BerryDunn

HB18-1421 Evaluation Report

Procurement Process for Major Information Technology Projects

March 2019

LEGISLATIVE AUDIT COMMITTEE

OFFICE OF THE STATE AUDITOR

Report Transmittal Letter

February 25, 2019

Members of the Legislative Audit Committee:

This evaluation was requested by the Colorado Legislature, through an enacted bill (House Bill [HB] 18-1421) during the 2018 Regular Session, and signed by the Governor in June of 2018. Specifically, HB18-1421 asked for "a qualified, independent third-party consulting firm… [to] review and evaluate the procurement process for the [Colorado] Human Resources Information System, also known as HRWorks, and provide objective findings and recommendations that could help the procurement process for major information technology projects in the future."

We conducted this project as a consulting engagement and although we did not attempt to strictly follow generally accepted government auditing standards, we did obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and recommendations based on the evaluation objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our project objectives. During our evaluation work, we received collaboration and support from both OIT and DPA, as well as representative agencies/departments that met with us.

Charles Leadbetter, Principal
BerryDunn

Table of Contents

1.0 Report Highlights

This evaluation was requested by the Colorado Legislature. Specifically, HB18-1421 asked for "a qualified, independent third-party consulting firm… [to] review and evaluate the procurement process for the [Colorado] Human Resources Information System, also known as HRWorks, and provide objective findings and recommendations that could help the procurement process for major information technology projects in the future".

KEY FINDINGS

- Cost savings and efficiencies cannot be significantly achieved without including the decommissioning of legacy systems, which was eliminated from the HRWorks project.

- The success criteria established for HRWorks were minimal and not sufficient for either an efficient RFP process or effectively measuring project success.

- The project had additional risk factors due to lack of alignment between primary stakeholders (HR, Payroll, and OIT).

- Procurement risks and the additional project complexities of a multi-vendor solution were not fully understood.

- Vendor scope was changed without following project and procurement best practices, and contract changes were negotiated through business executives rather than OIT's contracts office.

- There was no cost benefit analysis (CBA) that analyzed the business value the project would provide in comparison to the cost for that value.

- The Project Manager (PM) and the technical staff lacked experience with a state project of this magnitude and complexity.

- Independent Verification and Validation (IV&V) was engaged later in the process than policy requires.

BACKGROUND

- The Office of Information Technology (OIT) and Department of Personnel and Administration (DPA) procured the State's Human Resources Information System (HRIS) project, also known as HRWorks. The project began on May 12, 2015.

- Two RFPs were issued. The first RFP was cancelled on March 14, 2016. The RFP was cancelled primarily due to "ambiguous or otherwise inadequate specifications that were part of the solicitation." The second RFP was issued in May 2016.

- While the HRWorks project is ongoing, the level of effort, cost and scope of the project have changed over time and there have been significant changes in vendor scope, multiple delays and increases in costs.

KEY RECOMMENDATIONS

We made nine recommendations to OIT focusing on improving procurement and to help major information technology projects in the future. Our recommendations include changes in OIT policy, adding an additional review process prior to contracting, alignment with best practice, ensuring OIT has appropriate staffing, modifying the RFP development process, and including decommissioning of legacy systems as a part of projects. OIT agreed with all of our recommendations.

2.0 Overview

2.1 Description of the HRWorks Project

The Office of Information Technology (OIT) and Department of Personnel and Administration (DPA) procured the State's Human Resources Information System (HRIS) project, also known as HRWorks. The project began on May 12, 2015, with the issuance of the first RFP with the stated objectives to:

- Eliminate costly maintenance of aging legacy systems
- Develop a single-source database to house all human resources data
- Facilitate ease of data retrieval and reporting
- Eliminate duplication and reduce need for shadow systems
- Convert all State employees to a semi-monthly "lag-pay" cycle beginning in July 2017
- Facilitate strict compliance laws and rules governing human resources management (e.g., Fair Labor Standards Act, Family Medical Leave Act, Affordable Care Act)
- Reduce or eliminate paper and manual processes
- Improve data integrity and security

On June 29, 2015, six vendors submitted RFP responses/bids in response to the May 2015 RFP. Based on interviews with four people who reviewed these bid responses, the committee had a great deal of discussion regarding the proposals and how no single vendor had met all of the defined requirements (BerryDunn's team validated this through a review of the individual score sheets). Due to reviewers having to review more than 2,800 requirements for each vendor, this review process took time and there was not always consensus on which vendors met which requirements. Despite this, three vendors were identified as being more responsive than the others and moved to a finalist round. However, as the scoresheets and emails validate, no single solution emerged as a clear winner. Therefore as stated in the required bid cancellation notice, approximately eight and one half months later, on March 14, 2016, the RFP was cancelled primarily due to "ambiguous or otherwise inadequate specifications that were part of the solicitation." To address the shortcomings, OIT and DPA worked to condense the specifications to higher-level requirements (condensing the requirements from over 2800 to less than 130) and reissued the RFP. The revised RFP was issued in May of 2016 with one additional objective, to interface with key systems. Based on interviews with reviewers and OIT leadership, the revised RFP also included language that would more easily allow for a multi-vendor award; a concept that was explained clearly to the reviewers. Section 1.49 of the RFP was also modified to clarify the relationship between a prime contractor and subcontracts. CGI and Workday were both selected and signed contracts to implement HRWorks. In addition to the contracts with CGI and Workday, OIT selected MuleSoft as an integration vendor to facilitate a multi-vendor approach.

