

What Can the State do to Prevent Future IT Project Delays and Cost Overruns

Oversight Hearing of the Business, Professions and Economic Development Committee's Subcommittee on California's Innovation, Technology and Life Sciences Economy

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EXAMPLES OF PROBLEM

Many of California's most prominent tech projects in the past few years have suffered colossal delays and significant cost overruns — more than \$2 billion alone for seven big projects since 2011. The state Department of Technology has nine large systems-integration projects in the works right now. The combined value: \$3.75 billion.

The state paid out nearly \$900 million on three projects before canceling them:

- 21st Century Project –overhaul of the state's payroll system.
- Department of Motor Vehicles upgrade of the driver's license and vehicle registration system.
- Judicial Council courts management system

2015 – BreEZe - Another flawed multimillion-dollar state computer project has busted its budget and made work it was supposed to streamline even less efficient, according to a scathing state auditor's report released Thursday. Bills for the BreEZe system stand at nearly \$37 million, and the Department of Consumer Affairs estimates it will ultimately cost \$96 million – more than three times its initial estimate of \$28 million in 2009. The department runs 40 state entities that do everything from licensing podiatrists to registering and regulating car repair shops. Only half of the 19 licensing and regulatory boards and commissions that originally planned to implement the system are using BreEZe. In 2013, Consumer Affairs moved boards and commissions for registered nurses, physician assistants, doctors and respiratory care practitioners into BreEZe. Delays ensued. Some nursing school graduates, for example, lost work because the Board of Nursing fell three months behind assigning test dates. Before the online BreEZe system, the old paper process took six weeks or less. “The BreEZe project has been plagued with performance problems, significant delays, and escalating costs,” State Auditor Elaine Howle stated in a letter introducing the report. “Consumer Affairs failed to adequately plan, staff, and manage the project for developing BreEZe.” Among the findings in Howle's report:

- BreEZe first-phase testing took 11 months instead of the planned eight weeks.
- More than 1,000 defects remained in the system even after testing.
- The Department of Technology failed to intervene for more than a year, “despite being aware of significant problems with the project.”

- Contracts approved with vendors “did not adequately protect the state” by making it tougher to terminate services.
- Of the 10 boards and committees using the system, none were satisfied with BreEZe reports and data accuracy. Three said overall satisfaction with the system was “poor.”

Howle also noted that some BreEZe contracts contained altered terms that put taxpayers at greater risk. If, for example, project contractor Accenture LLP used copyrighted software instead of writing its own code, “Consumer Affairs could be liable to the copyright holder, depending on the facts of the case” because the state altered a contract that transferred the copyright violation risk to the state. Consumer Affairs officials told auditors that the department agreed to assume more risk to keep Accenture from pulling out of the bidding process.

2015 – UCPath - a new payroll system integrating UC’s 10 campuses, five medical centers and office of the president. It would be phased in over four years at a cost of \$170 million, eventually saving the university more than \$100 million per year. It has fallen at least two years behind schedule, its cost has ballooned to \$220 million and counting, and the financial benefits of the overhaul are now unclear. The university is forging ahead, with no end date in sight. “You have a project that is out of control, poorly planned and lacks basic governance,” said Michael Krigsman, an IT industry analyst. “In other words, who is minding the store while this is going on?” UCPath – which stands for payroll, academic personnel, timekeeping and human resources – was conceived in 2009 as a necessary upgrade to the university’s outdated, 30-year-old payroll technology. “We had no choice but to completely replace the system,” UC Chief Financial Officer Nathan Brostrom said. “It really is a ticking clock.” But the university figured it could achieve significant savings by consolidating all of UC’s 195,000 employees in a single payroll, rather than having each campus replace its own system, which Brostrom said would cost up to twice as much. Processes would be standardized and most of the work would move to a shared services center, reducing redundancies in personnel and activities across the campuses, while leaving some human resources employees to focus on higher-level strategy. UC contracted with Oracle to provide software, maintenance and consulting. “The savings are against every campus doing it on their own,” Brostrom said. Those deadlines came and went as well. Brostrom said they hope to have their next update in July or this fall. “It has been far more complex and complicated than we had ever envisioned,” he admitted. The fundamental issue, according to university officials, is not developing the technology but transforming UC’s operations to mesh with it. Brostrom said the current payroll systems had more than 1,000 interfaces that the university had to unravel and strip out, including business processes like employee benefits that would normally be handled manually. “It was much more difficult from a technology perspective than if we simply pluck out (the current systems) and pluck in this new technology,” Brostrom said. “A lot of that was built on standard benchmarks,” he said. UC still has to “do a more realistic audit of what the savings are going to be.” Napolitano said the university has “some very strict management milestones we will meet” to finish UCPath. Brostrom did not offer a specific timeline, saying the project’s completion is “driven by performance rather than an arbitrary date.” That is a “major red flag” for Krigsman. “It’s a very significant overrun,” he said. “Now they’re declining to provide estimates of what the total is. It’s rather extraordinary.” He added that it is not unusual, nor is it an excuse, that the

