



**Report to the
Colorado General Assembly**

**Joint Technology
Committee**

Prepared by

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Joint Technology Committee

Members of the Committee

Representative Max Tyler, Chair
Senator Linda Newell, Vice-Chair

Representative Bob Rankin
Representative Jonathan Singer

Senator Owen Hill
Senator Gail Schwartz

Legislative Council Staff

Jessika Shipley, Principal Analyst
Matt Kiszka, Research Analyst

Office of Legislative Legal Services Staff

Nicole Myers, Senior Staff Attorney

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Table of Contents

	Page
Committee Charge	1
Establishment and Procedural Matters.	2
Powers and Duties.	2
Committee Activities	4
Colorado Voter Access and Modernized Elections Commission.	4
Cyber Security.....	5
State IT Offices.....	6
State Auditor Recommendations.....	6
IT Budget Requests.....	7
COFRS Modernization Project.....	8
General Committee Procedures.	9
Summary of Recommendations	11
Resource Materials	11
Meeting Dates and Topics Discussed.	11
Appendices	

This report is also available on line at:

www.state.co.us/gov_dir/leg_dir/lcsstaff/2014/

Committee Charge

Establishment and Procedural Matters

Membership. Pursuant to section 2-3-1702, C.R.S., the Joint Technology Committee (JTC) is established, consisting of the following, who should have experience in the areas of information technology (IT), business analysis, or business process:

- three members of the House of Representatives, two of whom are appointed by the Speaker of the House and one of whom is appointed by the House Minority Leader; and
- three members of the Senate, two of whom are appointed by the Senate President and one of whom is appointed by the Senate Minority Leader.

"Information technology" is defined as information technology and computer-based equipment and related services designed for the storage, manipulation, and retrieval of data by electronic or mechanical means, or both. The term includes, but is not limited to:

- central processing units, servers for all functions, and equipment and systems supporting communications networks;
- all related services, including feasibility studies, systems design, software development, system testing, external off-site storage, and network services, whether provided by state employees or others;
- the systems, programs, routines, and processes used to employ and control the capabilities of data processing hardware, including operating systems, compilers, assemblers, utilities, library routines, maintenance routines, applications, application testing capabilities, storage system software, hand-held device operating systems, and computer networking programs; and
- the application of electronic information processing hardware, software, or telecommunications to support state government business processes.

It does not mean post-implementation support, hardware life-cycle replacement, or routine maintenance.

Appointees to the JTC may be designated after the general election, but prior to the convening of the General Assembly. The appointees may be current members or members-elect. Prior to being sworn in, members-elect are to have the same powers and duties and be entitled to the same compensation and expense allowance as current members.

Chair and vice chair. The committee is required to elect a chair and vice chair, one from the House and one from the Senate. The chair and vice chair serve in those roles for the first regular session of the General Assembly after they are so elected and switch roles for the second session.

Organization, procedures, and meetings. The committee is permitted to develop its own procedural rules. The JTC may meet as often as necessary to perform its functions, but it is required to meet at least once a year to review the Governor's budget submissions related to IT.

Repeal. The committee is repealed effective July 1, 2018.



Powers and Duties

Oversight duties. The committee has oversight responsibility for the Governor's Office of Information Technology (OIT). "Oversee" is defined as reviews of significant IT projects, reviews of the OIT's budget requests for IT projects, and ensuring that IT projects follow best practice standards as established by the OIT. Such oversight includes, but is not limited to:

- a review of the state of IT;
- any general IT needs;
- any anticipated short- or long-term IT changes for OIT;
- OIT's responsibilities related to the statewide communications and information infrastructure; and
- OIT's responsibilities for statewide geographic information system coordination.

Oversight does not include interference with the general responsibilities of the OIT. State law directs OIT to assist the JTC as necessary to facilitate the committee's oversight of OIT. This includes a number of advisory duties and reporting requirements. Specifically, the JTC should receive regular reports from OIT concerning the following:

- collaboration, office productivity, and e-mail (COPE) services initiated in a state agency;
- any emergency acquisition or purchase of IT resources made in the preceding fiscal year;
- an accurate account of all activities related to the Public Safety Communications Trust Fund;
- annual updates to the statewide information technology plan; and
- the Colorado Benefits Management System (CBMS) improvement and modernization project on a quarterly basis.

