



Examination & Certification Online System (ECOS)

Special Project Report

Project Number 7501-001

May 16, 2013

**Prepared by:
ECOS Project Team
California Department of Human Resources –
Revised SPR 1 approved by ECOS Executive Steering Committee**

**Prepared for:
California Technology Agency**

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1.0 Executive Project Approval Transmittal

Information Technology Project Request



**Special Project Report
 Executive Approval Transmittal**

Department Name			
California Department of Human Resources			
Project Title (maximum of 75 characters)			Project Acronym
Examination and Certification Online System			ECOS
FSR Project ID	FSR Approval Date	Department Priority	Agency Priority
7501-16	07/18/2011	1	1

I am submitting the attached Special Project Report (SPR) in support of our request for the California Technology Agency's approval to continue development and/or implementation of this project.

I certify that the SPR was prepared in accordance with the State Administrative Manual Sections 4945-4945.2 and that the proposed project changes are consistent with our information management strategy as expressed in our current Agency Information Management Strategy (AIMS).

I have reviewed and agree with the information in the attached Special Project Report.

I also certify that the acquisition of the applicable information technology (IT) product(s) or service(s) required by my department that are subject to Government Code 11135 applying Section 508 of the Rehabilitation Act of 1973 as amended meets the requirements or qualifies for one or more exceptions (see following page).

APPROVAL SIGNATURES		
Chief Information Officer		Date Signed
		3/4/13
Printed name:	Pamela Baker	
Budget Officer		Date Signed
		3/4/2013
Printed name:	Robyn Malin	
Department Deputy Director		Date Signed
		3/4/13
Printed name:	Howard Schwartz	
Department Director		Date Signed
		3/4/2013
Printed name:	Julie Chapman	
Agency Secretary		Date Signed
Printed name:	NA	

Executive Approval Transmittal IT Accessibility Certification

Yes or No

Yes	The Proposed Project Meets Government Code 11135 / Section 508 Requirements and no exceptions apply.
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Exceptions Not Requiring Alternative Means of Access

Yes or No	Accessibility Exception Justification
No	The IT project meets the definition of a national security system.
Yes	The IT project will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment (i.e., "Back Office Exception.")
No	The IT acquisition is acquired by a contractor incidental to a contract.

Exceptions Requiring Alternative Means of Access for Persons with Disabilities

Yes or No	Accessibility Exception Justification
No	<p>Meeting the accessibility requirements would constitute an "undue burden" (i.e., a significant difficulty or expense considering all agency resources).</p> <p>Explain:</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p>
No	<p>No commercial solution is available to meet the requirements for the IT project that provides for accessibility.</p> <p>Explain:</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p>

**Special Project Report
Executive Approval Transmittal
IT Accessibility Certification
(continued)**

Exceptions Requiring Alternative Means of Access for Persons with Disabilities

Yes or No	Accessibility Exception Justification
No	<p>No solution is available to meet the requirements for the IT project that does not require a fundamental alteration in the nature of the product or its components.</p> <p>Explain:</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p>

2.0 Information Technology: Project Summary Package

2.1 Section A: Executive Summary

1.	Submittal Date	March 5, 2013
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	FSR	SPR	PSP Only	Other:
Type of Document		X		
Project Number	7501-001			

		Estimated Project Dates		
3.	Project Title	Examination and Certification Online System	Start	End
	Project Acronym	ECOS	Aug 2011	May 2017

4.	Submitting Department	California Department of Human Resources
5.	Reporting Agency	State and Consumer Services Agency

6.	Project Objectives
	<ul style="list-style-type: none"> Upon the completion of the project the number of systems supporting the examination and certification process will be reduced from 7 to 1. Upon the completion of Phase II –Certifications, the cost of maintaining the certification system will be reduced by 80% from \$36,000 per month to \$7,000 per month. Upon the completion of Phase II –Certifications, the system will produce reliable and accurate scoring. This includes; percentage, raw, composite, full range, and various banded scoring. The accuracy of these scoring methods will be measured against the existing JobAps & Legacy systems.

8.	Major Milestones	Est. Complete Date
	Project FSR Approval	Aug 2011
	Project Initiation and Planning	Sept 2011
	Requirements and Design Phase	Dec 2011
	Phase One	Jan 2012
	Phase Two	Jan 2014
	Phase Three	May 2016
	Phase Four	Jan 2017
	Post Project Phase	May 2017
	PIER	
	Key Deliverables	
	Project FSR Approval	Completed June 2011

- Upon the completion of Phase II – Certifications, the system will produce an accurate and complete ranking. This includes; the application of 6 rank managerial scoring, rule of 3 names ranking, rule of 3 ranks, and rule of 1 ranking. This will be measured against the existing JobAps & Legacy systems..
- Upon the completion of the project, the system will have a more reliable and accurate auditing services. The California Department of Human Resources (CalHR) group will be able to determine the actions taken on underlying data, applicant records, examinations, eligible lists, and certification lists as well as when these actions were performed. The reliability and accuracy of these audits will be measured against the existing JobAps and Legacy systems.
- Upon the completion of Phase II – Certifications, the performance of the application will be improved from the prior versions. This will be measured by the request for a certification. The previous system took over 10 minutes to return its results on a large certification list. The new system will take under 1 minute to return results.
- Upon the completion of Phase III – Examinations, the system will have the ability to post and create examinations without the assistance of the technical staff. This will reduce staff the staff hours spent on these tasks by at least 20 hours a month.
- Upon the completion of Phase II –Certifications & Phase III – Examinations, several manual processes will be eliminated. These

<p><u>Projection Initiation and Planning</u> Project Schedule Project Management Plan Risk Management Plan Communications Plan Change Management Plan</p>	<p>Completed Sept 2011</p>
<p><u>Requirements and Design Phase</u> Requirements Definition Document Traceability Matrix Document Architectural Design Document Systems Design Document</p>	<p>Completed Dec 2011</p>
<p><u>Phase One - Roll Exams off of JobAps System</u> Exams Off of JobAps Convert JobAps Exam Data Clean Up JobAps Exam Data</p>	<p>Completed Jan 2012</p>
<p><u>Phase Two - New Certification System</u> Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Training Completed System Implemented</p>	<p>In Process Jan 2014 May 2012 May 2012 Jan 2014 Jan 2013 Sept 2013 Dec 2013 Dec 2013 Jan 2014 Jan 2014</p>

include; SROA listing uploads, vacancy postings, examination bulletins, the creation and management of CEA examinations and certifications. This results in a quicker turnaround time and less errors than the previous system.

- Upon the completion of Phase III – Examinations, applicants will have the ability to create and maintain their own accounts containing personnel information, resumes, applications and status on jobs they have applied for. This process of applying alone takes days if not weeks, and will now take minutes.
- Upon completion of Phase II –Certifications & Phase III - Examinations department personnel staff will have the ability to manage exams, manage exam schedules, create certification lists, send notifications, and upload external exams results. With the new system the hours it takes to manage this will be reduced.
- Upon completion of Phase IV – Reports all pertinent data will be available to CalHR users and Department personnel users. With all pertinent data available the amount of time needed to request the data and the time spent by IT to get the data will be greatly reduced.
- Upon completion of the project, 7 separate systems will have been decommissioned and backed up. This frees up state staff resources and space needed to house these systems.