complexity in a big payroll upgrade is the business transformation. But it is noteworthy that the timeline and budget remain open-ended, he said, with management still unable to develop a sense of their exact scope. “The only people who could afford to do this are people who have a blank check,” he said.

2014 - Controller’s 21st Century Project – Officials scuttled a massive overhaul of the state’s payroll system. The job was \$250 million over budget and four years behind schedule. A test run in the California State Controller’s Office revealed glaring flaws in software designed by SAP Public Services, the Washington, D.C.-based firm chosen for the work. Controller John Chiang blamed SAP for the disaster. The Senate Office of Oversight and Outcomes pointed the finger at Chiang, slamming the controller’s office for poor oversight and for misleading lawmakers about the size of the mess.

2014 – FI\$Cal - Financial Information System for California, a \$616 million overhaul of the state’s fiscal management system. It’s the largest IT modernization program listed by the Department of Technology, and state officials say a new multi-phased procurement process was supposed to weed out unqualified IT vendors. But the project has suffered several high-profile staff defections, struggled to fill vacant positions and lacked funding for years. A June status report from the California Department of Finance revealed the project recently missed 106 noncritical benchmarks. The system is \$300 million over budget and in 2009 three years behind schedule according to the Legislative Analyst's Office.

2013 – DMV - A \$208 million upgrade of the driver’s license and vehicle registration system at the California Department of Motor Vehicles. Feb 2013, on behalf of DMV's management, California’s CIO informed state legislators that it had decided to cancel at the end of January the remainder of its US \$208 million, 6-year IT modernization project with Hewlett-Packard, which was supposed to be completed in May of this year. As reported in the LA Times, after spending some \$134 million (\$50 million on HP) and having “significant concerns with the lack of progress,” the DMV decided to call it quits and do a rethink of the program’s direction. HP had apparently saw the handwriting on the wall. Its contract ended last November, and HP refused to hire key staff until the contract was renegotiated. The DMV IT modernization program was started in 2006 in the wake of a previous DMV project failure (called Info/California) that blew through \$44 million between its start in 1987 and cancellation in 1994. That “hopeless failure,” as it was then described, was supposed to be a 5-year, \$28 million effort; when it was terminated seven years in, the project’s cost to complete had skyrocketed to an estimated \$201 million with an uncertain finish date. A 1994 LA Times story reported that an assessment found the DMV had limited experience in computer technology, grossly underestimated the project’s scope and size, and lacked consistent and sustained management. The project's failure also sparked a full legislative probe.