Other JTC oversight duties include:

- the state's Chief Information Security Officer and his or her duties;
- any telecommunications coordination in the state performed by the state's Chief Information Officer;
- the General Government Computer Center; and
- state agencies regarding:
 - any IT purchased or implemented that is not managed or approved through OIT;
 - any IT that a state agency purchased or implemented that does not follow the standards set by OIT; and
 - any IT that a state agency purchased or implemented that has the same function as IT already created, purchased, or implemented by OIT.

Committee review. After January 1, 2014, the committee is required to review any legislative measure that is determined by the Speaker or the President to deal with IT. The committee is authorized to make advisory recommendations about such measures to the full House and Senate, the Joint Budget Committee (JBC), the Capital Development Committee (CDC), and any committees of reference, as appropriate.

Upon request of the JTC, executive branch agencies, the Judicial Department, and the departments of Law, State, and Treasury are required to make available to the committee any data, reports, or information necessary for the performance of the committee's duties. The information is to be provided by November 1 of the calendar year the request was made. Executive branch agencies are required to comply with information requests from the JTC. Upon request of the General Assembly, the JTC, or the JBC, agencies are required to provide satisfactory evidence of compliance.

Additionally, the committee is authorized to review the actions of the Statewide Internet Portal Authority (SIPA). SIPA is required to submit a report to the JTC on or before November 1 of each year that sets forth a complete and detailed operating and financial statement of SIPA during the relevant fiscal year. The report must also include any recommendations for legislation or other action that may be necessary to carry out the purposes of SIPA.

Reporting requirements. On or before January 1, 2014, and on the first day of the regular legislative session thereafter, the JTC is required to submit a written report on the committee's findings and recommendations to the JBC for any operational budget item related to IT and to the CDC for any capital budget item related to IT. The report may include:

- legislation recommended by the committee, which is exempt from the five-bill limit specified in Joint Rule 24;
- recommendations concerning any appropriations to any state agency for IT;
- recommendations concerning state agency IT budget requests for the next fiscal year that have been approved by OIT or the Governor's Office of State Planning and Budgeting, including the basis for approval by the committee, findings or comments on one or more budget requests, and a suggested prioritization of such requests; and
- any information on approved budget requests and a report on the status of any IT project that was previously approved for phasing in or for incremental implementation over a period exceeding one year.

Executive branch agencies are encouraged to submit a written report on or before November 1 of each year to the JTC concerning IT matters that are not managed by OIT. The Judicial Department and the departments of Law, State, and Treasury are also encouraged to submit such a report on or before November 1 of each year.

Advisory board membership. On or after July 1, 2013, if a vacancy arises for the Legislative Branch position on the Government Data Advisory Board or the SIPA board of directors, such vacancy must be filled by a member of the JTC.

Information security plan. Legislative service agency directors are required to maintain an information security plan and keep the JTC advised of the plan.

Staff Assistance

Legislative Council Staff and the Office of Legislative Legal Services are required to assist the JTC in the performance of its duties. Historically, for similar committees, this has included:

- acting as a liaison between state agencies and the committee;
- receiving and analyzing information and requests from state agencies for the committee's review;



- managing the committee's schedule for meetings and travel;
- providing background material and legal analysis about the matters before the committee;
- drafting bills recommended by the committee;
- tracking and reporting on legislation and projects related to the committee's charge; and
- miscellaneous other tasks, as required.

Committee Activities

The committee met four times during the 2013 interim. At these hearings, the committee discussed and was briefed on a broad range of IT-related issues by legislative, executive, and judicial branch staff, a quasi-governmental body, and industry groups. Discussion and briefing topics included committee appointments to the Colorado Voter Access and Modernized Elections Commission; cyber security; the recent activities and strategic goals for state IT offices; Office of the State Auditor recommendations; IT budget requests; the Colorado Financial Reporting System (COFRS) Modernization Project; and general committee procedures, including the relationship among the JTC, CDC, and JBC.

