



2015-2016 Reports

1. 2016 Information Technology Strategic Plan Update (GC 11545 (c))
2. 2015 Annual IT Performance Metrics Report (GC 11545 (d)3)
3. 2015-2016 Annual Department of Finance Cost Savings and Avoidance Report (GC 11545 (d)4)

Executive Summary

This packet provides three individual documents required of the California Department of Technology by statute. These documents are:

- 2016 Annual Information Technology Strategic Plan Update
- 2015 Annual Information Technology Performance Metrics Report
- 2015-2016 Annual Department of Finance Cost Savings and Avoidance Report

The Annual Information Technology Strategic Plan update is attached herein, but can also be found on our website at www.cio.ca.gov.

2015 Annual IT Performance Report (Government Code 11545 (d) 3)

In 2009, the Office of the State Chief Information Officer (OCIO) developed a performance framework of Information Technology (IT) metrics to measure progress statewide. This report provides the annual update to the Legislature and provides context for the collected and reported metrics, as indicated below.

Infrastructure Rationalization: Infrastructure Rationalization speaks to the efforts to consolidate, share, and standardize statewide IT infrastructure (AB 2408, Chapter 404, 2010). Due to an increased emphasis on server virtualization, the number of physical servers statewide has declined during the past five years. However, this decline is somewhat offset by an increase in the number of servers, both physical and virtual, needed to accommodate and support new and expanding IT systems throughout the state. Statewide data center capacity met the 50 percent target reduction rate in 2012, and has continued to maintain this since; information is included in this report to further comply with the five year data requirement. The number of Wide Area Networks reflects the reductions which have occurred due to consolidation efforts. The number of email boxes in E-Hub reflects the number of email boxes available to adopt the statewide email security solution.

Service: Service level metric for measuring public satisfaction with online services, as presented in previous reports, has been integrated into the Reliability metrics since 2011. Future reports will continue to show this in the Reliability metric section as with current technology offerings it is now a function of System Availability and Network Availability.

Project Management: Project Management data shows variations over time in the percentages of reportable projects delivered on time and within budget. For calendar year 2015, there is a significant decrease in the percentage of projects completed on time, and a modest increase in the percentage of projects delivered within budget. Due to the fluctuations in sample size from year to year, predictive value of this data is limited.

The Department of Technology, in 2014, launched a Division of Consulting and Planning to assist projects experiencing significant challenges. The Division works with state agencies to restore project equilibrium and ensure the project's continued value to the state.

The state IT community has undertaken considerable efforts to ensure project success. The Department of Technology has responsibility for oversight of the state's technology projects. The Department of Technology provides review and approval during project initiation and monitors projects once they have begun to identify potential risks and issues before there is a significant impact to the schedule or budget. The department coaches, mentors, and guides correction at such times as warranted.

The Department of Technology has implemented reforms intended to reduce the risk of project failure, including:

- Initiation of a Statewide Project Management Office designed to provide state level information technology project management expertise to state projects.
- Reformed the approval process for IT projects through the Statewide Technology Approval Reform (STAR) project. This end-to-end review of the project approval lifecycle will ensure projects are properly planned and resourced, leading to more realistic budget and schedule estimates. The

revised process focuses on key elements that are necessary for project success. The revised process places greater emphasis on documenting the business problem which an agency is seeking to address through investment in a technology solution. Additionally, greater emphasis is placed on ensuring that departments have the capacity to successfully complete a project. This will help ensure projects are implemented more timely and within budget.

- Embedding of Department of Technology oversight staff within large and mid-size high-risk projects to provide direct oversight, input, and feedback.
- Transitioned IT project procurement authority from the Department of General Services to the Department of Technology. Having IT project procurements in the same department as project oversight allows seamless incorporation and leveraging of the lessons learned across California's project portfolio. Having responsibility for both of these functions will allow the Department of Technology to mitigate project risks and streamline the IT project procurement process.
- Increased and targeted training for IT project sponsors and project teams.
- Increased communications with project directors and vendors on large projects.
- Cataloguing and sharing of lessons learned from across the state's IT project portfolio.

While we see some immediate results from these initiatives (better trained project staff, improved processes, etc.), a majority of projects currently underway were set in motion many years ago, long before these initiatives were initiated. As opportunities arise, the Department of Technology has initiated reviews of existing projects and, where applicable, the Department of Technology will monitor the impact of these efforts as projects are developed through the improved processes.