<p>Phase Three - New Examination System Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Training Completed System Implemented</p>	<p>In Process May 2016 Sept 2013 Sept 2013 Apr 2016 Sept 2015 Nov 2015 Mar 2016 Apr 2016 Apr 2016 May 2016</p>
<p>Phase Four - Reports Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Finalize Help Desk Documentation, System and Technical Documentation, Operations Documentation, and User Manuals Training Completed System Implemented</p>	<p>Jan 2017 Jan 2014 Jan 2014 Dec 2016 Jun 2016 Aug 2016 Oct 2016 Nov 2016 Nov 2016 Dec 2016 Jan 2017</p>
<p>Post Project Phase Decommission Plan Completed Systems Decommissioned PIER Completed</p>	<p>May 2017 Nov 2016 Apr 2017 May 2017</p>

7.	Proposed Solution
Develop an in-house, custom-built, web-based automated examination and certification online system.	

2.2 Section B: Project Contacts

Project #	7501-001
Doc. Type	SPR

Executive Contacts								
	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
Agency Secretary								
Director	Julie	Chapman	916	322-5193				Julie.Chapman@calhr.ca.gov
Deputy Director	Howard	Schwartz	916	322-5193				Howard.Schwartz@calhr.ca.gov
Budget Officer	Robyn	Malin	916	324-9404				Robyn.Malin@calhr.ca.gov
CIO / Project Director	Pamela	Baker	916	558-1757				Pamela.Baker@calhr.ca.gov
Project. Sponsor	Carol	Ong	916	323-5290				Carol.Ong@calhr.ca.gov

Direct Contacts								
	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
Doc. prepared by	Chad	Crowe	916	323-4424				Chad.Crowe@calhr.ca.gov
Primary Contact	Chad	Crowe	916	323-4424				Chad.Crowe@calhr.ca.gov
Project Manager	Chad	Crowe	916	323-4424				Chad.Crowe@calhr.ca.gov

2.3 Section C: Project Relevance to State and/or Department/Agency Plans

	What is the date of your current Operational Recovery Plan (ORP)?	Date	January 2011
	What is the date of your current Agency Information Management Strategy (AIMS)?	Date	Dec 2010
1.	For the proposed project, provide the page reference in your current AIMS and/or strategic business plan.	Doc.	AIMS
		Page #	18-21

Project #	7501-001
Doc. Type	SPR

		Yes	No
Is the project reportable to control agencies?		X	
If YES, CHECK all that apply:			
X	a) The project involves a budget action.		
	b) A new system development or acquisition that is specifically required by legislative mandate or is subject to special legislative review as specified in budget control language or other legislation.		
X	c) The estimated total development and acquisition cost exceeds the departmental cost threshold and the project does not meet the criteria of a desktop and mobile computing commodity expenditure (see SAM 4989 – 4989.3).		
X	d) The project meets a condition previously imposed by the Technology Agency.		

2.4 Section D: Budget Information

Project #	7501-001
Doc. Type	SPR

Budget Augmentation Required?											
No											
Yes	X	If YES, indicate fiscal year(s) and associated amount:									
		FY	13-14	FY	14-15	FY	15-16	FY	16-17	FY	17/18
		\$ 820,757		\$ 625,757		\$ 375,757		\$ 90,549		\$ 0	

PROJECT COSTS

1.	Fiscal Year	11-12	12-13	13-14	14-15	15-16	16-17	17-18	TOTAL
2.	One-Time Cost	\$ 511,447	\$ 1,183,012	\$1,527,389	\$ 1,477,389	\$ 1,227,389	\$ 649,846	\$0	\$ 6,576,472
3.	Continuing Costs	0	0	\$ 317,358	\$ 632,716	\$ 632,716	\$ 712,534	\$ 1,074,414	\$ 3,369,738
4.	TOTAL PROJECT BUDGET	\$ 511,447	\$ 1,183,012	\$1,844,747	\$ 2,110,105	\$ 1,860,105	\$1,362,380	\$ 1,074,414	\$ 9,946,210

PROJECT FINANCIAL BENEFITS

5.	Cost Savings/Avoidances	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6.	Revenue Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0

2.5 Section E: Vendor Project Budget

Vendor Cost for FSR Development (if applicable)	\$ 0
Vendor Name	

Project #	7501-001
Doc. Type	SPR

VENDOR PROJECT BUDGET

1.	Fiscal Year	11-12	12-13	13-14	14-15	15-16	16-17	TOTAL
2.	Primary Vendor Budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.	Independent Oversight Budget	\$0	\$0	\$65,000	\$65,000	\$65,000	\$65,000	\$ 260,000
4.	IV&V Budget	\$0	\$0	\$0	\$0	\$0	\$0	\$ 0
5.	Other Budget	\$39,185	\$449,990	\$550,000	\$500,000	\$250,000	\$0	\$ 1,789,175
6.	TOTAL VENDOR BUDGET	\$39,185	\$449,990	\$615,000	\$565,000	\$315,000	\$65,000	\$ 2,049,175

------(Applies to SPR only)-----

PRIMARY VENDOR HISTORY SPECIFIC TO THIS PROJECT

7.	Primary Vendor	Visionary Integration Professionals (VIP)
8.	Contract Start Date	6/29/2011
9.	Contract End Date (projected)	6/29/2013
10.	Amount	\$ 489,175

PRIMARY VENDOR CONTACTS

	Vendor	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
11.	VIP	David	Teater	916	834-6249				dteater@vipconsulting.com
12.									
13.									

2.6 Section F: Risk Assessment Information

Project #	7501-001
Doc. Type	SPR

RISK ASSESSMENT

	Yes	No
Has a Risk Management Plan been developed for this project?	X	

General Comment(s)

The risk management strategy is discussed in section 5 of this SPR. In addition, a detailed Risk Management Plan has been developed for this project. The ECOS Risk Management Framework is based on a combination of the PMBOK and selected Software Engineering Institute (SEI) technical reports. The ECOS Project Risk Management Plan processes are continuous steps performed throughout the life of the project, these steps include:

1. Risk Identification
2. Risk Analysis
3. Risk Planning
4. Risk Tracking
5. Risk Escalation

3.0. Proposed Project Change

This SPR provides a summary of the previous Feasibility Study Report (FSR) to replace the JobAps Examination and Certification System and the justification for changes to the Examination and Online Certification System (ECOS) project. The FSR recommended replacing the JobAps system with a custom developed ECOS to support the hiring needs of departments throughout the state.

The project started under the direction of the State Personnel Board (SPB). The majority of SPB and all of Department of Personnel Administration (DPA) merged to become CalHR on July 1, 2012. Upon the merger, responsibility for the ECOS Project was transferred to CalHR. You will see point in time references to SPB throughout this document, which refer to the time prior to July 1 when SPB was managing the project.

3.1 Project Background/Summary

In September 2009, SPB implemented the JobAps System (JobAps), a proprietary web-based modified off-the-shelf system (MOTS), to replace two legacy systems used for processing examinations and certs. The system was envisioned to be a one-stop shop for state job seekers, allowing applicants to take an exam and apply for a vacancy all in one place. SPB determined that JobAps was lacking functionality and did not perform adequately to meet the state's needs.

In June of 2011, SPB developed a FSR that proposed developing an in-house custom developed application to replace the JobAps System. The project was named ECOS. The project began to experience problems early on when the original project manager was unable to recruit and retain qualified programmers. As a result, the schedule quickly fell behind. In addition, the technical manager was juggling multiple projects and was unable to devote the time to establish technical and design standards at the start of the project. Soon after, the technical manager left SPB for another job.

Due to the system's failings, CalHR, which has since taken over the selection-related responsibilities formerly belonging to SPB, is in large part relying on its legacy systems and custom-built systems to process examinations and some certifications outside of JobAps until a permanent solution can be developed and implemented.

3.1.1 Functional Description

Almost all state departments use CalHR's systems to process their exams and certification lists. The alternatives for an individual department other than using CalHR's systems include manual processing of exams or using their own system(s). These options are not cost effective for the state. All current state employees will or have used the exam system to obtain positions within the state or to be eligible for promotion. Public users also utilize the exam system to apply for exams, and check their score and ranking. The system currently houses over 1.7 million applications.

In order to ensure that the appropriate individuals are given consideration, CalHR is charged with maintaining the eligible lists for all state departments and ensuring that the applicable rules and laws are applied to filter those broad eligible lists to certified lists. State personnel shops use the eligible listings on a daily basis. Eligibility lists are requested 90 times a day on average and over 21,000 times a year and there can be over 350,000 eligible individuals in the system at a given time.

The JobAps certification module is still in use while the ECOS Project develops its replacement. It supports statewide online access to and maintenance of eligibility lists, including state restrictions of appointment (SROA) and reemployment lists. These lists contain the names and other pertinent data of individuals who must be considered for hire prior to others on the certification list given that they have been or will be subjected to layoff.

All state departments must use JobAps to generate certification lists from which to make hires to ensure that SROA and reemployment eligibles are properly included. Therefore, departments using external exam systems must enter exam records into the system, whether by manual key entry or by import. Managing these SROA and reemployment lists in JobAps is cumbersome and inefficient.

3.1.2 Business Problem/Opportunity Statement

As discussed previously, because of the deficiencies of the JobAps system, CalHR uses seven different systems (Legacy Exams, Legacy Certification, CalHR Web Exams, JobAps, SROA and Reemployment, VPOS and the CEA Systems) to process examinations and certifications. These systems include character-based, mainframe systems requiring many manual and batch processes and a web application which behaves erratically with large amounts of users or data. These systems lack many features that would improve customer service and reduce internal processing time and errors. The current issues with the systems include the following:

- Scoring and ranking errors; which can lead to illegal appointments.
- Inaccurate applicant feedback, including incorrect rankings, notices, dates, etc.
- Poor performance in processing reports, uploads and downloads of information, and screen loading.
- Applicants are required to have several logins due to the reliance on multiple systems.
- Difficulty providing efficient and timely service and training to departments due to increased workload from current systems.
- Duplication of effort in departments preparing for and conducting exams using their own resources rather than using CalHR's flawed systems.