While the HRWorks project is ongoing, the level of effort, cost, and scope of the project have changed over time.

2.2 Evaluation Purpose

This evaluation was requested by the Colorado Legislature, through an enacted bill (House Bill [HB] 18-1421) during the 2018 Regular Session, and signed by the Governor in June of 2018. Specifically, HB18-1421 asked for "a qualified, independent third-party consulting firm to review and evaluate the procurement process for the Colorado (State) Human Resources Information System, also known as HRWorks, to provide objective findings and recommendations that could help the procurement process for major information technology projects in the future."

While the purpose of this evaluation was specifically to "… evaluate the procurement process…" and to "… provide objective findings and recommendations that could help the procurement process…", it is virtually impossible to separate the procurement process from the larger Project, and Project Management, processes. Therefore, whenever appropriate, this findings report will also include Findings and Recommendations as they relate to future "…major Information Technology projects…" and the management of those projects.

Lastly, another process that is related to both Procurement Management and Project Management is that of Contract Management. The scope of this evaluation, in terms of Contract Management, was limited to specifically answering the five questions posed in Section 2.3 below. During the evaluation process, no policies nor practices were discovered that were outside the scope of customary Contract Management practices, or that would have been in violation of any known State of Colorado Laws, Regulations, or Policies.

2.3 Evaluation Scope

In addition to evaluating the procurement process for the HRWorks system, as stated within HB18-1421, the independent third-party vendor was asked to perform analyses to answer the following questions relating to Section 24-50-104(8), C. R. S., payment of state employees:

Question 1: Was the contract for HRWorks originally negotiated in compliance with statutes for state employees being paid on a semi-monthly basis?

Question 2: When did the project switch to paying state employees on a biweekly basis? What was the impetus for this change? Did the actual terms of the contract change?

Question 3: Since the project has now shifted to paying state employees monthly, has the contract changed? If so, when did this happen?

Question 4: Are there additional costs to the state for any of these contract or project changes? If so, identify these costs and quantify them, to the extent possible.

Question 5: How does DPA plan to comply with Section 24-50-104(8), C.R.S., requiring state employees to be paid on a semi-monthly basis?

Lastly, Section 24-50-103.5(2), C.R.S., requires the Legislative Audit Committee (LAC) to cause to be conducted a performance audit of the Department of Personnel & Administration (Department) and the Personnel Board (Board) by December 1, 2019 ("at least seven months before July 1, 2020"). In conducting the audit, the LAC shall take into consideration, but not be limited to considering, 10 factors listed in statute that generally deal with whether the Department and the Board are operating efficiently and effectively and in the best interest of the public. The Office of the State Auditor's (OSA's) evaluation of the procurement process for the state's new HRIS called HRWorks, which will be released in March 2019, fulfills this audit requirement.

2.4 Evaluation Methodology

In order to successfully evaluate the HRWorks Project, gain sufficient and appropriate evidence necessary to conclude on the evaluation's objectives, and to develop related findings and recommendations, BerryDunn conducted various fact-finding and analysis efforts, including:

Questions & Answers – BerryDunn asked OIT and DPA to respond to questions (and follow-up questions) that helped identify potential sources of information (documents and potential interview candidates).

Document Review – BerryDunn reviewed all internal documentation provided by DPA and OIT. Additionally, BerryDunn reviewed documentation from OIT's website, all relevant websites of agencies/departments in-scope of the evaluation, and researched procurement best practices used in other states. Over 1,500 (internal and external) resources were reviewed to comprehensively evaluate the procurement process of the HRWorks project.

Interviews – To comprehensively evaluate the procurement process of the HRWorks Project, BerryDunn conducted a total of 20 interview sessions: 15 in-person sessions were conducted on-site in Denver, Colorado, and 5 telephone sessions were conducted afterwards. BerryDunn interviewed relevant stakeholders from all agencies/departments in-scope of the evaluation including:

- The Office of Information technology (OIT)
- The Colorado General Assembly
- The Department of Personnel and Administration (DPA)
    - The Office of the State Controller (OSC)

3.0 Procurement Related Findings and Recommendations

3.1 What Work Was Performed and What Was the Purpose

The purpose of BerryDunn's work was to review and assess the procurement process for the State's new HRIS, also known as HRWorks, and to objectively provide any findings and recommendations that could help the procurement process for major IT projects in the future.