Reliability: The Reliability metric indicates the percentage of state agencies with current IT disaster recovery plans. Each agency or state entity is required to submit a full plan when changes are made, or certify that no changes were made to necessitate such a revision. System and Network availability are also included in this section.

Sustainability: As required by Government Code 11545, the Sustainability metric reports on the departments' energy usage; the 33 percent reduction goal was achieved in 2012 and has been maintained since that time.

Information Security: Information Security metrics have varied greatly over the years and their importance to managing today's cyber security risks and maturing department information security programs continues to increase. As part of its Statewide Information Security Program Improvement Initiative the Department of Technology is implementing an automated solution to track both reported incidents and departments' progress in achieving information security compliance; once fully implemented, the new tool will provide enhanced metrics for information security.

In 2015, the California Information Security Office has undertaken or expanded upon the following initiatives to enhance the security of California's technology resources:

- 1) Continued partnership with the Governor's Office of Emergency Services on the California CyberSecurity Task Force to strengthen and enhance California's cybersecurity. The Task Force has formed the following committees: Legislation and Funding; Risk Mitigation; Cyber Emergency Preparedness; Cybersecurity Workforce Development; Information Sharing; High-tech and Digital Forensics; and Economic Development.
- 2) Co-Sponsored the National CyberSecurity Awareness Month (NCSAM) event: CyberSecurity Symposium. The annual National CyberSecurity Awareness event, which included educational content, and new government to government session tracks, was videotaped and is available on the California Information Security Office Website.
- 3) Participated in the State Technology Approval Reform (STAR) Project to integrate information technology security policy into the stages of the Project Approval Lifecycle.
- 4) Engaged several state entities with the Information Security Compliance and Oversight Function Pilot Project and is creating a plan to implement a permanent program.
- 5) Collaborated with Department of General Services to integrate information technology security policy into cloud-based software contract negotiations.
- 6) Provided expanded content for the Information Security Officer Basic Training to help ensure policy compliance and understanding of the Information Security Officer role; the new two-day class was held four times in 2015.
- 7) Hosted Information Security Officer and Technology Recovery Coordinator and Privacy Program Coordinator bimonthly meetings to discuss emerging information security issues and invited subject matter experts as speakers.
- 8) Collaborated with the instructor from California State University at Sacramento who provides courses for state employees on the system development lifecycle to include information security policy content for integration into educational courses that are delivered through the Statewide Office of Professional Development's Project Management Academy.
- 9) Represented the Office of Information Security at numerous state, local, tribal and territorial speaking engagements as part of the cyber security awareness outreach campaign.
- 10) The California Information Security Office worked with the Department of and the Governors' Office of Emergency Services to prepare for implementation of Assembly Bill 670, security assessment and reporting requirements. The Computer Network Defense (CND) team plans to expand their services offering that currently include vulnerability and risk assessment services. The services will continue to be included on the Department of Technology Service Catalog.
- 11) Implementation of a process for the automated Information Security Incident Management program; the benefits of the automation effort include real time reporting and statistics as well as faster response and situational awareness dashboards.

California Department of Technology 2015 Annual IT Performance Report

Metrics shown in Calendar Year Data

Infrastructure Rationalization

Metric	2011	2012	2013	2014	2015
# of servers (physical)	7,266	Data not available ¹			
Statewide data center capacity (sq. ft.)	181,324	50% reduction achieved	50% reduction maintained	50% reduction maintained	50% reduction maintained
# of Wide Area Networks	45	25	3	3	2
# of email boxes in E-Hub	166,949	166,980 (99.5%) ²	166,980	166,980	190,147

¹This data is no longer collected as this was not an effective metric.

²Percentage of mailboxes migrated to eHub reflected in the 2012-2013 report rather than number of email boxes in eHub.

Service

Metric	2011	2012	2013	2014	2015
Public satisfaction with online services ³	N/A	N/A	N/A	N/A	N/A
Service level objectives	100%	N/A ⁴	N/A ⁴	N/A ⁴	N/A ⁴

³Public satisfaction survey, from the 2007-2010 CA.Gov template, was eliminated as data no longer captures current technology efforts and is therefore not considered useful.

⁴Service level objective data in past years was a factor of Network and System Availability. This data is presented under "Reliability" below, and is thus no longer reported separately.

Project Management

Metric	2011	2012	2013	2014	2015
% of projects delivered on time and within budget ⁵	29% ⁶	40%	37.5%	75%	25%
% of projects completed within budget ⁵	43% ⁶	80%	93.75%	75%	87.5%
% of projects delivered on time ⁵	56% ⁶	40%	37.5%	75%	25%

⁵Data is based on reportable projects completed in a given year with schedule and cost projections compared to last approved baselines. In 2015, data was available for eight completed projects. This small sample size limits its predictive value.