3.2 Project Status

3.2.1 Phases & Milestones

The project has made progress since the approval of the FSR. The migration from the JobAps Examination system back to the legacy system (Phase I) has been completed. The gathering of requirements and design for the new certification system has been completed. The project is now coding and QA testing the new certification system as part of Phase II. The following is a list of completed and in-process major milestones.

Table 3.1 Project Milestones

Major Project Milestones	FSR Completion Date	SPR Completion Date	Difference in Months	Status
FSR Approved	Jul-2011	Jul-2011	0	Completed
Project Initiation and Planning Project Schedule Project Management Plan Risk Management Plan Communications Plan Change Management Plan	Sept-2011	Sept-2011	0	Completed
Phase I - Roll Exams Back to Legacy from JobAps System Exams Rolled Off of JobAps JobAps Exam Data Transferred JobAps Exam Data Cleaned	Jan-2012	Jan-2012	0	Completed
Phase II - New Certification System Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Training Implemented	Sept-2012	Jan-2014	16 months	In Process
Phase III - New Examination System Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Training Completed Implemented	Jul-2014	May-2016	22 Months	In Process
Phase IV - Canned & Ad-Hoc Reporting Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed	Dec-2014	Jan-2017	26 Months	Not Started

User Acceptance Testing Completed Documentation Training Implemented				
Post Phase - Decommission of JobAps & Legacy Systems - PIER Report Plan Decommission of previous systems Implemented PIER Completed	Aug-2015	May-2017	22 Months	Not Started

3.2.2 Expenditures to Date

The total project expenditures to date are as follows.

Table 3.2 Expenditures to Date

	Last Approved Budget from FSR 2009	Proposed SPR Budget	Reason for Change	Currently Spent to Date
One-Time IT Project Costs				
Staff (Salaries & Benefits)	\$ 3,036,488	\$ 4,527,297	Schedule has been lengthened by 22 months. Resources originally under estimated, added 3.7 positions.	\$ 785,188
Hardware Purchase				
Software Purchase/License				
Telecommunications				
Contract Services Software Customization				
Contract Services Project Management				
Contract Services Project Oversight		\$ 260,000	Added Half-time CTA IPOC	0
Contract Services - IV&V Services				
Contract Services Other Contract Services	\$ 500,000	\$ 1,789,175	Consultants were under estimated and the schedule was lengthened by 22 months. Consultant assistance needed for longer length of time. \$500,000 of this money has already been acquired.	\$ 301,133
Data Center Services				

Agency Facilities				-
Other				-
Total One-Time IT Project Costs	\$ 3,536,488	\$ 6,576,472		\$ 1,086,321
Continuing IT Project Costs				
Staff (Salaries & Benefits)	\$ 553,669	\$1,060,238	Once the new systems are implemented, an additional 2 people are needed for maintenance. We believe the staff salaries were not estimated correctly in the original FSR.	0
Hardware Lease/Maintenance				
Software Maintenance/Licenses				
Telecommunications				
Contract Services				
Data Center Services	\$ 615,000	\$2,309,500	This is showing 22 months extra due to extended schedule. The increase of 178k a year is due to the under estimation of environment needs. Added 2 Servers for load balance, 2 Virtual machines for staging, and 1 SQL Enterprise Edition License.	\$ 2,020
Agency Facilities				
Other				
Total Continuing IT Project Costs	\$ 1,168,669	\$ 3,369,738	FSR costs and SPR costs are similar, just showing for an additional 2 years because of longer schedule.	\$ 2,020
TOTAL	\$ 4,705,157	\$ 9,946,210		\$ 1,088,341

The overall difference in cost is **\$5,241,053** between the FSR and the SPR 1.

- The additional 22 months on the schedule, along with properly staffing the project by adding 3.7 positions, during the peak years, has increased the cost of State Staff costs by **\$1,490,809**.

- The under estimation of consulting assistance along with the extended schedule attributes to **\$1,289,175** of the difference between the FSR and the SPR 1.
- The original FSR did not account for paying for an IPOC, the project was allowed to use a person within the department for these duties. The project is now bringing in a dedicated and qualified IPOC from California Technology Agency (CTA). This cost accounts for **\$260,000** of the difference.

3.2.3 Achievements & Work In Progress

Since the FSR was approved, the project has completed and started work on several key project activities. These activities lead to the successful roll back to the exam legacy from the JobAps system (Phase I), the database designed, data mapped, data migrated, data dictionary completed, Phase II – Certification requirements gathered, and Phase II – Certification interface designed. Currently we are working on the code development of Phase II – Certification, and the requirements gathering and interface design of Phase III - Examination.

The key accomplishments include:

- Successfully rolled back the exams system to legacy and migrated off of JobAps with the completion of Phase I.
- Database for Phase II has been designed, data dictionary has been completed, legacy data mapping and legacy data migration for the certification system has been completed.
- Completed requirements gathering for Phase II – certification system.
- Completed Phase II certification interface design.
- Acquired competent development staff for ASP.NET in an N-Tier development environment.
- Completed general system development – authentication, authorization, field level authorization (the ability to Create Read, Update or Delete (CRUD) per page field based on user roles).
- Designed and implemented coding standards.
- Designed and implemented global utility methods, functions, and controls for consistency and reuse in all phases of development.
- Established technical foundation using N-tier environment with WCF web services, scripting standards with JQuery, asp.net security, web page base for session handling used for all phases of the applications.
- Purchased and installed new automated functional and regression testing software.
- Test case scenarios for Phase II certification system identified and documented.

- All project plans completed and approved.
- Successfully migrated project documentation and project progress tracking systems to the SharePoint collaboration site for quicker and easier project monitoring and controlling.
- Change Control Management System successfully implemented and in use.
- Implemented pre QA roll check back with business per system feature.
- Designed hardware environments for Production, Staging, QA, UAT and Testing.
- Implemented QA environment.

Key items that are currently underway:

- Gathering requirements for the new exams system.
- New exams system interface design.
- Documenting and defining business rules for Phase II.
- Developing Training plans
- Documenting baseline design
- Development foundations for ASP.NET controls and style sheets to be used throughout development.
- Coding of Phase II modules.
- Quality Assurance (QA) testing of the general system modules (1.x).
- Training on new automated functional and regression testing software.
- Phase III examination database design, data migration, data mapping, and data dictionary.
- Database data dictionary updates.

3.3 Reason for Proposed Change

In July of 2012, the ECOS project transferred to CalHR when the DPA and SPB merged. At approximately the same time the original project manager and the technical manager at SPB left the project. CalHR assigned a new project manager to this project. After fully assessing the schedule, budget & resources, it became apparent that both the schedule and budget were initially under estimated and the project was not adequately resourced.

Schedule

The schedule of Phase II was very aggressive and under estimated. The driving factor for the aggressive schedule was SPB's desire to terminate its maintenance contract

with JobAps for the support of the remaining certification module. In spring of 2012, SPB and JobAps engaged in legal discussions to drop the maintenance of the JobAps system by August of 2012. With that in mind, the original delivery date for Phase II was estimated for October 2012. There are several reasons contributing to the change of the original schedule in the FSR, these include the following:

- The original project manager could not obtain or retain adequate developers with expertise in ASP.NET and SQL 2008 to begin development on time. The project went through 13 consultants during this period.
- Once the project was partially staffed with competent developers it was well past the start date for development to begin. This left 2-1/2 months, according to the original schedule, to develop the entire certification system. After doing our estimates, we show that the coding of the certification system will actually take over 14 months to complete.
- The original design and coding time estimates given by staff were ignored and were tremendously cut. This was due to the pressing need to get off of the JobAps system as mentioned previously.
- It was initially believed that the programmers on the project would have a complete understanding of the business and business rules. The business unit was directed not to document the underlying business rules and logic. The programmers on the project do not know the underlying business rules and logic and those now need to be documented.
- Due to the rush to get off of the JobAps system, Phase II & Phase III were reversed. Phase III - Examinations should have been completed first and Phase II - Certifications should have followed. Since these are in reverse order, the design of Phase III screens will require changes to some of the Phase II screens once the coding for Phase III begins. We are now too far along to switch the phases around, as it would take an additional 9-12 months to revert back to legacy certification and start the examination phase.
- Phase III schedule was thought to have a buffer in it where any overall delays to the project schedule could be absorbed. Our new estimates show that Phase III was also under estimated and there is no time savings here. Please see proposed change in section 3.4 for more information.