2012 - Judicial Council California Case Management System - voted to terminate a courts management system because of state budget cutbacks. The council already had spent more than \$500 million on the project. Despite spending \$500 million on the California Case Management System (CCMS), court officials terminated the project and allocated \$8.6 million to determine whether they can salvage anything. In 2004, planners expected the system to cost \$260 million;

today, the price tag would be \$2 billion if the project runs to completion. The multi-billion project, started in 2001, was intended to automate California court operations with a common system across the state and replace 70 different legacy systems. Although benefits from the planned system seem clear, court leadership decided it could no longer afford the cost of completing the system, especially during this period of budget cuts, service reductions, and personnel layoffs

2012 - Employment Development Department - the EDD made headlines again after another information technology meltdown halted unemployment benefits to about 150,000 Californians. That computer system, also designed by Deloitte Consulting, shares much of the same architecture and software as the disability system. After its 2012 debut, EDD's 196 million dollar disability payment processing computer system glitched and resulted in major unemployment claim backlogs. Though the system has improved, its release decreased on-time processing rates from 90 percent to 60 percent for several months, impacting over 80,000 unemployed Californians. EDD officials underestimated the glitches impact. Deloitte contracted this system A year before California launched an upgrade to a computer system that pays disability claims to injured workers, state employee Michael O'Brien warned his bosses of big trouble ahead. An application architect, he was in charge of making sure that the new software would enable Californians to file and track their claims electronically — and O'Brien didn't like what he saw. In fall 2011 he sent dozens of emails to his superiors at the Employment Development Department informing them the system was riddled with errors that could jeopardize a successful launch. O'Brien's predictions proved accurate. When it debuted in September 2012, the new system malfunctioned immediately. Wait times for injured workers soared as the backlog of claims mounted. EDD staffers resorted to processing claims by hand as the computer staff scrambled to make fixes. But by that time, O'Brien, a 20-year-veteran, was no longer part of the team. EDD had removed him from the project in August 2012 against his will, following a reprimand for "inefficiency, discourteous treatment and failure to follow procedure," according to an internal memo. His offense: repeatedly pointing out software problems that his bosses insisted were fixed. His supervisor said he was costing the project time and money because of the resources needed to address his concerns. He was also forbidden from discussing certain problems he flagged with co-workers or vendors. O'Brien filed a whistle-blower complaint in September 2012 with the California Personnel Board contending that his muzzling and transfer to another department amounted to punishment for speaking up. The 170-page document, obtained by The Times, contains dozens of emails, documents and other correspondence between O'Brien and his superiors. Project management "retaliated against me because I reported ... improper contracting practices, bad decisions, incompetence and poor internal controls," O'Brien said in his complaint. His whistle-blower complaint also alleges that Deloitte violated its contract with the state by failing to provide qualified consultants to replace a senior software architect and a veteran database designer who left the project midstream. O'Brien said their replacements lacked the minimum years of experience required by the contract. He alerted his supervisors by email and by filing an item with the project's tracking log, which is a detailed record of issues raised by staff over the course of the project. Less than two weeks after O'Brien sent his email, EDD managers rewrote the contract language to ease the experience requirements for the replacements. Those changes were

documented in an email sent to O'Brien and other project staff by Babette Davis, the project's executive liaison in September 2011.

2008 – Child Support Payments - a computer system began operating to allow better tracking and collection of child support payments, but it had taken so long to be completed that California had to pay \$987.8 million in penalties to the federal government. And after spending \$1.5 billion on the project, California still has one of the worst collection rates in the nation: 53.1%, according to the federal government. The child support database is part of a plan to spend \$6.8 billion overhauling state computer systems.

2001- the state awarded a \$95-million computer contract for software to link information and services across government agencies to Oracle Corp., without competitive bidding. The state auditor later concluded that Oracle's service was overpriced and involved a system for which there was little demand from state agencies.

1994 - then-Gov. Pete Wilson pulled the plug on a DMV computer project after the state spent \$50 million on a system that never worked.

REASONS FOR THE PROBLEM

The California Department of Technology, in July 2014 took control of the state's largest IT projects as part of an effort to improve efficiency and prevent boondoggles, says the state's massive and complex technology needs are largely to blame. "We're building our oversight capacity based on those lessons learned," said department director Carlos Ramos, who also is the state's chief information officer.

But others point out what seems to be a common thread: Big projects involving big information technology consulting firms such as Deloitte, Accenture, Hewlett-Packard Co. and SAP seem to have big troubles.