Colorado Voter Access and Modernized Elections Commission

House Bill 13-1303, among other things, created the Colorado Voter Access and Modernized Elections Commission to evaluate the implementation of the bill and conduct other evaluations and assessments related to elections and voter access. The commission began meeting weekly on June 3, 2013.

Commission members were to be appointed by June 1, 2013 to serve two-year terms. The commission consists of the following 11 members, or their designees:

- two members of the General Assembly from the JTC from different political parties;
- the chief information officer from OIT;
- the Secretary of State;
- two representatives of different political parties from the Colorado County Clerks Association, with one member from a county with more than 25,000 voters and one member from a county with fewer than 25,000 voters;
- a person representing the interests of persons with disabilities, appointed by the Secretary of State;
- two persons with expertise on voting rights, appointed by the Governor; and
- two persons representing a major political party, as appointed by the chairperson of each party.

The JTC initially appointed Senator Giron and Representative Rankin to serve on the commission. Senator Giron was replaced by Representative Tyler at the September 30 meeting.

The bill requires the commission to prepare and present the following reports to the House and Senate State, Veterans, and Military Affairs Committees:

- by **July 15, 2013**, an independent needs assessment that examines the current state of voting and registration system technology, including Statewide Colorado Voter Registration and Election (SCORE) system and the online voter registration system;

- by **September 2, 2013**, an independent needs assessment that examines the current state of technology pertaining to voting systems, the certification of voting systems, and the replacement of voting systems, including costs and funding sources;
- by **January 15, 2014**, recommendations generated from the first two assessments and an outline of a process for evaluating the use of technology in the 2014 general election; and
- by **February 16, 2015**, an evaluation of the technology used in the 2014 general election and technical recommendations for the 2016 general election.

All meetings are open to the public and audio recordings and links to the reports that have been completed are available on the Secretary of State's website at <http://www.sos.state.co.us/pubs/elections/CVAMEC/index.html>.

Cyber Security

Jonathan Trull, Chief Information Security Officer for OIT, presented to the committee on the office's approaches to and management of cyber security for state information, data, users, and systems. OIT provides a suite of IT services to executive branch agencies, which consists of security assessments, firewalls, deployment of technical tools within networks and systems, security controls, and incident response. Mr. Trull has statutory authority to oversee the 17 core executive branch agencies in the state, and his team renders its services to a total of 26,000 endpoints throughout the state. This oversight does not extend to the Attorney General, Judicial Branch, General Assembly, Department of State, individual counties (to an extent – OIT does however oversee any machines provided to counties for the purposes of the Colorado Benefits Management System), or local governments.

OIT has a cyber security staff of 15 full-time individuals divided into three groups: governance and oversight; risk and compliance; and security and operations, which is the largest of the three groups. The security and operations group is divided into smaller teams of individuals: one that handles network security needs, and another that addresses endpoint security for PCs and mobile devices. Mr. Trull told the committee that his staff has an operating budget of roughly \$1.1 million (FY 2013-14), which was increased from \$6,000 in the previous fiscal year (FY 2012-13) through enacted legislation that appropriated more funds to OIT.

Mr. Trull outlined the threat landscape that Colorado executive branch agencies face on a daily basis, which is roughly 600,000 different attacks per day on individual state employees and systems. These malicious attacks normally consist of malware, phishing emails, and brute force attacks, and are mostly delivered via botnets, which search the internet for weaknesses in systems that can be manipulated. The state is also targeted by user-specific attacks, which usually come in the form of "spear-fishing" emails sent to executive level staff. Such attacks attempt to compromise an individual through an email with an embedded link, and then pivot into other state systems. These attacks constitute about 5% of all cyber security attacks the state faces on a day-to-day basis. Mr. Trull's staff utilizes most of its time in identifying incidents, stopping them from inflicting damage or spreading, and then restoring service to users. Currently it is more focused on the prevention of attacks than follow-up or prosecution of attempted attacks. In addition to the services that it provides to state agency employees, the cyber security team also has the authority to administer the official cyber security policies of executive branch agencies, and to require the annual submittal of agency cyber security plans for review by OIT. State agency employees are

required to sign user agreements acknowledging that they will follow cyber security policies and take security awareness training once per year. Mr. Trull's team is bolstering these policies through the enhancement of data loss prevention programs, such as software that can recognize the usage of a non-authorized USB drive, or the tagging of sensitive data and limiting of user options when writing data to a device.