Reference *Table 3.2 Expenditures to Date* to see differences in FSR and SPR schedule.

Budget

The project's budget was grossly under estimated in both consultant and hardware dollars.

There are three consultants on the project. They were only budgeted through June of 2013, but are needed through the duration of the project.

The project's hardware is to be housed at OTECH, but the budget only included estimates for production and staging environments. The project will also need Training, QA, and UAT environments which were not taken into account. We plan to absorb the cost of these three additional environments by hosting them in-house using our existing hardware and resources.

The production environment was budgeted and designed to use the standard version of SQL Server database. This is not adequate for the features needed, the amount of data and the amount of processing that will be done at the database level. The license will need to be upgraded to the enterprise version of SQL Server.

Table 3.3 Budget Comparison

Budget Line Item	FSR Budget	SPR Budget	Difference	Notes
Contract Services Total	\$500,000 Total	\$2,049,175 Total	\$1,549,175	These costs are over 5 FYs, with 500,000 already acquired. This is due to the underestimated time for consulting assistance, the extended schedule, and the addition of Half-Time CTA IPOC,
OTECH	\$410k year	* \$513k year	\$103,000	Original quotes did not include Load Balance Servers for Production, Virtual Servers for Staging or SQL Enterprise License
State Staff	2012/2013 6 PY at \$760k	2012/2013 7.5 PY at \$733k	-\$27,000	Cost over estimated
	2013/2014 6 PY at \$760k	2013/2014 9.7 PY at \$912k	\$152,000	Added necessary additional resources to project
	2014/2015 6 PY at \$760k	2014-2015 9.7 PY at \$912k	\$152,000	Added necessary additional resources to project
	2015/2016 -	2015-2016 9.7 PY at \$912k	\$912,000	Project schedule lengthened
	2016/2017 -	2016-2017 5.7 PY at \$584k	\$584,000	Project schedule lengthened

* 513k a year comes from the existing budget of 335k a year for OTECH costs and an additional 178k a year needed for additional equipment. The project is utilizing the existing equipment at OTECH for the ECOS project.

Resources

The project has had staffing issues in the past that contributed to the delay in the project.

The original purchase order for consulting services had a limit of \$85 per hour that would be paid for a business or technical consultant. The response to the RFO from the vendor states that this is an entry level position for technical consultants when the project actually needs staff or senior level developers to be successful. In an effort to confirm this price level, we spoke with our representative at Visionary Integration Professionals (VIP) consulting who confirmed that \$85 an hour is an entry level developer. We also spoke with colleges within the state that have ASP.NET consultant developers and confirmed that they were paying \$110-\$120 an hour for senior level programmers. The current project manager was previously a consultant in private sector who also contracted for \$100-\$130 dollars an hour for staff and senior level work. The pay rate is one of the reasons the project has gone through 13 technical consultants. While \$85 is the going rate for a business analyst, expert .Net developers command a rate of \$100 to \$125 per hour. The ramp up time and training of an entry level developer is time consuming.

The technical manager at SPB was over extended and was not able to commit the amount of time needed on the project. This person was working on 2-3 other projects at the same time and was unable to design or implement a technical foundation for the project. Once the technical manager left the project the position was not replaced and the duties fell on the technical lead and the project manager.

The QA team had two individuals on it. One of them is assigned to work on the project for 50% of her work schedule, and the other at 25%. The person who was working 25% retired from state service and that position is scheduled to be eliminated as a consequence of the merger. In an effort to correct this issue, we have increased our QA team lead's time on the project from 50% to 100% and hired temporary help to fill in at 45% of their time.

There was a retired annuitant on the project prior to the merge in July 2012, who helped with administrative duties and database checks. She left the project in June of 2012. To correct this, the project hired two temporary help positions. The technical temporary position will work 10% of their time on database checks and the other 44% on QA testing. The business temporary help will work on various administrative duties.

Additional Work

Due to the rush to get off of the JobAps system the time needed to establish a technical foundation, technical standards, and properly design the certification system was insufficient.

The project needed time to establish the technical foundation, but no technical foundation was set or envisioned in advance of the project's coding beginning. After taking over the project, the technical lead had to take additional time to establish the

foundation that would be used throughout the rest of the project. This foundation includes global field validation routines, field data checks, web services, custom controls, web page base, error handling, validation error handling, logging, deployment configurations, builds, and authentication. This took a large amount of time out of the development schedule to envision, establish, and train the development staff on. The majority of the foundation is now in place.

The technical standards were not planned, let alone established before coding began. The technical lead had to take the time to establish these standards as coding was going forward. These include database setup and standards for tables, views, stored procedures, triggers, etc. He also had to set the accessibility and security standards in place. The accessibility standards comply with Section 508 amendment to the rehabilitation act of 1973 and Web Content Accessibility Guidelines (WCAG) 2.0 AA. The security standards comply with SAM chapter 5300 and section 5100.

Business design standards were also not defined prior to beginning the design of Phase II screens. The lack of foundational screen design standards caused delays as backtracking and screen revisions were required in order to conform to standards defined after designs were underway. Beyond the approval of Phase II screen designs, user interface design standards that were documented, as recently as November 2012, require developers to rework completed screens in order to implement those standards.

3.4 Proposed Project Change

The project schedule and budget were significantly under estimated in the original FSR.

The project schedule for Phase II has increased from 8 months to 25 months with a completion date in January 2014. The majority of the under estimation was in the coding tasks. While the original coding period for Phase II allowed 2-1/2 months, the updated calculations show that it will actually take fourteen months to complete the coding portion of the development. Reference *Table 3.6 New Calculations for Phase II Coding*. The training and the UAT schedule were underestimated by a few weeks as well.

The project schedule for Phase III has increased from 22 months to 29 months with a completion date of May 2016. The difference is due mainly to under estimations in the original schedule for coding the application. This was due to unknown requirements at the time of the FSR and the original schedule had no detail in it for Phase III. At this point only half of the requirements have been documented.

The schedule for Phase IV has increased from 5 months to 7 months with a completion date of January 2017.

The schedule for Post Project Phase has decreased from 8 months to 4 months with a completion date of May 2017.

The budget for hardware will also increase from \$410k a year to \$513k a year. The original project proposal did not include all of the hardware needs. This includes using the existing environment, adding 2 servers, adding a SAN segment, and upgrading the SQL Server License from Standard to Enterprise for the production environment. The staging environment will also use the existing environment adding 2 virtual servers. The project is saving money by establishing UAT, Training and QA environments in-house. The project budget for state staff will increase due to the extended schedule and added resources. The calculations for these estimates are in *Table 3.7 Hardware Costs*.

The increase in funding needs for this project is due to the under estimation in several different areas including the schedule, consulting needs, application environments, and software licensing. For example, the original budget plan only included consulting dollars through the end of the 2013/2014 fiscal year. There was no plan for how consultants would be funded through the remainder of the project. To help save money on the project, we are going to leverage existing internal servers to house the additional environments listed above saving the project over approximately 600k dollars a year.

It is key for the project to get additional funding for consulting assistance and the temporary help positions. CalHR met with Department of Finance (Finance) on the need for additional funding and submitted a Finance Letter on February 20, 2013.

The Project Manager hired two excellent candidates for the temporary help positions. The project has money for this fiscal year to fund these positions, but will need assistance going forward. The first temporary help position provides administrative support to the project manager and has experience performing this same function on five prior IT projects. The second temporary help position assists with QA testing and data mapping verification. He is a prior SPB employee who has an expert understanding of the exam system functions. If the project does acquire funding for these position through the Spring Finance Letter the project will be forced to let the temporary help go and thus affect the overall project schedule.

The project has finally established its standards and technical foundation and is now beginning to pick up momentum. Morale has improved significantly on the project in the past six months and the team is starting to experience the synergy that comes from a cohesive and well run group. With a new and realistic schedule, when team members are given tasks, they are completed on time and according to the schedule. Because of the improvement, team members are more freely expressing their ideas, thoughts, and opinions, providing additional opportunities for innovation and creativity.

In an effort to ensure that the project remains on schedule, within budget, and within scope the project manager will continue to work closely with CTA. Previously, the project did not have a true IPOC overseeing the project. The project is planning to contract with CTA to provide a half-time IPOC with proper qualifications. In addition, the project is now staffed with more qualified project management and technical staff. Finally after completing this recent assessment, we have a more accurate estimate of the true magnitude of the work.