Critics of California's IT track record also point to a Byzantine state procurement process that they say hampers competition and curbs innovation while repeatedly rewarding large companies for shoddy work.

For smaller tech firms, especially Sacramento companies with both federal and state consulting experience, the problem is especially frustrating. They have the background to do the work but feel shut out of the process. "It's frustrating. It's been going on for years," said Martin McGartland, president and CEO of Natoma Technologies, an IT consulting firm in Sacramento with roughly 50 employees. "It's not even incrementally getting better."

According to a study by the global consulting firm McKinsey & Co., 66 percent of 5,400 public and private IT software projects it studied busted their budgets and 33 percent didn't meet completion deadlines. And 17 percent of projects fail so badly that they're known as "black swans" in the IT world, the name for ventures with cost overruns of at least 200 percent. The numbers were similar regardless of industry.

STATE ENTITIES TAKE TOO LONG

Business owners in the IT industry claim California takes longer to develop and award government contracts than other states. Even the United States government — by no means a nimble bureaucracy — seems to pick vendors more quickly, according to several Sacramento firms.

State Department of Technology spokesman Anthony Lewis disagrees. “California’s projects are large and complex,” he said. “In our discussions with IT leaders with other states, our experiences were not unusual or uncommon.”

But Carol Henton, vice president of state and local government at industry group TechAmerica, said her members have called California worse than many other governments; they report an average wait of 18 months for agencies to develop and award a project. “That’s if you’re lucky,” she said.

Local IT exec McGartland said the state often takes at least three years to develop a project, request bids and award the contract. According to a 2009 report from the Department of General Services, the state averaged between 29 and 78 months to prepare an IT project and select vendors. The report blamed extensive revisions to project requirements, inexperienced users creating the proposals, and a lengthy review process that drags more people into the process.

The practice takes roughly 90 days for similar projects at the federal level, McGartland says. “The procurement cycle in the state is completely out of control,” he said.

When more time passes, technology evolves and becomes outdated, forcing firms to request changes to the project. Agency staff members sometimes underestimate costs and have to revamp budgets when they delve deeper into a system’s overhaul.

MICROMANAGEMENT

At the same time, California has a reputation for micromanaging government projects and demanding excessive customization, which technology executives say stifles innovation and adds time, cost and confusion. McGartland said he’s seen state contract proposals with hundreds of specific solutions described.

According to SAP’s Senate testimony, the state requested 126 customizations after the 21st Century Project was supposed to go live. The company claimed the requests were “extraordinarily high compared to other large SAP payroll systems.”

“The amount of customization that has to go into implementing a tool is often so severe that it’s beyond the core capability of the tool,” said Alex Castro, a partner at M Corp, a Sacramento IT consulting firm with 105 employees.

State spokesman Lewis said the state believes giving detailed directions to consultants is actually a good thing. “The more micromanaging we’re doing up front, it will actually lessen the confusion in the implementation and development process,” he said.

QUALITY OF WORK / EMPLOYEES

The delays can have another side effect. Companies usually list their most experienced staff members on bids submitted to the state. But if agencies take longer than expected to award the contract, companies will reassign those workers and often replace them with less experienced staff.

Chiang said the process needs to be reformed so the state clearly can assess staff experience after picking a vendor and improve accountability. “When you have these big projects, how do you identify the top talent within a company?” said Chiang. “Are you getting their A team, their B team, or their C team? Are they bringing in people they just brought in from the minor leagues?”

SMALL VS LARGE FIRMS

Smaller firms also believe the state’s tendency to select large firms also leads to less accountability because those companies often turn around and pick subcontractors to perform most of the work.

In that case, government officials have an even harder time verifying talent levels of people on the contract. “It’s not their name on the line,” Castro said.

Some also believe the process needs more competition and better ways to judge firms for their past performance. Local firms believe they are often shut out of the bidding process because the state favors bigger companies with recognizable names despite their past failures.

“A lot of these large firms, regardless of how poorly they perform, are selected over and over again,” said Castro of M Corp. “I think that’s unfortunate.”

The state’s chief information officer disputes the idea that smaller companies are locked out.