⁶Percentages shown for 2011 previously erroneously reported in incorrect rows.

Reliability

Metric	2011	2012	2013	2014	2015
% of state agencies with current IT disaster recovery plans (per year) ⁷	73%	54%	64%	69%	72%
System availability	99.99%	99.90%	99.90%	99.90%	100%
Network availability	99.91%	99.95%	99.95%	99.95%	99.95%

⁷Percentage that submitted a full plan or certified no changes were made in the past year requiring a new or updated plan.

Sustainability					
Metric	2011	2012	2013	2014	2015
Energy used (MWh/year)	107,028	33% reduction achieved	33% reduction maintained	33% reduction maintained	33% reduction maintained
Carbon dioxide emissions (Metric Tons)	41,994				
Security					
Metric	2011	2012	2013	2014	2015
# of electronic data breaches (per calendar year)⁸	81	96	120	178	104
# of breaches resulting in the loss of personally identifying information (PII)⁹	2	10	10	16	9
# of website compromises at state Agencies or entities (per calendar year)¹⁰	7	9	5	10	2
⁸ The number of data breaches during the calendar year that involved unencrypted data in an electronic format (e.g., unencrypted laptop, thumb drive, unauthorized access to database through hacking or network intrusion, etc.). ⁹ The number of breaches during the calendar year that involved unencrypted electronic devices and storage media lost or stolen containing PII. ¹⁰ Includes any successful exploit of a state Agency or entity website vulnerability (e.g., defacement, SQL injection, etc.).					

Annual Cost Savings and Avoidance Report from

California Department of Technology to the Department of Finance

The 2015-16 Cost Savings and Avoidance Report includes amounts planned for the remainder of the fiscal year and those already achieved through improvements to the way the State acquires, develops, implements, manages and operates state technology assets, infrastructure and systems.

2015-16 Cost Savings and Avoidance

Fiscal Year (FY) 2015-16 Office of Technology Services Rate Savings	\$ 8.7 million
Renegotiation of California Department of Technology Contracts – Cost Avoidance	\$ 1.9 million
Total	\$10.6 million

Office of Technology (OTech) Services Rate Savings

The FY 2015-16 rate reductions will result in an estimated savings of \$8.7 million. Savings are due to increases in utilization, such as online applications and/or increased data storage usage. The FY 2015-16 rate adjustments, which are effective January 1, 2016, will result in savings in the following service categories:

- **California Government Enterprise Network (CGEN) Infrastructure rates reduced by 10.4 percent.**

The CGEN Infrastructure provides the statewide network infrastructure that supports CGEN. For redundancy and fault tolerance purposes, the CGEN infrastructure includes three interface hubs located in different geographic locations and local access transport areas (LATA). The rate reductions are a result of customers using higher CGEN connection speeds than anticipated, and the reduction of vendor circuit and internet access costs.

- **ListServ E-mail Distribution rates reduced by 52.2 percent.**

ListServ is the e-mail list management software that supports electronic lists, including: e-mail newsletters, announcement lists, and discussion groups. E-mail lists provide efficient dissemination of a single message simultaneously to a group of people and simplify the administration of various lists.

- **Open Systems Storage rates reduced by 15.2 percent.**

Open Systems Storage uses the storage area network rather than a distributed system. The secure open systems data storage service includes high availability, efficient, and reliable backup and restoration functions. The decreased service rates help to better align the cost of providing the service to customers.

- **Mainframe Disk Storage rates reduced by 12.1 percent.**

The z/OS (mainframe) platform offers reliable, high-speed disk storage using Redundant Array of Independent Disks (RAID) technology. This service provides full-volume and incremental backups on all newly created and updated datasets. The datasets are auto-archived and/or expired based on client criteria.

- **Mainframe Tape Storage rates reduced by 10 percent.**

The Office of Technology Services offers data storage on virtual tape with high-speed access at a lower cost. Data stored on virtual tape is automatically backed up to a second copy stored at another Data Center location.

Renegotiation of California Department of Technology Contracts

Cost avoidances for FY 2015-16 are achieved through price adjustments obtained during the renegotiation and renewal of contracts, including:

- Vendor discounting for maintenance renewals
- Discounting as a result of multi-year contracting
- Discounting as a result of volume purchasing or bundling of software licensing agreements