All of the above calculations assume that the following is true:

- Integral staff remain dedicated to the project
- The project remains a high priority for CalHR
- Number of project staff dedicated to project stays static
- The additional funding for consultant assistance is acquired
- Business has the knowledge and ability to continue to document missing business process and rules
- Project scope remains static

Table 3.4 Working Hours Per Month

Working Hours per Mo.:	172
Meetings per Mo.:	-20
Vacation/Sick per Mo.:	-14
Other Working/Non-Working Items per Mo.:	-23
Total:	~115

Table 3.5 Phase II Coding Complexity Levels

Complexity Level	Hours	# of Pages
Very High	80	4
High	60	18
Medium/High	50	11
Medium	40	53
Medium/Low	30	10
Low	20	36
Total	-	132

Table 3.6 New Calculation for Phase II Coding

5090 (Total Hours for coding Phase II, calculation: 132 pages x complexity hours) Divided by: 4 Programmer Resources
1272.5 (hours per resource) 1272.5 (hours per resource) Divided by: 115 (hours worked in a month)
11.1 (total months to code Phase II) 11.1 (total months to code Phase II) Plus: 3 months (technical standards, strategy, training, schedule overlap)
14 months (FSR estimation for Phase II Coding: 2-1/2 months)

Table 3.7 Hardware Costs

Description	SPR	FSR
Existing System Servers are to be utilized for production and Staging	335k/yr.	335k/yr.
Add 2 Tier 1 servers to production environment	78k/yr.	-
Add 2 Tier 1 virtual machines to staging	46k/yr.	-
Add 20GB SAN storage to production	1k/yr.	-
Enterprise SQL Server License Upgrade	53k/yr.	-
Total	513k/yr.	410k/yr.

3.4.1 Accessibility

The project is adhering to SAM §4833 and Government Code §11135. The project is currently complying with Section 508 and WCAG AA standards. This will be confirmed throughout QA testing as the application runs through HiSoftware’s Compliance Sheriff to test compliance and the JAWS screen reader.

3.4.2 Impact of Proposed Change on the Project

The project will have realistic deadlines and a realistic budget that is not driven by a need to get off of an existing maintenance contract. The application will provide the intended business features, implement the necessary laws and business rules, and meet the business needs that application was intended for. The proposed change will ensure that the application is maintainable, consistent, and scalable going forward.

Scope

There has been no change to the scope of the project since the FSR. Upon implementation, 7 legacy systems that are riddled with maintenance issues and data disconnections, will be eliminated and integrated into one.

Schedule

The original FSR schedule had a completion date of August 2015. The updated schedule has been changed to reflect a new completion date of May 2017. Reference *Table 3.1 Project Milestones* for new project schedule details.

Costs

The additional need for consultants beyond the original estimates in the FSR, CTA IPOC, two hardware environments not accounted for, the new schedule, and the additional software licensing increases the budget from \$4,705,157 to \$9,946,210 over the life of the project.

The additional cost for two unforeseen environments that would have significantly increased our hardware budget has been avoided by leveraging internal resources and building UAT, QA and Training environments in-house.

The cost for state staff has increased due to the extended schedule. The project has added the necessary resources to the project to complete the project in a timely manner.

3.4.3 Feasible Alternatives Considered

The only other feasible solution is a temporary one. We can migrate off of the JobAps Certification module back to the legacy Certification System. At that point both examinations and certification would be on legacy. There would still be seven separate systems that are riddled with maintenance issues. This temporary solution would ultimately need to be replaced in the near future. This would also increase the work load of the Exams division as automated functionality will go away. The CEA exams and certifications will continue to be done by hand. The department user community will have to be retrained on how to use the old system again. The individuals applying for state jobs will continue to fumble through the existing convoluted process to get a state job.

The original project team explored this option in early September of 2012 and rejected it. There are a few reasons why this is not the optimum alternative at this point in the project. First, it would take approximately 9 months to implement. We have made significant progress in this phase and we would lose the momentum the project is now experiencing if we stopped development to focus on rolling back to legacy. Second, the IT team that provides maintenance and support for the legacy systems is down to one employee. The legacy systems are on a mainframe, written in old programming

languages and it is getting harder to find qualified staff to support this technology. To maintain both the Certification and Examination legacy systems, CalHR would need to recruit additional staff proficient in mainframe technology.

3.4.4 Implementation Plan

Upon approval of the SPR, the project will keep the same approach as outlined in the FSR. This includes the remaining Phases II, III, IV, & Post Phase which is decommissioning of the Legacy systems. The project will adhere to the new extended schedule outlined here. The project will implement its new budget and go back out to bid for consultants to assist with the remainder of the project.

4.0 Updated Project Management Plan

4.1 Project Manager Qualifications

The previous project manager, John Dong, left the project in August of 2012. Following Mr. Dong's departure, CalHR appointed Chad Crowe to manage the ECOS Project. Mr. Crowe joined the ECOS project in August of 2012. He has over 15 years of experience in IT. Mr. Crowe graduated from California State University at Sacramento with a bachelor's degree in Computer Information Science with an emphasis in project management. While going to college and after graduating, Mr. Crowe worked in the private sector, managing projects that range from preparing responses to RFPs to developing and implementing multi-million dollar software solutions. Mr. Crowe has significant experience operating large and complex projects which include DOJ ACHS 10+ year multi-million dollar project and the New York Police Department's Internal Investigation Case Management system (TaskForce). Since joining DPA, now CalHR, 5 years ago, he has successfully implemented numerous medium sized applications. The ECOS project is rated as a medium sized project and requires a project manager with 3-5 years of experience. Mr. Crowe's experience exceeds this requirement.

As a technology project manager, Mr. Crowe has experience with the design, configuration, and development of technically advanced business solutions, and possesses the management skills and training required to successfully complete a project of this magnitude and complexity.

The project also utilizes the Project Director, Pamela Baker, to provide vision and direction on the project. Ms. Baker has over 30 years of experience in the IT field with the State of California. She brings extensive experience managing large IT projects and works closely with the Project Manager to ensure the success of the ECOS Project.

4.2 Project Management Methodology

The project management methodology is based on the guidelines in the Statewide Information Management Manual (SIMM) Section 17 and the Project Management Body of Knowledge, maintained by the Project Management Institute. The project management methodology also includes the Technology Agency California Project

Management Methodology (CA-PMM) framework and the Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK). Additionally, included are industry best practices and lessons learned from prior state and private industry projects. The project management approach incorporates the principles of these methodologies and includes the following activities:

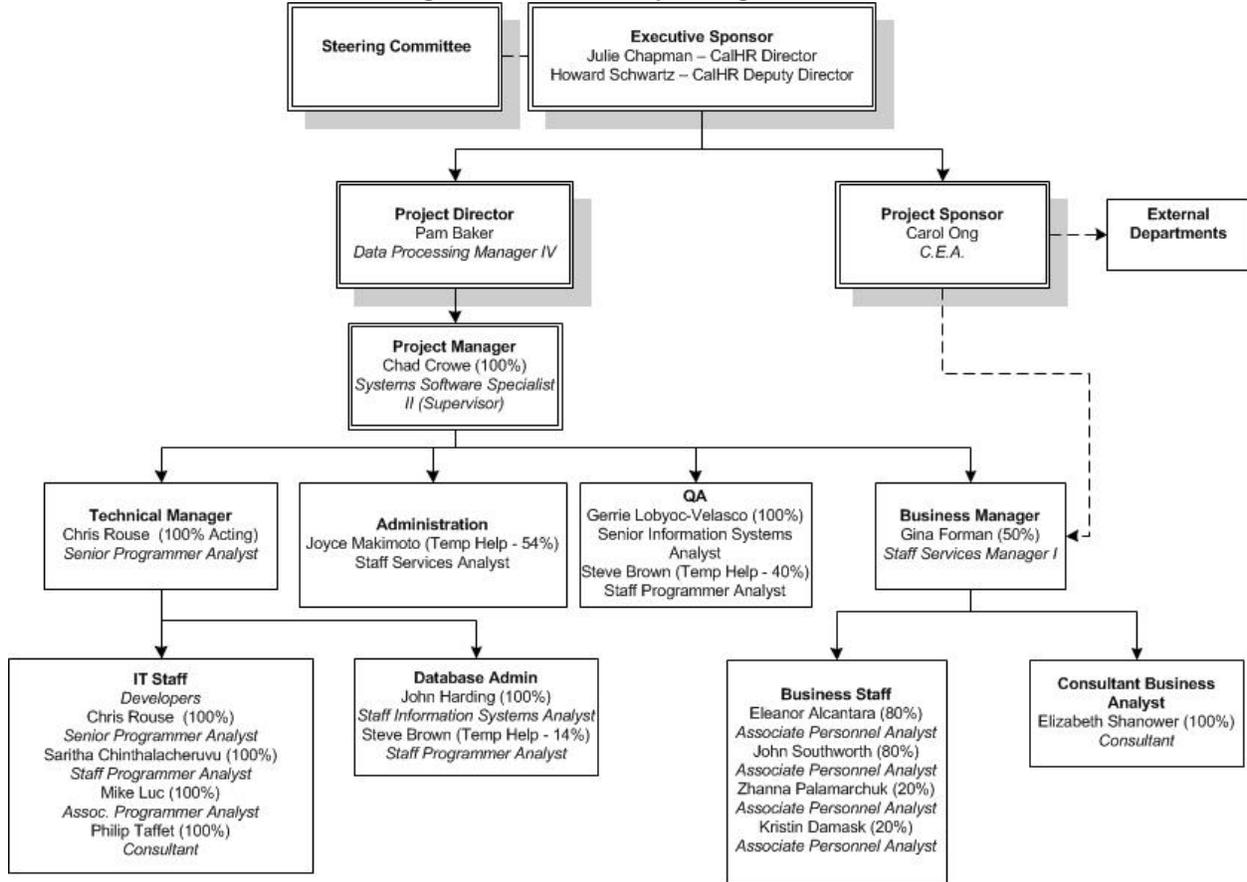
- Maintenance of a detailed, integrated project schedule and identification of the critical path of activities for the phases, timeframes, responsible parties, dependencies, milestones, and deliverables.
- Monitoring of planned versus actual performance, schedule, and budget.
- Utilization of industry standard issue and change management processes.
- Development of a Risk Management Plan and performance of frequent project risk assessments.
- Definition of a structured approach for reviewing and approving deliverables.
- Adherence to the California Technology Agency's reporting requirements.

4.3 Project Organization

The project uses a project management approach that consists of a single Project Manager responsible for the project's core team. The Project Manager reports to the Project Director. The Project Director receives direction from an Executive Steering Committee which consists of selected members from the CalHR and includes an Executive Sponsor and a Business Sponsor.

This approach to project management facilitates excellent communication between the Project Team and management. To assist in this area, the Project Communications Plan addresses how all entities coordinate with each other and external stakeholders throughout the course of the project.

Figure 4.1: ECOS Project Organization



4.4 Project Priorities

All projects have four variables that project managers can change on a project to maintain performance:

- **Quality** – defined as meeting the customers’ expectations
- **Schedule** – the duration of time it will take to complete the defined scope of the project
- **Scope** – the work to be performed in order to produce the desired results
- **Resources** – the budget and effort expended on staff, services and products

Each of these is interrelated. A change in any one component will almost certainly impact the others. For the project, the relative importance and flexibility of each component is documented in the following table:

Table 4.1: ECOS Project Priorities

Quality	Schedule	Scope	Resources
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1	4	2	3
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4.5 Project Plan

4.5.1 Project Scope

The scope of the project has not changed since the approval of the FSR, which is to implement an in-house, custom-built, web-enabled system to replace the seven fragmented systems (the Legacy Examination System, the Legacy Certification System, the CalHR Web Exams System, JobAps, the SROA/Reemployment System, VPOS and the CEA System) currently used to support the state’s examination and certification functions. It will improve both hiring departments’ and job seekers’ abilities to use the system successfully without the performance and data integrity issues they are currently facing with the current conglomeration of systems, ultimately ensuring the state has an adequate workforce to perform critical operations to ensure the safety and welfare of the citizens of California.

The project will not eliminate the need for CalHR oversight of day-to-day IT departmental processes, nor diminish the requirements for analysis, approval, and technical assistance required for maintenance and operations. However, the project will allow skilled CalHR staff to spend more time on analytic activities and less time on system support and error correction. The project will also enable the system to support the statewide enterprise IT classification initiative and provide the ability to perform exams and create cert lists based on skills.

4.5.2 Project Assumptions and Constraints

4.5.2.1 Assumptions

In addition to the original FSR assumptions:

Budget Provision Assumptions

- The Spring Finance Letter submitted to Finance is approved.

4.5.2.2 Constraints

- The project is subject to annual budget appropriations
- The application will be housed within OTECH
- Access to .Net developers

4.5.3 Project Phasing

Table 4.2: ECOS Project Phases

Project Phase	Phase Deliverables
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Phase One Roll Exams off of JobAps System	Exams Off of JobAps Convert JobAps Exam Data Clean Up JobAps Exam Data
Phase Two New Certification System	Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Training Completed System Implemented
Phase Three New Examination System	Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Training Completed System Implemented
Phase Four Reports	Requirements Gathered Interface Designed Data Mapped & Migrated System Programmed Quality Assurance Testing Completed User Acceptance Testing Completed Documentation Completed Training Completed System Implemented Finalize Help Desk Documentation, System and Technical Documentation, Operations Documentation, and User Manuals.
Post Project Phase	Decommission Plan Completed Systems Decommissioned PIER Completed

4.5.4 Project Roles and Responsibilities

In order to provide all project participants with a clear understanding of the authority and responsibilities for successful accomplishment of the project, this SPR defines the roles and responsibilities of key participants of the project. Table 4-3 identifies each key participant and their responsibilities on this project:

Table 4-3: ECOS Project Team Roles and Responsibilities

Role	Responsibilities
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Role	Responsibilities
<p>Executive Steering Committee Project Executive Sponsor, Project Business Sponsor, Project Director, Project Manager</p>	<ul style="list-style-type: none"> • Provides advocacy for the project • Oversees organization funding • Provides policy direction to the project • Provides direction to the Project Director • Makes key business decisions
<p>Change Control Board (CCB) Project Business Sponsor, Project Director, Project Manager, IT Technical Manager/Lead, Business Manager/Lead</p>	<ul style="list-style-type: none"> • Ensure change is made in an organized and controlled manner • Manages change activity from initial request through technical recommendation, to approval for implementation • Identify technically sound improvements having high benefit-to-cost ratios and thereby enhancing overall business performance • Interface with those impacted to coordinate implementation of the change in an coordinated effort
<p>Project Executive Sponsor Howard Schwartz Deputy Director</p>	<ul style="list-style-type: none"> • Supports project activities • Commits time and political capital to the project • Guides through and minimizes the political minefields • Provides direction and guidance for key organizational strategies. • Resolves strategic and major issues.
<p>Project Business Sponsor Carol Ong Division Manager - Selections</p>	<ul style="list-style-type: none"> • Ensures an appropriately skilled Project Manager is selected for the project • Approves project charter and master project plan • Provides advocacy to external business users and stakeholders. • Provides policy guidance and interpretation for business rules • Resolves issues with stakeholders to keep the project on time and within budget and scope. • Conducts appraisal of the Project Manager's performance • Follows up to ensure that promised benefits are realized • Approves significant changes to the project charter and master project plan • Shields project teams from unrealistic customer demands • Understands project complexity

Role	Responsibilities
Project Director Pamela Baker DPM IV - CIO	<ul style="list-style-type: none">• Provides advocacy for the project• Oversees project funding• Provides policy direction to the project• Facilitates communication between Executive Steering Committee, Executive Sponsor, Project Manager, and Project Team• Resolves significant issues identified by the Project Manager• Approves the final scope of the project and Risk Management Plans• Provides project resources• Reviews and approves escalated project changes• Coordinates policy for uses of system data.• Escalates decisions and issues as needed to the Sponsor• Coordinates project related issues with other efforts

Role	Responsibilities
<p>Project Manager Chad Crowe SSS II (Supervisor)</p>	<ul style="list-style-type: none"> • Provides leadership for the project • Performs day-to-day project coordination • Coordinates project direction with the Project Director • Participates in Executive Steering Committee meetings • Facilitates communication about the project to the Project Director and Project Team • Implements policy direction as defined by the Project Director • Provides support to the key business decision makers of the project • Resolves issues identified by the Project Team – escalates issues to be resolved by Project Director when needed • Contributes to the Risk Management Plan • Manages project resources • Reviews, approves, and escalates project changes • Performs prioritization and decision making on the project • Develops monitors and updates the PMP • Develops and maintains the project schedule • Oversees, tracks, monitors, and reports on project status including schedule, scope, budget, and risk • Enforces corrective action plans, if appropriate • Manages requirements traceability throughout the system development life cycle • Coordinates project work efforts of the Project Team • Facilitates the change management process • Facilitates the risk and issue management process • Resolves project issues • Reviews and approves Project Work Plan and deliverables • Oversees the Post Implementation Evaluation Review (PIER)
<p>IT Technical Manager/Lead Chris Rouse Senior Programmer</p>	<ul style="list-style-type: none"> • Provides CalHR IT resources to the project • Participates in Executive Steering Committee meetings • Serves as the Project Architect • Configuration Manager