BerryDunn performed the following tasks:

- Reviewed information pertaining to the HRWorks project from OIT and DPA. In response to our requests, OIT and DPA provided over 670 documents or files for our review, including:
    - Title 24, Section 24-50-104, C.R.S.
    - Contracts and amendments for Kronos, CGI, and WorkDay
    - HRWorks project documentation
    - HRWorks project status reports
    - HRWorks funding requests
    - Both HRWorks RFPs
    - Bids and scoring documents for both RFPs
    - Q&A from vendor briefings
    - Vendor presentations
    - Correspondence with vendors
    - Presentations and information shared with the legislature
    - Negotiation documents
    - Statements of Work (SOWs)
    - Procurement and Project policies
    - IV&V reports
- Researched additional materials not provided by state agencies, including:
    - Websites with information pertaining to HRWorks and procurement practices
    - Best practices from other states and professional organizations
- Conducted interviews with OIT, DPA, and legislative staff with knowledge of the HRWorks project, including:
    - 15 in-person sessions on-site in Denver
    - 5 additional phone interviews

3.2 How Were the Results of the Work Measured?

The table below describes the criteria against which the HRWorks procurement process was measured. The criteria are best practices selected based on BerryDunn's expert opinion using professional organizations, states considered leaders in procurement practices, and requirements specified in Colorado statute or policy.

Table 3.2.1: Best Practices and Requirements for Evaluating HRWorks Procurement Process

ID	Best Practice/Requirement	Source
1	For pay periods beginning before July 1, 2017, employees paid on a biweekly basis shall be paid fourteen days after the last day of the fourteen-day pay period and salaries for employees paid through the state's payroll system shall be paid twice a month	C.R.S. 24-50-104(8)
2	"Without a dependable understanding of what constitutes success, the project is placed in the untenable position of being judged against differing criteria."	PMI®, https://www.pmi.org/learning/library/project-success-criteria-opinion-counts-1010
3	"… there will need to be an intentional concentration early in the project life cycle on establishing the success criteria."	PMI®, https://www.pmi.org/learning/library/project-success-criteria-opinion-counts-1010
4	"The most important aspect of the project success criteria document is not so much its' specific content, but the fact that it exists at all."	PMI, https://www.pmi.org/learning/library/project-success-criteria-opinion-counts-1010
5	"...writing requirements that leave the door open to vendor experience and innovation is essential. "Requirements should not include the solution or any unnecessary characteristics."	State of Indiana, https://secure.in.gov/iot/files/RFP_bestpractices.pdf
6	"The business problem should be defined by the results required, not the methods employed to attain these results"	State of Indiana, https://secure.in.gov/iot/files/RFP_bestpractices.pdf
7	Avoid scope creep (""adding features and functionality [project scope] without addressing the effects on time, costs, and resources, or without customer approval")	PMI, 2008, p 440
8	"By working on unapproved features of a product, a project team devotes time to the unauthorized changes. The work to incorporate these changes must usually be done within the original time and budget estimates, leaving less time for approved parts of the scope. That	PMI, https://www.pmi.org/learning/library/top-five-causes-scope-creep-6675

ID	Best Practice/Requirement	Source
	could mean approved features don't get completed, and the end-product is not what was chartered. Or, it can mean that time and cost overruns to finish the authorized parts of the scope will occur."	
9	Slide show lists "Components of a Strong Contract," including an SOW with clearly defined responsibilities, and unique terms and conditions	State of California, https://cdt.ca.gov/wp-content/uploads/2017/02/Contracts_and_Vendor_Mngmnt_Slide_Deck_3-4-2016.pdf
10	"Evaluation Instruments are designed to measure how well the proposed solution addresses the agency need." "When no proposal meets the minimum technical score, the procurement is fatally flawed."	New York, https://osc.state.ny.us/agencies/outreach/fallconfer2014/files/boc_rfp_evaluation.pdf
11	Explains some of the reasons "why many RFP activities ultimately fail or vendors fail to provide the solutions that we expect" including unachievable requirements.	PMI, https://www.pmi.org/learning/library/project-requirements-rfps-vendor-proposals-6673
12	"Differing interests among the main stakeholders can be one of the greatest causes of conflict in a project and one that can sink it before it has a chance to swim. "A project shouldn't move on until all stakeholder agendas are aligned."	Clarizen, "The Main Causes of Conflict Between Project Team Members," 2017
13	"… the project team needs to work with stakeholders to confirm the project goals and objectives."	PMI, "Running with scissors," 2010
14	"...the point of the success criteria document is to ensure that the success criteria for this specific and unique project are captured and agreed to."	PMI, "Project success—what are the criteria and whose opinion counts?" 2002
15	Avoid scope creep by "establish[ing] a communication channel between [the] client and you. Don't let them [the vendor] talk directly to your project team members."	PM Study Circle, https://pmstudycircle.com/2012/09/scope-creep-and-gold-plating-in-project-management/
16	Vendor should not drive scope changes	TBI, "Vendor Management Best Practices", http://www.tbicentral.com/our-white-papers/vendor-management-best-practices/