“We do put in requirements that somebody be able to back up their work,” said state CIO Ramos.

One example: The California State Lottery recently sought bids for an upgraded sales management system. Anyone could submit proposals — but only if a firm had previously worked with one of 17 state lottery systems with at least \$1 billion in revenue.

Department spokesman Lewis said the state tries to accommodate smaller firms, but that some projects are just too big for them.

“It’s a very difficult balancing that has to be done,” he said. “You want to have as much competition as you can, but you want to have reasonable assurances that these people can deliver.”

Castro said those types of mandates shut out smaller firms with proven track records. He said he thinks between 30 and 50 percent of state IT contracts could be done by local companies instead of multinational corporations with failed work on their record.

“There are times that large system integrators fit better than a local firm, no question,” said Castro. “But there are many projects in the state that could have easily been done by a local firm that would have had a better outcome, simply because those firms live and die by their reputation here.”

POSSIBLE SOLUTIONS

AUGUST 2013: RECOMMENDATIONS TO IMPROVE LARGE INFORMATION TECHNOLOGY PROCUREMENTS: A ROAD MAP FOR SUCCESS IN CALIFORNIA

Task Force on Reengineering IT Procurement for Success, Chairperson Rosio Alvarez, Ph.D.

Appointed by Governor Jerry Brown and Controller John Chiang

http://www.sco.ca.gov/Files-EO/0813_IT_Task_Force_Recommendations.pdf

Recommendation 1. Department of General Services (DGS), California Technology Agency (CTA), and Department of Finance (a.k.a. Finance or DOF) should abandon the FSR and restructure the project-approval process to create two stages: (1) initial approval and (2) detailed planning approval.

Recommendation 2. Understand, document, and validate business requirements and objectives before solicitation.

Recommendation 3. Use business process reengineering to modernize and standardize state processes.

Recommendation 4. The Procurement Authority should strengthen the market research requirement in the project-approval process and provide detailed guidance on how to conduct market research, including the use of one-on-one meetings.

Recommendation 5. Require the acquisition strategy and procurement plans to describe the governance body for each project that includes a transparent, clear, timely, and robust decision-making process.

Recommendation 6. Under the authority and direction of the CTA, extend the Office of Systems Integration (OSI) model to the rest of the state for large-scale IT projects.

Recommendation 7. The Procurement Authority should require a formal staffing plan as part of the project-approval process.

Recommendation 8. The Procurement Authority should develop a cadre of procurement and legal staff well versed in the use of PCC 6611 and expand its use for IT projects.

Recommendation 9. At the recommendation of the project executive, allow for a contingency contract dollar amount consistent with the size and complexity of the project.

Recommendation 10. The Procurement Authority should study and annually report on the viability and utility of using alternative contracting vehicles.

Recommendation 11. The Procurement Authority should develop and publish a model procurement task plan that establishes the goal of a 10-month maximum timeline from RFP issuance to contract execution.

Recommendation 12. The Procurement Authority should conduct formal post-project evaluation of major procurements, with annual reporting on lessons learned and needed improvements.

Recommendation 13. Use a combination of quantitative and qualitative criteria to evaluate proposals.

Recommendation 14. The CTA as the state's technology leader must set an expectation that IT procurements are iterative and that staff should expect and plan for change.

Recommendation 15. The Procurement Authority should develop and publish a standard, streamlined framework for the addendum process.

Recommendation 16. The Procurement Authority should require a contract-management office for large-scale IT projects and should assess the need for a central contract management office.

Recommendation 17. Develop and use contract incentive provisions to reward excellent performance and address underperforming projects.

Recommendation 18. The CTA should identify methods to collect vendor performance data and incorporate it into prescreening of vendors for future procurements.

Recommendation 19. Reduce and track vendor changes of key personnel and subcontractors.

Recommendation 20. The Procurement Authority should develop an ongoing forum for vendors and state staff to meet outside of the pressure of solicitations.

Recommendation 21. The CTA should review the procurement life cycle to identify opportunities to increase effective and fair communication between the state and vendors.