State IT Offices

The JTC heard briefings about IT systems and processes across state government in Colorado from OIT, the Judicial Branch, and SIPA.

OIT. Kristen Russell, Secretary of Technology and Chief Information Officer for OIT, briefed the committee on the mission, operations, accomplishments, and future goals of OIT. Discussions focused on the scope of OIT's service and support responsibilities, which includes 921 employees, 1,200 applications, 35,000 computers, and 600,000 malicious attacks handled daily.

Secretary Russell told the committee about OIT's organizational workflow, which includes planning, building, and running IT solutions for the state. She talked about OIT priorities and values and how those things are involved in the strategic planning process. The committee heard about the method by which OIT evaluates its performance related to its strategic plan, known as the balanced scorecard, and how it can be used to improve the performance of OIT and its ability to provide excellent customer service. Communications strategies, leadership development, customer satisfaction, and employee-management relations and engagement were all covered during the briefing.

Finally, the committee discussed the awards and recognition received by OIT and the financial performance of the organization in FY 2012-13. Specific attention was paid to the Colorado Information Marketplace; the WyCAN consortium for sharing cloud-based IT services across states; the issue of contract reliability and data security; and the state's transition to Google applications.

Judicial Branch. Chad Cornelius, Chief Information Officer, and Judge Jerry Marroney, State Court Administrator, Colorado Judicial Branch, briefed the committee about a bandwidth expansion request for courthouses in mostly rural areas and video conferencing; a planned Microsoft XP hardware refresh; and the state's long-term direction with its existing internet service provider.

SIPA. The JTC is authorized to review the actions of SIPA. John Conley, Executive Director of SIPA briefed the committee about the role of SIPA in state and local government. He discussed the eligible governmental agencies that may use SIPA's electronic information delivery system. A number of public-private partnerships were explained and an overview was provided of the various services provided to state and local agencies through those partnerships.

State Auditor Recommendations

The committee was twice briefed by the Office of the State Auditor. The first briefing concerned financial, performance, and IT audit recommendations not fully implemented for OIT and SIPA. They are discussed below. A financial audit reviews an agency's financial statements to

determine whether those statements represent a fair and complete picture of the agency's financial situation and whether the agency is in compliance with federal regulations. A performance audit assesses whether an agency is operating effectively and efficiently, while IT audits review procedures and technology to ensure confidentiality and integrity of data within the state, and whether the state's critical IT systems are available when needed.

The second briefing included a presentation of a November 2010 report entitled *Confidential Office of Cyber Security, Governor's Office of Information Technology, Performance Audit*. The second briefing was held in executive session pursuant to Section 2-3-103 (2), Colorado Revised Statutes, due to the sensitive nature of the information contained in the report. This report does not contain information about what was discussed during an executive session of the committee.

Financial audit recommendations. As of June 30, 2013, OIT had 20 outstanding financial audit recommendations. Half of those represented a "deficiency in internal control," which is the least serious level of internal control weakness and exists when a design or operation of a control does not allow management or employees to prevent, detect, or correct misstatements or noncompliance with federal program requirements. Outstanding audit recommendations in this category are related to the County Financial Management System, the Colorado Mental Health Institute's medical procedure database and patient billing system, the state mainframe computer, the Colorado Benefits Management System, and service-level contracts between OIT and executive branch agencies.

The other ten outstanding financial audit recommendations showed "significant deficiency," which is considered a high level of internal control weakness and warrants attention by management. Nine are related to the KRONOS payroll system and one is related to the Colorado Personnel Payroll System.