ID	Best Practice/Requirement	Source
17	1. Mobilize an active and visible executive sponsor 2. Dedicate change management resources 3. Apply a structured change management approach 4. Engage with employees and encourage their participation 5. Communicate frequently and openly 6. Integrate and engage with project management 7. Engage with middle managers	Prosci®, "Best Practices in Change Management", https://www.prosci.com/resources/articles/change-management-best-practices
18	"The Secretary of Administration shall obtain independent expert review of any recommendation for any information technology activity … when its total cost is $1,000,000.00 or greater or when required by the State Chief Information Officer." An Independent Review (IR) provides an independent assessment of a technology project, proposed solution, proposed vendor, and all the associated lifecycle costs (i.e., implementation and on-going operations).	Vermont, Vermont Statute 3 V.S.A. § 2222 (g)(1)
19	LinkedIn colleagues cited reasons for scope creep that include: • Lack of clarity and depth to the original specification document. • Allowing direct [unmanaged] contact between client and team participants. • Customers trying to get extra work "on the cheap." • Beginning design and development of something before a thorough requirements analysis and cost benefit analysis has been done. • Scope creep "where you do it to yourself" because of lack of foresight and planning. • Poorly defined initial requirements. • "Management promises the sun and the moon, and breaks the backs of the	PMI Conference Paper, "Top five causes of scope creep", Richard & Elizabeth Larson, 2009

ID	Best Practice/Requirement	Source
	developers to give them just that in impossibly tight time frames."	
20	(i) Initiate or approve all procurements of information technology resources, enterprise facilities, and any goods or services related to such procurements for state agencies and enter into any agreement, contract, or enterprise agreement in connection with such procurements on behalf of a state agency or agencies; (k) Develop a comprehensive risk assessment that will be applied to every new information technology project to assess risk levels related to the project and determine whether the project should be classified as a major information technology project;	C.R.S. 24-37.5-105 (3)
21	(c) As part of any major information technology project by a state agency, classified as such according to a comprehensive risk assessment performed by the office, the project plan at a minimum shall include: (I) The identification of a project manager; (II) A business case for the project that is in alignment with the strategic goals of the state agency; (III) Business requirements for the project developed in collaboration with the state agency and end users; (IV) Information security requirements and best practices; (V) A disaster recovery plan; (VI) Consideration of and inclusion in the business continuity plan of the state agency; (VII) Independent verification and validation of the project; (VIII) A funding strategy for the ongoing maintenance and eventual disposal of the information technology system; and (IX) A planning and analysis function to be performed by the office to ensure that	C.R.S. 24-37.5-105 (4)

the state agency's desired major information technology project solution is in accordance with the office's technology standards and to ensure that the scope and budget of the major information technology project are vetted by the office

(d) In connection with any major information technology project that it plans to undertake, a state agency shall:

   (I) Consult with the office on the development of the project plan for any major information technology project;

   (II) Submit and obtain approval from the office of the project plan for any major information technology project before commencing work on the project;

   (III) (A) Consult with and obtain approval from the office of significant changes to the plan or budget of any major information technology project.

   (B) As used in this subparagraph (III), "significant changes" means the removal of, or any additions or substantial changes to, any of the project plan's components listed in paragraph (c) of this subsection (4).

   (IV) Consult with and obtain approval from the office for changes to the funding strategy for the ongoing maintenance and eventual disposal of a major information technology system.

3.3 What Findings Did the Evaluation Identify, Why Did the Findings Occur and Why Do They Matter?

BerryDunn identified the following findings related to the procurement practices used for the project known as HRWorks and the related causes and the effects that they have, or could have:

1. The project team's desired primary pay cycle of biweekly lag did not align with the contract nor state statute. The project team did not present industry best practices and potential efficiency savings from a conversion to biweekly lag to the legislature with enough time to make informed decisions before communications were sent to staff. The

impact of this was that constituent feedback drove the legislative decision rather than actual data driven analysis, resulting in decisions that do not take advantage of efficiencies and effectiveness gains that have been demonstrated in other states.

2. Vendor scope was changed (i.e., moving from Kronos to CGI for time keeping) without following project and procurement best practices, and contract changes were negotiated through business executives rather than OIT's contracts office. There was lack of clarity between the roles of business lead and contract lead. Lack of adherence to project management standards and best practices for negotiating with vendors often results in scope creep (adding additional features or functions of a new product, requirements, or work that is not authorized) often resulting in schedule delays, increased costs, and difficulties with integration.

3. Success criteria were established late for the project, were minimal, and were not communicated broadly. Stakeholders had different ideas on what constituted success and did not resolve their differences. Project success criteria are the basis for determining if a project is successful without which there is no consistent view of the business value due to the project. They are also used throughout a project to prioritize issues and weigh the tradeoff decisions that are critical to keeping a project on schedule and on budget. Without success criteria, the likelihood of cost overruns and schedule slippage increase.

