, states managerial independence requires the responsibility for the IV&V effort to be vested in an organization that is separate from the development and program management organizations. Although AOC staff participating in development activities are independent of the development vendor, they are not independent of the development project or the AOC.
- ③⑩ The AOC mischaracterizes our concern. We did not state that the unexpected 10-month delay was "a result of insufficient project oversight." Rather, as noted on pages 80 through 81 and Table 7 on pages 81 through 83, the consulting firm raised substantial and persistent questions about the project schedule and the quality of the system's requirements and design, which are key elements in the software development process. As noted on page 83, according to our IT expert, the AOC's inadequate response to these concerns may have resulted in missed opportunities to minimize and avoid schedule delays and quality issues that have arisen in the development of CCMS.
- ③⑪ Again, the AOC's comment illustrates its lack of understanding of independent oversight. The project team, which is subject to the independent oversight, should not decide whether the IV&V and IPO monthly status reports are distributed. Rather, to ensure the independence of project oversight, our IT expert advises that the distribution of the reports should be controlled by a high-level manager who acts independently of the project and makes ultimate decisions about the project's direction.
- ③⑫ We disagree with the AOC's assertion that the consulting firm's monthly status reports "contained nothing that the project team considered to require escalation." As we indicated on page 79, the consulting firm's October 2007 report—the last monthly status report before the six-month period during which reports were withheld from distribution—raised significant concerns about the project team. The consulting firm's concerns included that the AOC appears to have relinquished too much control over certain project elements to the development vendor; that the courts and the AOC have limited experience and knowledge of IT project management; that it is unclear how day-to-day project

management is being conducted; and that IV&V and IPO issues it reported are being left unresolved for too long. These concerns are related to the management of the project. The project team, which is the subject of these concerns, should not be allowed to withhold the distribution of the monthly status reports. Moreover, the AOC's statement "if the reports had contained information requiring immediate escalation, such action would have been taken immediately" is disingenuous.

We disagree with the AOC's assertion that "these concerns...did not present a risk to the successful completion of the CCMS project and should not affect the successful functioning of CCMS." As shown in Table 7 on pages 81 through 83, our IT expert found four concerns in particular that represented significant risk to the project, which the AOC does not appear to have appropriately addressed before the concerns were closed. Our IT expert identified two additional concerns that were closed but it is unclear whether the issues were adequately addressed. In addition, one concern raised in April 2010 is still open as of October 2010 with no action taken by the AOC. As noted on page 83, according to our IT expert, the AOC's inadequate response to these concerns may have resulted in missed opportunities to minimize and avoid schedule delays and quality issues in the development of CCMS.

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It is unclear to us why the AOC would rely on the former chief information officer's statement that the AOC was "aggressively managing" oversight on the statewide case management project as a way of attempting to demonstrate the quality of project oversight, particularly in light of the fact that the letter AOC quotes from was dated in February 2004, two months before the AOC had begun to contract for IV&V services for the project in April 2004. Also, the AOC misquotes Mr. Kelso's letter. He stated the AOC is "properly" managing IT projects, not "aggressively" managing.

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The AOC's current practice for resolving IV&V and IPO concerns appears to focus solely on the functioning of the system. However, our IT expert advises that in addition to ensuring "that system function is not affected," the AOC should consider the impact on the project's cost and schedule resulting from its efforts to address oversight concerns, and the possible effect on system support cost.

35

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