



2011-2012 Reports

1. 2011-12 Annual IT Performance Metrics Report (GC 11545(d))
2. Annual Department of Finance Cost Savings and Avoidance Report (GC 11545 (d)4)
3. 2011 Supplemental Reporting Language – Metrics (0502-001-0001)
4. Quarterly Consolidation Reports (GC 11546.3)

Executive Summary

This report provides four individual reports required of the California Technology Agency (Technology Agency) by statute and by Supplemental Reporting Language of 2011. The four reports are:

- 2011-12 Annual Information Technology Performance Metrics Report
- Annual Department of Finance Cost Savings and Avoidance Report
- 2011 Supplemental Reporting Language—Metrics
- Quarterly Consolidation Reports

While these reports are not typically linked or provided as one report the Technology Agency has brought them together in this consolidated report for this year.

As the reorganization and consolidation of IT infrastructure progresses, the means by which it is measured must be re-evaluated. These reports provide updated information on the progress of the state's consolidation and reorganization efforts along with new thoughts on how to track the positive impacts these changes are having in California.

In addition to the reports included here, the recently published California Information Technology Strategic Plan (<http://www.itsp.ca.gov>), provides our vision and priorities for the future.

2011-12 Annual IT Performance Report (Government Code 11545(d))

In 2009, the Office of the State Chief Information Officer (OCIO) developed a performance framework of metrics to measure our progress. When the Technology Agency first developed the metrics, the state lacked consistency for how IT metrics were monitored or reported. We have worked since that time to put an infrastructure in place that will yield consistency in how metrics are reported and used, allowing us to more accurately track and monitor statewide trends.

In addition to improving statewide measurement, the Technology Agency is now in a better position to define metrics that provide information we can use to manage the state's IT operations. The Technology Agency:

- Reviews metrics tracked and reported by departments
- Assesses the value those metrics provide
- Balances the value provided against the time and cost to collect the data.

Some areas of focus that were of critical importance in 2009, such as infrastructure rationalization, are nearly complete. Other areas, such as security, workforce development, and service metrics are increasing in importance.

The world of technology moves quickly, and we must constantly evaluate and evolve our efforts to move with it.

2011-12 Performance Metric Update

Infrastructure Rationalization

Metric	2009	2010	2011
# of servers	10,000	8,129	7,266
Data center capacity (sq. ft.)	364,000	262,500	181,324
# of Wide Area Networks	70+	50	45
# of email boxes in E-Hub	0	163,630	166,949

Service

Metric	2009	2010	2011
Public satisfaction with online services	80%	90%	N/A ¹
Service level agreements met	75%	88%	100%

¹The public satisfaction survey that was part of the 2007-2010 CA.Gov template was not included in the CA.Gov template rolled out in 2010 because it did not yield usable data.

Project Management

Metric	2009	2010	2011
% of projects delivered on time and within budget	58%	70%	43% ²
% of projects completed within budget	75%	75%	56% ²
% of projects delivered on time	68%	75%	29% ²

²Data is based on projects completed in a given year. Typically, approximately 20 projects are completed each year, but in 2011 complete data is available for only 7 completed projects. This small sample size makes the data volatile, where one or two projects can swing the percentages. The Technology Agency is reviewing this metric for future reports to determine the most appropriate method for analyzing projects in regards to schedule and budget. For instance, total project portfolio budget may provide some larger scale perspective.

Reliability

Metric	2009	2010	2011
% of state agencies with current IT disaster recovery plans (per year) ³	85%	89%	73%
System availability	99.0%	99.90%	99.99%
Network availability	92.70%	99.91%	99.91%

³Percent of state agencies that have submitted a full plan or a certification during calendar year that they had no changes within the past year that would require a change or update to the plan.

Sustainability

Metric	2009	2010	2011
Energy used (MWh/year)	170,000	140,426	107,028
Carbon dioxide emissions (Metric Tons)	85,000	70,213	41,994

Security

Metric	2009	2010	2011
# of electronic data breaches (per calendar year) ⁴	90	268	81
# of breaches resulting in the loss of personally identifying information (PII) ⁵	3	0	2
# of website compromises (per calendar year) ⁶	70	11	7

⁴The number of data breaches during the calendar year that involve unencrypted data in an electronic format (e.g., unencrypted laptop, thumb drive, unauthorized access to database through hacking or network intrusion, etc.).

⁵The number of breaches that resulted in the loss of PII during the calendar year, based on unencrypted electronic device and storage media lost or stolen containing PII. ⁶Website compromise includes any successful exploit of a State Agency website vulnerability (e.g., defacement, cross-site scripting, SQL injection, and hijacking, etc.).