4. No cost benefit analysis (CBA) is apparent in the documents identified by OIT as their business case (OIT identified funding request documents as their business case for HRIS) or in other documents provided. A CBA is one of the most successful practices for justifying and understanding the benefits of a project prior to acquisition and is a useful tool for aligning project staff and establishing success criteria. A good business case development process, which includes a CBA, results in greater alignment, increased likelihood of project success, more realistic cost estimates, and more realistic schedules.

5. Primary stakeholders (HR, Payroll, and OIT) were not aligned; different interests were not represented. The committee governance process followed by OIT and DPA on this project does not identify a single leader as "in-charge" to force negotiated alignment. Lack of alignment of the project team is listed among the top causes for project failure by PMI, Clarizen, the American Management Association, and others. While no single issue can lead a project astray, multiple sources show that lack of alignment between key stakeholders impacts project success.

6. Neither RFP was evaluated against success criteria, and the first RFP over specified business requirements. Business requirements were based on interviews with stakeholders with customized solutions who lacked agreement on success criteria. When RFPs are evaluated against inputs (i.e., requirements) rather than outcomes (i.e., success criteria), innovation, process improvement, and cost effectiveness are stifled, resulting in continuation of potentially less effective business processes, longer projects, and greater cost.

7. Procurement risks and the additional project complexities of a multi-vendor solution (HRIS project included Kronos, Workday, CGI, SAP, and MuleSoft) were not fully understood. The Project Manager (PM) and the technical staff lacked experience with a state project of this magnitude and complexity. The PM should be the primary point of contact between the vendor and the project team, and experience with projects of similar scope and size is a key factor for project success. If the PM does not have the experience, the project team breaks down and there is an increased chance of people working outside of their established role, poor communication, lack of adherences to project best practices, scope expansion, schedule slippage, and increased cost. Industry data shows that additional funding for a fully qualified PM frequently results in lower overall project costs, greater customer satisfaction, and more fully realized success measures.

8. Project process irregularities (e.g., risks minimized, PM had no control of resource plan, incomplete process and data flows, lack of holistic architecture documentation) outside of the project scope existed and were noted. Project standards and best practices were not followed. Not following project management standards and best practices results in less successful projects.

9. Per the State's Policy on Project Lifecycle and Governance (POL 200-01), IV&V is a best practice and is required for all major projects with an IT component. However, Grant Thornton was not engaged as the Independent Verification and Validation (IV&V) contractor until "… the project was already in the build/deliver phases" (IV&V Initial Report Review, Page 7, by Grant Thornton, dated January 19, 2018), delaying external review that helps identify problems. Early detection of issues has been shown to reduce cost overruns and help keep projects on schedule and on task.

10. Decommissioning of legacy systems was eliminated from the project and left for agencies. Without including the decommissioning of legacy systems, success factors cannot be achieved, costs increase, and it is impossible to measure the benefits of the project.

3.4   Recommendations

To improve procurement for future information technology projects:

1. The Governor's Office of Information Technology (OIT) should create an independent review process prior to contracting for major IT projects that:

    a. Leverages an independent expert (independent expert is recommended due to the potential for conflict between OIT and agencies) at a fixed cap price to assess:

        i. The cost benefit analysis (CBA) required by OIT policy for realistic cost estimates and appropriate value/benefit calculations

      ii.   The implementation plan to ensure project stakeholders are appropriately addressed, the change management plan is reasonably resourced and scheduled, and project risks are mitigated

      iii.   The project management resources planned for the project (i.e., hire an experienced project manager, use an internal resource, use a vendor resource)

      iv.   If success criteria are appropriately defined and are measurable

      v.   The net operating impact of the proposed change

  b. If any of the areas are found to be deficient, contracting should be delayed until such time as the Chief Information Officer (CIO) agrees that deficiencies identified by the independent expert have been addressed

2. OIT should modify its Project Lifecycle Methodology and Governance Policy (POL 200-01) to include:

  a. Assessment of preliminary success criteria during the "Intake" phase

  b. Final agreement of success criteria during the "Plan" phase

  c. Ensuring success criteria are identified and appropriate (e.g., outcome based, measurable) in the OIT required review process (i.e., gate reviews) that occurs when projects transition from one project stage to another

  d. Measurement against success criteria in the "Close" phase

3. OIT should modify its Independent Verification and Validation (IV&V) Policy (POL 200-03) to revise the policy statement such that IV&V is required for all major IT projects regardless of initial risk assessment and ensure that the IV&V vendor is engaged in the "Initiate" phase of the project.