Role	Responsibilities
<p>Business Manager/Lead Gina Forman Staff Services Manager I</p>	<ul style="list-style-type: none"> • Defines business requirements • Develops business documentation • Works with the Design, Development and Implementation (DD&I) Team to communicate business policy, process, and functional needs • Assists the DD&I Team to define data elements, relationships, and definitions • Participates in system design and development walkthrough sessions • Develops test scenarios and acceptance criteria for UAT • Participates in UAT • Works with DD&I Team as they develop user manuals, address user questions and issues (e.g., help desk), develop training manuals, and conduct training sessions • Coordinates and ensures that subject matter experts are engaged appropriately and timely.
<p>Test Manager/Lead Gerrie Velasco Senior Information Systems Analyst</p>	<ul style="list-style-type: none"> • Coordinates the testing of the system, including any system developed by a contractor • Works with the Quality Management staff to design test cases and data that will best represent "real-life" scenarios for the system • Coordinates interface tests with other organizations (e.g., programs, departments, county, state, federal), as needed • Plans, monitors, and evaluates test plans, problem reporting and resolution process, including any developed by a contractor
<p>Test Team Gerrie Velasco (ISO) Senior Information Systems Analyst Steve Brown Staff Programmer Analyst</p>	<ul style="list-style-type: none"> • Coordinates interface tests with other organizations (e.g., programs, departments, county, state, federal), as needed • Plans, monitors, and evaluates test plans, problem reporting and resolution process • Upload test scripts into automated tool • Manage and validate test scripts • Report test results to test manager • Validates security requirements • Testing of security components to adhere to the SAM

Role	Responsibilities
<p>Design, Development and Implementation (DD&I) Team Gina Forman Elizabeth Shanower John Southworth Eleanor Alcantara Kristin Damask Zhanna Palamarchuk Chris Rouse Mike Luc Saritha Chinthaleruvu John Harding Philip Taffet</p>	<ul style="list-style-type: none"> • Defines data elements, relationships, and definitions • Conducts data model walkthrough sessions • Conducts system design and development walkthrough sessions • Designs and develops the system environment, as defined by the functional requirements and business needs • Determines technology architecture required for system interfaces • Designs, tests, and documents system interfaces • Develops security requirements • Participates in testing security components • Conducts unit and system integration tests • Works with the Business Team in the development of UAT test scripts • Facilitates UAT • Works with the Business Team to develop user manuals, address user questions and issues (e.g., help desk), develop training manuals, and conduct training sessions • Confirms data conversion approach (if applicable) • Develops data conversion tools (if applicable) • Coordinates data cleanup (if applicable) • Implements the final solution • Develops a Decommission Plan for the legacy and other systems • Executes the Decommission Plan • Business matter experts • Contain those whom serve as the project's SME's

4.5.5 Project Schedule

A high-level project schedule was provided in the FSR. The schedule below is revised according to the current project status and estimated remaining work required. More detail for each major milestone is included. For a detailed comparison of the FSR and SPR schedules see *Table 3.1 Project Milestones*.

Table 4-4: ECOS Project Phase, Schedule and Deliverables

Task Name	Start	Finish	Deliverables/Milestone
Project FSR	April 2011	Aug 2011	<ul style="list-style-type: none"> • Complete/Approved FSR
Project Initiation and Planning	Aug 2011	Sept 2011	<ul style="list-style-type: none"> • Exams Off of JobAps • Convert JobAps Exam Data • Develop Project Schedule • Develop Project Management Plan • Develop Risk Management Plan • Develop Communications Plan • Develop Change Management Plan (CMP) • Clean Up JobAps Exam Data
Phase One Roll Exams off of JobAps and back to Legacy	Aug 2011	Jan 2012	<ul style="list-style-type: none"> • Exams Off of JobAps • Convert JobAps Exam Data • Clean Up JobAps Exam Data
Phase Two New Certification System	Feb 2012	Jan 2014	<ul style="list-style-type: none"> • Requirements Gathered • Interface Designed • Data Mapped & Migrated • System Programmed • Quality Assurance Testing Completed • User Acceptance Testing Completed • Documentation Completed • Training Completed • System Implemented
Phase Three New Exam System	Oct 2012	May 2016	<ul style="list-style-type: none"> • Requirements Gathered • Interface Designed • Data Mapped & Migrated • System Programmed • Quality Assurance Testing Completed • User Acceptance Testing Completed • Documentation Completed • Training Completed • System Implemented
Phase Four Reports	Sept 2013	Jan 2017	<ul style="list-style-type: none"> • Develop Canned and Ad-Hoc Reports • Perform UAT • Finalize All Documentations • Perform Training • Implement Remaining System

Task Name	Start	Finish	Deliverables/Milestone
Post Project Phase	Nov 2016	May 2017	<ul style="list-style-type: none"> • Develop Decommission Plan • Execute Decommission Plan • Finalize project documentation • Develop Lessons Learned Document • Complete PIER

4.6 Project Monitoring and Oversight

The project maintains consistent project monitoring via the project communications plan.

The project is monitored in accordance with state approved policies and documented in the State Administrative Manual (SAM) and the State Information Management Manual (SIMM) – Project Management Methodology (PMM). The project employs practices embodied in the Project Management Institute’s (PMI) Project Management Body of Knowledge (PMBOK®).

The Project Manager manages the day-to-day activities of the project. The Project Steering Committee provides leadership and guidance with a state executive perspective, focused on budget, scope, schedule and resource management.

Monitoring of the project is performed through:

- Weekly Team Lead Meetings discussing project schedule, deliverable status, resources, and any other project issues.
- Bi-weekly Project Team Meetings discussing the project schedule, deliverable status, upcoming meetings, risks, issues and any team level decisions to be made.
- Bi-weekly Project Director/Sponsor Meeting discussing the project schedule, deliverable status, risks, issues, budget and resources.
- Bi-weekly Risks & Issues Meetings discussing all existing and any new risks and issues on the project.
- Monthly Steering Committee Meetings where the Steering Committee and the representative from the California Technology Agency are informed about the project and includes discussions regarding the project schedule, deliverable status, risks, issues, budget, resources and any executive decisions to be made.
- On demand Change Control Board (CCB) Meetings & Feature Quality Check Meetings with business before features roll to QA testing.
- SharePoint lists are filled out weekly for status and percentage completed on modules and pages within modules being developed and designed.

- A small SharePoint application with workflow for change control on configuration items that document requested and accepted changes to the project scope.
- Technology Agency reports, that include Milestone attainment, issues, risks, approved and pending change requests, and actual expenditures compared to budget.
- The Technology Agency provides on-site half-time Independent Project Oversight (IPOC).

4.7 Project Quality

The project uses the following approach to minimize the risk of receiving a work product or deliverable of poor quality:

- The Project Manager, in collaboration with the Business Team and with the support of the DD&I Team, ensures that the expectations for each deliverable are well defined in advance and that any documents supporting this project are signed off by all parties.
- The Project Team reviews all major milestone deliverables produced by the DD&I Team to ensure that defined standards and methodologies are met.
- The Project Manager along with the Project Team reviews the requirements traceability matrix at various stages of the project to ensure all requirements are met.
- Walkthroughs of the systems architecture and design specifications, test plans, test scripts, test results, training plans, etc., are held at various stages of the project with all parties present.
- Technical standards are defined, implemented and checked against during weekly technical meetings and the feature business check meeting.
- Design standards are defined, implemented and checked during review and approval process.
- Accessibility compliance checks are done through QA testing and HiSoftware's Compliance Sheriff testing.
- Security compliance with SAM is assured through our ISO involvement throughout QA testing. The ISO will run a complete check with every module released and will assist in testing during UAT as well.