Annual Department of Finance cost savings and avoidance report

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Since the California Technology Agency was established, the state has achieved savings and cost avoidances through numerous technology initiatives including state-wide IT consolidation, IT Project Oversight, IT Capital Plans, IT Acquisition Plans, annual IT Cost Reporting, and contract renegotiations.

In previous years we have reported cost avoidance based on projects rejected or reduced in scope through our IT capital planning process. While the Technology Agency still serves the role of approving and rejecting projects, which helps avoid costs, we are not reporting specific dollars in this report. Projects that move forward with more accurately defined costs may not represent any actual cost avoidance as the cost of the project is determined in the procurement, not initial project documents. Other project refinements do create actual cost avoidances. While we continue to consult and collaborate with projects in order to improve their project requests, we are re-evaluating how those original requests should be considered and tracked for purposes of this report.

Other previous year savings were one-time in nature or based on one-time actions with ongoing savings, such as the closure of the cannery campus data center (providing over \$40 million in cost avoidances) and renegotiation of the CalNet2 contract (\$25 million in annual savings/cost avoidance). These types of one-time savings will occur sporadically and be reported in the appropriate year for which they occur.

Below is the report on 2011-12 cost savings and avoidances achieved through improvements to the way the state acquires, develops, implements, manages, and operates state technology assets, infrastructure, and systems.

Sincerely,

Carlos Ramos
Secretary – California Technology Agency
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2011-12 Cost Savings/Avoidances

Wireless plan optimization savings	\$1,174,000.00
Office of Technology Services rate savings	\$10,990,000.00
Office of Technology Services April 2012 rate savings	\$21,500,000.00
Renegotiated Office of Technology Service contracts – Cost Avoidance	\$1,140,000.00
Total	\$34,804,000.00

The Office of Technology Services rate savings previously implemented for the year (\$10.99 million in savings) were achieved through the following rate reductions:

- Mainframe Processing rates were reduced by 3.4%
- Mainframe Disk Storage rates were reduced by 15%
- Open Systems Disk Storage rates were reduced by 25%
- Mainframe Tape Storage rates were reduced by 20%
- AIX Application Hosting rates were reduced by 9.6%

The rate reductions approved in April of 2012 (\$21.50 million in savings) will be achieved through the following rate reductions:

- Mainframe CPU rates were reduced by 25%
- Mainframe Disk Storage rates were reduced by 59%
- Mainframe Tape Storage rates were reduced by 20%
- AIX Application Hosting rates were reduced by 20%
- Electronic Commerce Application Support rates were reduced by 43%
- Tenant Managed Services rates were reduced by 41%
- Web Hosting rates were reduced by 75%

2011 Supplemental Reporting Language – metrics

Supplemental Reporting Language 0502-001-0001 (2011):

“Implementation and Reporting on Governor’s Reorganization Plan. It is the intent of the Legislature that the California Technology Agency (Technology Agency) and the Department of Finance jointly develop reporting metrics that capture additional information not already included in the Technology Agency’s statutorily required annual reports. These metrics will include, but not be limited to, information on cost and risk avoidance and identified impediments to the continued implementation of the Governor’s Reorganization Plan No. 1 (GRP).

It is the intent of the Legislature that these metrics be (a) developed in consultation with the Legislative Analyst’s Office (LAO), (b) completed in time for the information to be incorporated, as appropriate, into the Technology Agency’s 2012 annual reports, and (c) shared with the Legislature.”

The factors below were developed in consultation with the Legislative Analyst’s Office and the Department of Finance. These factors are intended to highlight information about the impact of the Technology Agency on the state’s IT systems that are not currently contained in existing reports. The areas of focus are: project oversight, lessons learned, improving IT procurement processes, and avoiding infrastructure costs.

These factors focus on the benefits provided to the state by the Technology Agency, but do not all lend themselves to easy measurement.

Project oversight

The Technology Agency participates in the project process from start to finish. We have a role in reviewing project concepts, approving project requests, monitoring projects, learning from completed projects, and sharing those lessons learned with departments. The following discussion provides an overview of progress and applicable metrics on project concepts and project risk.

1) Project concepts review and approval

The Technology Agency has implemented standards and processes to reduce project cost and risk. These changes are difficult to measure, but provide significant benefits to the state. The Technology Agency’s role includes prevention and, later in the process, corrective action.

Prevention starts early in the project lifecycle. Even before project development, through the IT Capital Plan, all departments must provide the Technology Agency with prospective IT projects they anticipate in their future. This gets the planning process started early, and allows a statewide view of potential projects on the horizon.