4. OIT should modify its risk assessment process to include project and procurement risk in addition to the security risk managed by the current process. Factors that should be considered for risks include, but are not limited to:

  a. Alignment of project team

  b. Level of integration required with new or existing systems

  c. A solid track record demonstrated by the chosen implementation team (best practice)

  d. If the chosen solution (including all components) has a good success rate

  e. Experience level of team (in-house and vendor supplied)

5. OIT should enforce the concept that a project manager (PM) should participate and lead all meetings with vendors and ensure that appropriate project team members (e.g. contracts office) are invited and engaged.

6. OIT should ensure that project managers (PMs) assigned major IT projects have experience with projects of similar scope and magnitude, and that they have enough domain expertise to manage the vendor (i.e., a PM with Enterprise Resource Planning [ERP] experience is needed to manage an ERP project). If they do not have staff that meet those qualifications, or do not have those staff resources available, they should contract for project management services with the specific expertise needed for the project.

7. OIT should change the RFP development process to require evaluation against desired outcomes rather than against requirements. High-level business and technical requirements should remain a part of the RFP process, but none should be written as grounds for disqualification of bidders if the desired outcome can be achieved.

8. OIT should review all of their project management and procurement policies with the HRWorks project in mind, paying specific attention to POL 200-01 (detailed steps required throughout the project lifecycle) and POL 200-03 (requirements for IV&V). Further, OIT should ensure that enforcement mechanism(s) are clear and, when violated, OIT should strictly enforce these policies.

9. OIT should include decommissioning of legacy systems as part of any project that has cost efficiencies or cost effectiveness as part of the justification and ensure that all success criteria are measured in project closeout. These measurements should be presented to Joint Technology Committee (JTC) as part of the closeout procedures.

3.5 Agency Response

GOVERNOR'S OFFICE OF INFORMATION TECHNOLOGY

1. a. Agree. Implementation Date: April 2019

OIT agrees and will add an independent review process as first phase of the project life cycle prior to contracting major IT projects. This process will utilize and independent expert/contractor to assess:

   i.   The cost benefit analysis (CBA) required by OIT policy for realistic cost estimates and appropriate value/benefit calculations

   ii.   The implementation plan to ensure project stakeholders are appropriately addressed, the change management plan is reasonably resourced and scheduled, and project risks are mitigated

   iii. The project management resources planned for the project (i.e., hire an experienced project manager, use an internal resource, use a vendor resource)

   iv.   If success criteria are appropriately defined and are measurable

   v.   The net operating impact of the proposed change

1. b. Agree. Implementation Date: April 2019

OIT agrees and will add an independent review process as first phase of the project life cycle prior to contracting major IT projects. If any of the areas are found to be deficient, contracting will be delayed until such time as the Chief Information Officer (CIO) and Executive Director of OIT agrees that deficiencies identified by the independent expert have been addressed.

2. a. Agree. Implementation Date: April 2019

OIT will modify Project Lifecycle Methodology and Governance Policy (POL 200-01) to include assessment of preliminary success criteria during the "Intake" phase.

2. b. Agree. Implementation Date: April 2019

OIT will modify Project Lifecycle Methodology and Governance Policy (POL 200-01) to include final agreement of success criteria during the "Plan" phase.

2. c. Agree. Implementation Date: April 2019

OIT will modify Project Lifecycle Methodology and Governance Policy (POL 200-01) to include ensuring success criteria are identified and appropriate (e.g., outcome based, measurable) in the OIT required review process (i.e., gate reviews) that occurs when projects transition from one project stage to another.

2. d. Agree. Implementation Date: April 2019

OIT will modify Project Lifecycle Methodology and Governance Policy (POL 200-01) to include measurement against success criteria in the "Close" phase.

3. Agree. Implementation Date: April 2019

OIT will modify its Independent Verification and Validation (IV&V) Policy (POL 200-03) to revise the policy statement such that IV&V is required for all major IT projects regardless of initial risk assessment and ensure that the IV&V vendor is engaged in the "Initiate" phase of the project.

4. Agree. Implementation Date: April 2019

OIT will modify its risk assessment process to include project and procurement risk in addition to the security risk managed by the current process. Factors that will be considered for risks include, but are not limited to:

   a. Alignment of project team

   b. Level of integration required with new or existing systems

   c. A solid track record demonstrated by the chosen implementation team (best practice)

   d. If the chosen solution (including all components) has a good success rate

   e. Experience level of team (in-house and vendor supplied)

5. Agree. Implementation Date: March 2019

OIT will enforce the concept that a project manager (PM) should participate and lead all meetings with vendors and ensure that appropriate project team members (e.g. contracts office) are invited and engaged.

6. Agree. Implementation Date: March 2019

OIT will ensure that project managers (PMs) assigned major IT projects have experience with projects of similar scope and magnitude, and that they have enough domain expertise to manage the vendor (i.e., a PM with ERP experience is needed to manage an ERP project). If OIT does not have staff that meet those qualifications, or do not have those staff resources available, OIT will contract for project management services with the specific expertise needed for the project.