There were no outstanding financial audit recommendations for SIPA.

Performance and IT audit recommendations. Similarly, 34 performance and/or IT audit recommendations for OIT were still outstanding as of June 30, 2013. One outstanding recommendation related to the Department of Transportation's Systems, Applications, and Products (SAP) Information System and 31 outstanding recommendations for the Office of Cyber Security are considered a high priority because the audit reports were released three or more years ago. Two other outstanding recommendations, of lower priority, are related to program oversight and accountability of the consolidation of executive branch IT.

Four audit recommendations for SIPA were still outstanding as of June 30, 2013. They are all related to information system security and contract monitoring.

IT Budget Requests

The JTC's charge gives the committee oversight responsibility for OIT's budget requests related to IT and those of state agencies that are not under the purview of OIT. The committee discussed and was briefed by CDC staff and a representative of the Department of Revenue about six IT capital budget requests for FY 2014-15 at the November 19 meeting. At the request of the JBC, the committee was also briefed about an IT operations budget request from the Department of Education at the January 6 meeting. Also at the January 6 meeting, the committee was briefed about OIT's full list of budget change requests for FY 2014-15. The CDC asked for the JTC's input about the IT capital budget requests in advance of the CDC's recommendations that will be made



to the JBC in March 2014. The JTC discussed the best method for providing any input to the CDC and JBC and agreed to address the development of a standard operating procedure at future meetings.

Table 1 provides information about the IT budget requests for FY 2014-15 that were discussed by the JTC, including the agency making the request, a project title, and the amount and type of funds requested (General Fund, cash funds, or Capital Construction Fund). More information about each budget request is included in Appendix A.

**Table 1
IT Budget Requests for FY 2014-15 Reviewed by the JTC**

Agency	Project Title	Funds Requested in FY 2014-15
Agriculture	eLicense Implementation	\$700,000 CF
Education	Core Network and Information Technology Refresh	\$3,070,988 GF
Human Services	Electronic Health Record and Pharmacy System Replacement	\$9,849,610 CCF
Labor and Employment	Workers' Compensation Mainframe Migration and Modernization Project	\$5,932,500 CF
OIT	Digital Trunked Radio System, Software Upgrade	\$3,636,760 CCF
OIT	Statewide Leave, Time Tracking, Human Resources Management Systems Modernization	\$16,070,000 CCF
Revenue	IT Systems Replacement, Division of Motor Vehicles	\$41,021,167 CCF
Total		\$3,070,988 GF \$6,632,500 CF \$70,577,537 CCF

Source: Legislative Council Staff

Colorado Financial Reporting System (COFRS) Modernization Project

The COFRS Modernization Project, which has been renamed the Colorado Operations Resource Engine (CORE), was established in 2012 in order to modernize the state's core financial system by phasing out outdated legacy systems and putting a new software solution into place. Robert Jaros, State Controller, Department of Personnel and Administration (DPA), briefed the committee about the project at the November 19 meeting. He explained the issues that were taken into consideration when it was decided that the state should rely on basic system configuration of an off-the-shelf software product rather than creating new legacy systems or major customization. He discussed the timeline, scope, budget, and current status of the project.

The plan for the CORE project includes accounting, procurement, and budgeting functions, as well as a data warehouse. Several functional teams and a steering committee have been selected to plan, implement, and oversee all aspects of the project. Mr. Jaros outlined the project deliverables and benefits to the state in the context of highlighting problems with the current system and how those problems will be addressed by CORE. In general, CORE offers the state the opportunity to utilize best practices in a comprehensive manner.

In response to committee concerns, Mr. Jaros also discussed a number of project risks and the mitigation plans DPA has made for each of the identified risks. The committee especially focused on the aggressive timeframe for the project, which aligns with the fiscal year. Time for training has also been included in the project schedule. The committee expressed the intent to continue being updated about the progress of CORE and indicated a desire to meet jointly with the JBC for that purpose.