During the concept stage, the requesting department must develop a business need statement. The Technology Agency evaluates the concepts using criteria that indicate potential risk, justification of the business need, capacity of the organization to manage the project effectively, and alignment

with state direction. By evaluating the concept on these and other criteria, the Technology Agency prevents unfounded concepts from proceeding to what is likely to be an unsuccessful conclusion.

The Technology Agency also determines whether existing systems or other projects might meet the requesting department's needs, to identify if collaboration on a system can result in both cost and risk reduction. As an example, the Technology Agency is working with a department that wants to acquire a computer aided dispatch system to evaluate whether another department's system can meet both departments' needs, rather than having each deploy their own system.

2) Project risk mitigation

If the concept is approved, the Technology Agency staff work with the department to ensure risk is mitigated throughout the project. At the Feasibility Study Report (FSR) stage, departments are required to identify potential risks in a multitude of categories including: planning, organization and management, technical, financial, user involvement, project management, procurement approach, and staffing. As the project progresses, the risk identification and mitigation strategies also cover requirements, vendor performance, and long-term system support. By evaluating the level of risk and identifying mitigation strategies early, departments can minimize those risks.

All FSRs are reviewed to determine if the project is in the best interest of the state, uses appropriate technology, has a reasonable economic analysis, and if there are opportunities for collaboration. Without Technology Agency approval of the FSR, the project cannot proceed. If the project is approved, Special Project Reports (SPRs) must be submitted to the Technology Agency any time a deviation of more than 10% exists for cost, schedule or scope. SPRs must also be approved by the Technology Agency before the project can continue.

3) Oversight

The Technology Agency ensures proper oversight of high criticality projects through a variety of methods.

A tool is provided in the California Project Management Methodology (CA-PMM) to evaluate risk factors to rate the level of project risk from low to high. Projects that are of high criticality or risk are required to hire and use independent experts to provide project oversight and to validate that the systems are being developed in accordance with sound industry practices. These independent experts assess progress and risk and report their findings on a scheduled basis to the Technology Agency, to the sponsoring departments and to the project teams. This provides early additional information about a project's status and if a project is in trouble.

For all significant projects, departments and their cabinet agencies meet with the Secretary of Technology on a monthly basis to review their project portfolios. In these sessions, departments report on the project status along with any issues or risks.

The Secretary also meets regularly with technology companies and reviews the status of projects they are implementing for the state. These meetings allow the Secretary to cross check information

reported by the departments and to leverage the authority of the Technology Agency to negotiate resolution to project issues.

For all the above project oversight functions, the benefits are very difficult to isolate and measure. For instance, while we know that of the thirty-two (32) concepts submitted for 2012 for which the department did not have delegated authority, the Technology Agency rejected twelve (12); this metric doesn't provide value. If 30 of the 32 projects were well conceived and justified, that doesn't represent a decrease in the benefit of this role for the Technology Agency, simply better justification of projects. Similarly, early intervention by the Technology Agency to help improve project planning, reduce risk, and to improve procurements and oversight provides benefits to the project down the line, but not in a measurable way.

Lessons Learned

The Technology Agency is currently focusing on identifying and providing lessons learned to projects throughout the state portfolio. The Technology Agency is creating a clearinghouse so that departments can benefit from other departments' lessons and avoid repeating the same issues. An example of this occurred when the Technology Agency shared lessons learned on the State Controller's 21st Century project related to data migration with the FI\$Cal project. In response, the FI\$Cal project re-evaluated the resources dedicated to data migration so that it could avoid the issues experienced by the 21st Century project.

With the creation of the Office of Professional Development within the Technology Agency, there will be an increased focus on providing training and career development opportunities to ensure the state has a skilled workforce to manage and run future projects and existing systems.

Improving IT procurement process

In the project approval process, departments must detail their procurement plans. The Technology Agency reviews Requests for Proposals (RFP) and Invitation for Bids (IFB) that are estimated to cost over \$1 million to ensure alignment of the requirements with the project scope as stated in the project planning document. The Technology Agency looks to make sure the department has demonstrated their plans are realistic, achievable and within their capacity to deliver.

When appropriate, the Technology Agency provides assistance with the procurement process, such as evaluations, primarily on large information technology projects with high risk.