7. Agree. Implementation Date: April 2019

OIT will change the RFP development process to require evaluation against desired outcomes rather than against requirements. High-level business and technical requirements will remain a part of the RFP process, but none will be written as grounds for disqualification of bidders if the desired outcome can be achieved.

8. Agree. Implementation Date: April 2019

OIT will review all of the project management and procurement policies with the HRWorks project in mind, paying specific attention to POL 200-01 (detailed steps required throughout the project life cycle) and POL 200-03 (requirements for IV&V). Further, OIT will ensure that enforcement mechanism(s) are clear and, when violated, OIT will strictly enforce these policies.

9. Agree. Implementation Date: April 2019

OIT will include decommissioning of legacy systems as part of any project that has cost efficiencies or cost effectiveness as part of the justification and ensure that all success criteria are measured in project closeout. These measurements will be presented to JTC as part of the closeout procedures.

4.0 Procurement Practices used for HRWorks

4.1 Evaluation Question 1: Original Contract

Was the contract for HRWorks originally negotiated in compliance with statutes for state employees being paid on a semi-monthly basis?

4.1.1 Answer to Question 1

BerryDunn received the following response to this question from DPA:

> "The original HRWorks contracts called for first the implementation of the state's current payroll cycles, biweekly lag and monthly current, and then a transition to a semi-monthly lag pay cycle."

From a detailed analysis of the documents provided to BerryDunn, and from the interview sessions that were conducted, it was determined that the above statement was accurate. The contract with CGI states that the system was to initially be configured to support both biweekly lag and monthly current payroll cycles (referred to as the initial payroll implementation), then to move these cycles to a semi-monthly payroll cycle (referred to as the "Payroll Cycle Change" and the "Pay Period Change") post Go Live. The contract stated that the system was "… to convert biweekly and monthly payrolls into a combined semi-monthly payroll." (State of Colorado Contract 96903, Version 1116, signed 01/20/2017, Page 22 of 58, Exhibit A-1: Implementation Statement of Work, Part 4. Project Specific Statement of Work, Section B. Deliverables: Subsection 17) Payroll Cycle Change Strategy). In addition, in the General Terms and Conditions Section of this same document, it further states that "All employees/agencies on CPPS (approximately 30,000 employees) will be included in scope and all agencies will go live on the same schedule, for both the initial payroll implementation, as well as the cycle change." (Page 57 of 58). During the 2016 legislative session, SB16-215 added C.R.S. 24-50-104(g) and this provides in part, "if the state personnel director determines that due to circumstances in connection with the implementation of the human resources information system, it will not be possible on July 1, 2017, to begin paying salaries twice monthly for employees paid through the state's payroll system … the director shall on or before June 1, 2017, notify employers that pay employees through the state's payroll system, employees who are paid through the state's payroll system, and the general assembly that the department will not meet the July 1, 2017 deadline…" On July 1, 2017, the state personnel director sent a letter to the General Assembly informing the general assembly that the department would not meet the July 1, 2017 deadline to implement twice monthly payroll. Under C.R.S. 24-30-104(g) the state personnel director can determine the date to implement twice monthly payroll. SB16-215 was signed on June 8, 2016. The contract with CGI was signed on January 20, 2017. Since the CGI contract was signed prior to the letter from the state personnel director, the initial contract with CGI was not in compliance with current Colorado statutes, but was brought into compliance by the July 2017 letter.

4.2   Evaluation Question 2: Payroll Cycle Changes

When did the project switch to paying state employees on a biweekly basis? What was the impetus for this change? Did the actual terms of the contract change?

4.2.1   Answer to Question 2

BerryDunn received the following response to this question from DPA:

> "The project switched in February 2018. At the Joint Budget Committee (JBC) meeting on January 31, 2018, the OSPB Director presented to the JBC the move from semi-monthly to biweekly pay. The JBC agreed to sponsor this bill. As a result, the Project Leadership Team agreed to proceed with developing a plan with biweekly pay, and the project shifted its focus to implementing only biweekly pay. The General Assembly did not proceed with biweekly pay on May 9, 2018. The project team then worked with the vendors to revise the schedule to go live on January 1, 2019 with monthly current and biweekly lag. A contract amendment was signed on August 16, 2018 to reflect the revised go live date."

From a detailed analysis of the documents provided to BerryDunn, and from the interview sessions that were conducted, it was determined that the above statements were accurate. Prior to the JBC meeting in January, the State Controller had approached the OSPB Director and proposed the idea of moving to a biweekly pay cycle. The OSPB Director then presented to the JBC the move from semi-monthly to biweekly pay. After the JBC on January 31, 2018 voted to request a bill draft to change the statutes from semi-monthly to biweekly pay, the State Controller approached the vendor, CGI, in early February of 2018, to request that CGI focus on a biweekly payroll cycle. As it was still early in the process of configuring the system, and the vendor had not yet configured any payroll cycles, the vendor proceeded with configuring the solution to run a biweekly payroll cycle, to the exclusion of all other payroll formats. Once it was learned that a biweekly payroll cycle would not be supported by the Legislature, in early May of 2018 near the end of the Legislative Session, the vendor was contacted regarding configuring the system to run a monthly current payroll cycle and a biweekly lag payroll cycle. CGI stated that they would need additional time to configure and test the monthly current payroll cycle including the impact on premium pay for non-exempt employees. Because of the additional time required, both CGI and Workday agreed to revisit the project schedule with a go-live date of January 2019 and additional funding of $589,000. During the final stages of this assessment, additional delays in the project schedule have occurred, which could potentially result in additional project costs. However, new contract documents were not yet available for analysis.