General Committee Procedures

The committee spent time discussing the best way to accomplish its tasks at each meeting. Of special interest was a procedure for receiving, reviewing, and making recommendations concerning IT budget requests. The CDC currently reviews and makes recommendations to the JBC regarding IT capital budget requests. No secondary review by a legislative committee is made of IT operations budget requests before they are considered by the JBC. Both the CDC and the JBC have asked the JTC for input on IT budget requests for FY 2014-15.

Using the CDC as a model, the committee directed staff to develop a form for gathering information about IT budget requests, whether they were capital or operations budget requests, and analyzing the information. A draft of the form using the FY 2014-15 Department of Education operations budget request is included as Appendix B. The committee asked that the answers to the following questions be added to the CDC form for IT budget requests in order to customize the form for the purposes of the JTC.

- What kind of cost savings or improved performance outcomes will result from the project?
- What is the problem you are trying to solve and how will this project solve that problem?
- What kind of implementation plan is in place for this project and does it take into account change management and training needs?
- Are there opportunities for systems integration with this project and other similar projects in the state?
- What will happen to the old system and infrastructure?
- What will happen to the old licensing and maintenance agreements?
- Have end users of the system been included in the planning process?
- How does this new request fit into your overall budget devoted to IT? How many people in your agency are dedicated to IT? What IT systems are currently in place?
- Please discuss any analysis you have completed about whether it is more cost effective to fix or upgrade your current system or to replace it with something completely new.

Staff intends to communicate with the Governor's Office of State Planning and Budgeting (OSP) before OSPB releases its new budget instructions to executive branch agencies in the future in the hope that the new instructions will include information to be directed to the JTC about IT projects. Staff will then gather and analyze information from the budget requests each year and provide it to the JTC for consideration. Agencies requesting funding for new IT projects will be expected to appear before the committee to present their requests and respond to questions.

Additionally, the JTC is planning to meet jointly with the CDC and the JBC on a regular basis in the future in order to provide feedback about IT projects in the state. The exact nature of and timeframe for these meetings has not yet been determined.



Summary of Recommendations

The JTC began meeting for the first time in 2013. It is currently in the process of becoming educated about the state of IT in Colorado and developing procedures for gathering, tracking, considering, and making recommendations about IT budget requests. This work is expected to continue into 2014. As such, the committee has no specific recommendations to make at this time.

Resource Materials

Meeting summaries are prepared for each meeting of the committee and contain all handouts provided to the committee. The summaries of meetings and attachments are available at the Division of Archives, 1313 Sherman Street, Denver (303-866-2055). The listing below contains the dates of committee meetings and the topics discussed at those meetings. Meeting summaries are also available on our website at:

http://www.state.co.us/gov_dir/leg_dir/lcsstaff/2014/

Meeting Date and Topics Discussed

May 30, 2013

- ◆ Introductions and election of chair and vice-chair
- ◆ Selection of appointments to the Colorado Voter Access and Modernized Elections Commission

September 30, 2013

- ◆ Replacement appointments to the Colorado Voter Access and Modernized Elections Commission
- ◆ CDC request for input regarding FY 2014-15 IT capital budget requests
- ◆ OIT Recent Activities
- ◆ Update on data storage and backup systems of executive branch agencies
- ◆ Follow-up actions resulting from Department of Revenue data loss

November 19, 2013

- ◆ Office of the State Auditor annual recommendations not fully implemented for OIT and SIPA
- ◆ Presentation from the Colorado Technology Association
- ◆ Update on the Colorado Financial Reporting System (COFRS) modernization project
- ◆ IT capital budget requests for FY 2014-15
- ◆ Committee procedures



January 6, 2014

- ◆ Office of the State Auditor of *Confidential Office of Cyber Security, Governor's Office of Information Technology, Performance Audit* - November 2010 Report
- ◆ State cyber security
- ◆ OIT budget decision items
- ◆ IT budget request from the Colorado Department of Education
- ◆ Judicial Branch IT systems
- ◆ Presentation from SIPA
- ◆ Consideration of draft JTC annual report
- ◆ Committee procedures