Additionally, the Technology Agency has worked aggressively with customer departments and other control agencies to reduce the timeframe to acquire technology solutions. Recently, the Technology Agency led the effort to shorten the planning process and reduce the documents needed to acquire initial project approval. The project approval document (FSR) and the Information Technology Procurement Plan (ITPP) contain similar but not exactly the same data requests and are submitted to the Technology Agency and Department of General Services respectively by the requesting department. The two control agencies, along with customer departments identified how the two documents could be

combined into one so that departments could explain their need once, removing duplication and streamlining the process. The two control agencies also agreed to concurrent review of the FSR. This is likely to reduce the approval process timeline by several months. Because all procurements take different lengths of time, it is difficult to measure how much time was saved due to this one factor. Nonetheless, this reduced timeframe is expected to have a positive impact on projects.

Additional efforts include considering alternative procurement approaches, such as the multi-stage procurement utilized by the FI\$Cal project.

In addition to the internal review process, the Technology Agency is responsible for IT procurement policy and is evaluating the existing procurement policies for areas that can be improved. The Technology Agency met with DGS and jointly agreed to seek input from vendors and customer departments on IT procurement policies. These efforts will be undertaken throughout 2012.

Telecommunications Procurement Authority

Chapter 404, Statutes of 2010 (AB 2408) amended Public Contract Code (PCC) 12120, transferring the responsibility of telecommunications procurements authority from the Department of General Services to the Technology Agency. In February 2012, the Technology Agency established the Office of Telecommunications Procurement to undertake and implement this authority.

The goal of the Office is to implement a telecommunications procurement program that will streamline processes and improve operating efficiencies, while not interrupting procurements currently underway. The Office plans to reduce the procurement timeline, reduce the size and requirements of procurement documents, increase telecommunications bidder participation, and eliminate fatal flaws in bidder proposals. In order to achieve this goal, the Office of Telecommunications Procurement will develop a procurement manual (Volume IV to the State Contracting Manual) for telecommunications and invite stakeholder review; maintain and develop leveraged procurement agreements for use by departments with delegated purchasing authority; establish and maintain bidder lists by pre-qualifying telecommunications vendors and pre-negotiating contract language, thereby reducing administrative requirements within an individual bid; and ensure departments are afforded the opportunity for their staff to acquire the knowledge and skills necessary to perform in-house procurements and contract administration.

These processes are being developed now, making it difficult to determine how to measure their benefit. As this new unit matures, the Technology Agency will evaluate the appropriate metrics to measure the benefit provided to the state.

Avoided Infrastructure Costs

The Technology Agency leads the state's efforts to reduce infrastructure costs through consolidation and optimization and works closely with departments to meet consolidation goals and increase long-term efficiency and effectiveness. By reducing space needed for IT facilities, some departments may be able to avoid additional leased space. In 2011, the Technology Agency reported \$40 million in avoided

capital costs due to elimination of a planned new data center that was avoided through IT consolidation efforts. While this example lent itself to easy measurement, not all such avoided costs are easy to track.

The Technology Agency seeks out these opportunities to improve state operations and tracks, measures and reports on these improvements when feasible, but whether or not they can be measured, the state still reaps the benefits. The Technology Agency works closely with all departments to disseminate best practices, consolidate infrastructure, consolidate projects, and promote more efficient and effective operations. All these efforts result in avoided costs that cannot always be measured or attributed to IT savings.

Quarterly consolidation reports

As part of AB 2408 (Chapter 404, Statutes of 2010), departments were required to provide metrics to the California Technology Agency to allow tracking and reporting of the progress of the IT consolidation efforts.

Green IT Power Savings

The State was required to reduce IT energy consumption (compared to 2009 baseline data) by 20% by July 2011 and 30% by July 2012. The State achieved a 37% reduction prior to July 2011, already exceeding the required 2012 target and meeting the reporting required.

E-mail migration

All departments were required to “be in migration” from their existing e-mail service to a state shared e-mail solution by June 2011. As of January 2012, 99.5% of the state’s 178,000 e-mail boxes have begun this process. The Technology Agency continues to work with the few departments that have not fulfilled their requirements, and is moving forward to complete the migration for all those that have begun the process. The quarterly update posted to the Technology Agency website is attached.

CGEN (California Government Network)

All departments were required to “be in migration” from their existing network services to CGEN by July 2011. As of February 2012, all departments have begun the process of migrating their network services, as required. While this requirement has been met, the Technology Agency continues to work with departments to complete the migration process. The quarterly update posted to the Technology Agency website is attached.

Data Center Consolidation

The Technology Agency was required to oversee the reduction of the state’s total amount of square footage utilized for data centers by 50% by July of 2011, in order to improve operations efficiency. As of July 2011 the state had reduced the total square footage in use by nearly 45%, and by July 1, 2012 the state will have achieved the 50% reduction target and met the required reporting.