4.3   Evaluation Question 3: Contract Change

Since the project has now shifted to paying state employees monthly, has the contract changed? If so, when did this happen?

4.3.1   Answer to Question 3

BerryDunn received the following response to this question from DPA:

"This question mistakes the facts. The project originally contracted to include both biweekly lag and monthly current pay cycles. The contract was amended in August 16, 2018 to extend the go live date to January 1, 2019."

From a detailed analysis of the documents provided to BerryDunn, and from the interview sessions that were conducted, it was determined that the above statements were accurate. Per the initial contract, the system would be capable of supporting multiple forms of payroll cycles. These different payroll cycles would simply have to be selected by the State, provided to the vendor, and then the vendor would configure each payroll cycle chosen. The contract was never amended to "shift" the payroll cycles; it was merely to allow for additional time to configure another payroll cycle. Priority was given to the monthly-current pay cycle. The original contract language remained in place that included biweekly lag and monthly current pay cycles at go live and then the move to semi-monthly pay. However, the contract did not include any language for differing completion dates for these different pay cycles.

4.4   Evaluation Question 4: Additional Costs

Are there additional costs to the state for any of these contract or project changes? If so, identify these costs and quantify them, to the extent possible.

4.4.1   Answer to Questions 4

BerryDunn received the following response to this question from DPA:

"There were additional costs in the form of vendor costs of $589,000 ($391,802 for CGI and $197,198 for Workday) to extend the go live date to January 1, 2019. The project funded these additional costs from project contingency."

From a detailed analysis of the documents provided to BerryDunn, and from the interview sessions that were conducted, it was determined that the above statements were accurate. During the final stages of this assessment, additional delays in the project schedule have occurred which could potentially result in additional project costs. However, new contract documents were not yet available for analysis.

4.5   Evaluation Question 5: Plans for Compliance

How does DPA plan to comply with Section 24-50-104(8), C.R.S., requiring state employees to be paid on a semi-monthly basis?

4.5.1   Answer to Question 5

BerryDunn received the following response to this question from DPA:

"After the implementation and stabilization of HRWorks, an assessment to transition employees to semi-monthly pay can be made. In the meantime, DPA will continue to work with the General Assembly. It is the position of the current state personnel director, as set forth in the June 12, 2018 letter to the Joint Budget Committee and Joint Technology Committee that:"

"Moreover, the variability of working days in pay periods under a semi-monthly payroll schedule would cause ongoing hardship for employees who are paid hourly (more than 65% of our workforce). "For these reasons alone, we cannot in good conscience transition our workforce to semi-monthly payroll."

From a detailed analysis of the documents provided to BerryDunn, and from the interview sessions that were conducted, it was determined that the above statements were accurate but did not fully address the question posed. The Vendor, CGI, focused exclusively on working to configure the payroll in a biweekly format, which had been requested by the Controller, after the JBC agreed to request a bill draft that would change statutes from semi-monthly to biweekly, but before that bill was introduced. As such, even though the contract stated that multiple payroll formats had to be supported by the system, CGI focused all of their efforts on a single payroll format. The amendment to the contract, which delayed the go-live date of the system until January 2019, included language that would have the system configured for monthly current and biweekly lag formats, as was stated in the original contract. During the final stages of this assessment, additional delays in the project schedule have occurred, which could potentially result in additional project costs. However, new contract documents were not yet available for analysis.

Appendix A: Acronyms

Table A-1: Acronyms

Acronym/Term/Abbreviation	Definition
CBA	Cost Benefit Analysis
CIO	Chief Information Officer
C.R.S.	Colorado Revised Statute
DPA	Department of Personnel and Administration
ERP	Enterprise Resource Planning
HB	House Bill
HRIS	Human Resources Information System
IT	Information Technology
IV&V	Independent Verification and Validation
JBC	Joint Budget Committee
JTC	Joint Technology Committee
LAC	Legislative Audit Committee
OIT	Office of Information Technology
OSA	Office of the State Auditor
OSC	Office of the State Controller
OSPB	Office of State Planning and Budgeting
PM	Project Manager
PMI®	Project Management Institute
RFP	Request for Proposal
SOW	Statement of Work
TBI	Technology & Business Integrators
V.S.A.	Vermont Statutes Annotated