4.8 Change Management

Project Features

The project follows a documented Change Management Plan to define the process, procedures, and outputs for all change-related project activities. The plan identifies the parties responsible for identifying, resolving, supporting, and making project changes. The major goal of this change management strategy is to ensure changes are made using standardized methods and procedures which minimize negative impacts and maximize positive impacts to the requirements, design, development, implementation, and maintenance of the system. The Change Management process provides the capability to identify, document, manage, and resolve all project related changes. The plan is designed to:

- Minimize project risk.
- Provide documentation for all changes.
- Minimize disruption to the project due to rework.
- Measure project volatility.
- Provide open disclosure of changes.
- Communicate changes to stakeholders.
- Maximize system/application value.
- Minimize unanticipated impacts to schedule and/or budget.

The change control process provides a mechanism for the review and approval of changes in design, business requirements, additional features or removal of features, and standards of the system. This process allows the Project Management Team to jointly discuss, review, prioritize, and approve changes to requirements and design through all phases of the project from initiation through testing, implementation, and maintenance.

The change control process tracks and handles all proposed changes to the system software and hardware. All requested changes are presented to a CCB for approval. This process ensures that changes are documented and applied in a controlled manner with participation from relevant project personnel from initiation through closure. The CCB is comprised of members from both the Business Team and the DD&I Team.

Business Process

The project has taken into account the training of the business program users. The business program has identified trainers to be trained on the product. These individuals will be trained by the existing project's business staff. In preparation for this change, the majority of the business program employees are being brought into design meeting to help design and give requirements in their area of expertise. This gives the program area users prior exposure and some authority on how the application will work.

Training

The project has planned for the training of CalHR users as well as external department users. The external department users have been brought in for input on the design of the system and will be a part of UAT. There will be help documentation on the application site to assist the users outside of state service as well as those in state service.

4.9 Authorization Required

Approval of this SPR is required from CTA.

5.0 Updated Risk Management Plan

Project risks are factors that can jeopardize the successful accomplishment of project goals. Risk management is the systematic process of identifying, analyzing, tracking, mitigating, and responding to project risks.

The project risk management processes comply with CTA Project Management Methodology. The approach is based on best practices for early detection, through analysis, appropriate and swift response, as well as continuous project lifecycle monitoring.

The project also complies with the CTA's IT project framework as detailed in the Statewide Information Management Manual (SIMM 45). This framework details how project oversight will be managed on State of California IT projects.

This Risk Management Plan (RMP) minimizes the risks associated with the project. The Department's approach to risk management on the project includes:

- An RMP that adheres to the project management framework outlined in section 6.0 of the FSR.
- Identification of project issues and risks by the Project Team and Project Director.
- Development of preventive risk mitigation (or avoidance) strategies and contingency measures to avoid or minimize the impact of these issues and risks.
- Continuous monitoring of identified issues and risks through ongoing communications and reporting mechanisms throughout the life of the project.

This section discusses the:

- Risk Management Team (RMT).
- Risk Management Approach.
- Current Known Risks to the Project.

5.1 Risk Management Team

The Project Manager has overall responsibility for risk management on the project and is supported in this responsibility by a Risk Management Team as outlined below. The RMT includes the following key individuals:

- Project Manager - Has overall responsibility for the project. The Project Manager: helps identify project risks; reviews, approves, and maintains the RMP; regularly reviews the Risk Management Log (RML); and meets regularly with the Project Director. The Project Manager has primary responsibility for monitoring and

reporting on project risks, developing risk mitigation strategies and plans, and ensuring strategies and plans are implemented appropriately.

- Executive Steering Committee – Receives reports of all high probability risks and may be called upon to assist with mitigation.
- Project Director – Receives reports of all risks and may be called upon to assist with mitigation and contingency planning.
- Project Team Members – Project Team members are responsible for identifying risks and recommending risk mitigation plans. Team members have experience with existing programs, knowledge of data collection within the Department, or other relevant IT experience.

5.2 Risk Management Approach

The Project Manager, with support from the Requirements Traceability Matrix (RTM), is responsible for risk assessment on the project. This consists of identifying, analyzing, quantifying, and prioritizing project risks. Above all, the notion of early detection and intervention combined with taking prompt and corrective action is paramount to a successful risk management approach.

The Project Manager determines the probability that specific risks will occur and evaluates their potential impact. This is an ongoing process throughout the lifecycle of the project.

The six steps in risk assessment, which are discussed in more detail in the subsections below, are:

- Identify the risk.
- Analyze the risk.
- Plan for risk mitigation.
- Implement risk mitigation strategy.
- Track and control identified risks.
- Communicate and coordinate risk management.

5.3 Risk Identification

Identification of project risks is the first step in risk assessment. It is the responsibility of all members of the Project Team and consists of identifying risks as early as possible in a project. Initially, this will be based on an understanding and analysis of project requirements and challenges, in light of previous experience with similar projects. As the project progresses and more specific experience is gained with people, organizations, technologies, and the business environment associated with the system,

additional risks will be identified and the probability estimates of others may be changed. Crucial to risk identification are the input of Project Team members and other stakeholders who are encouraged to recognize and report risks as soon as possible. This occurs through formal communications such as telephone calls and emails. The Project Manager documents and evaluates risks identified by the Project Team members and stakeholders.

5.4 Risk Analysis

Once a project risk is identified, the Project Manager, in consultation with the RMT, evaluates the likelihood of the risk event occurring and the probable outcomes associated with the risk event, in order to determine its potential impact on the success of the project. The RMT may recommend assignments of risk impact, timeframe, and probability as well as recommended risk mitigation actions. The result of risk analysis is a set of confirmed project risks that have been verified, evaluated (including probability), classified, prioritized, and documented.

The five steps in risk analysis, which are discussed in more detail in the subsections below, are:

- Determine the impact of the risk.
- Determine the probability of the risk occurring.
- Determine the timeframe for responding to the risk.
- Determine the exposure to the risk.
- Determine the severity of the risk.

Determine Risk Impact

The RMT is responsible for determining the risk impact, which involves considering the consequences that the risk would have on the project if the risk were to materialize. The criteria for risk impact in the table below is a guide for this step, expressed in terms of high, medium, or low.

Table 5-1: Criteria for Risk Impact

IMPACT	CRITERIA: RISK CONSEQUENCES INCLUDE:
High	<p>Risk consequences include one or more of the following:</p> <ul style="list-style-type: none"> • Significant schedule delay. For example, delay in a critical path activity by more than 2 months or by more than 10 percent of the overall project schedule. • Significant cost increase. For example, project budget increase by more than 10 percent of the overall project costs. • Significant resources change. For example, loss of more than 20 percent of personnel, or loss of more than 10 percent of key management personnel assigned to the project. • Significant scope changes. For example, major objectives of the project are dropped or increased. • Significant political repercussions. For example, noncompliance with current legislation or state laws governing hiring. • Significant impact to the ability to meet the needs of stakeholders. For example, lack of communication, or miscommunication with exam and certification users will result in the system not being accepted.
Medium	<p>Risk consequences include one or more of the following, but do not include any consequences previously identified above under high:</p> <ul style="list-style-type: none"> • Moderate schedule delay. For example, delay in a critical path activity by more than 1 month or by 5- 10 percent of the overall project schedule. • Moderate cost increase. For example, project budget increase by 5-10 percent. • Moderate resources change. For example, loss of more than 10-20 percent of personnel, or loss of 5-10 percent of key management personnel assigned to the project. • Moderate scope changes. For example, a number of non-major objectives of the project are dropped or increased. • Moderate political repercussions. For example, moderate dissatisfaction of political parties or special interest groups. • Moderate impact to the ability to meet the needs of stakeholders. For example, lack of communication, or miscommunication with exam and certification users will results in the system not being accepted.

Low	<p>Risk consequences include one or more of the following, but do not include any consequences previously identified above under high or medium:</p> <ul style="list-style-type: none"> • Minor schedule delay. For example, delay in a critical path activity by less than 2 weeks, or delay in a noncritical path activity by less than 1 month. • Minor cost increase. For example, project budget increase by less than 5 percent. • Minor resources change. For example, loss of less than 10 percent of personnel, or loss of less than 5 percent of key management personnel assigned to the project. • Minor scope changes. For example, 1 or 2 minor objectives of the project are dropped or increased. • Minor political repercussions. For example, minor dissatisfaction of political parties, or special interest groups. • Slight impact to the ability to meet the needs of stakeholders. For example, lack of communication, or miscommunication with exam and cert users will results in the system not being accepted.
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Determine Risk Probability

The RMT is responsible for determining the risk probability, which involves considering the likelihood of the occurrence of the risk. The criteria for risk probability in the table below is a guide for this step, expressed in terms of high, medium, or low.

Table 5-2: Criteria for Risk Probability

Probability	Criteria: The likelihood of the risk event is:
High	Certain or very likely to occur.
Medium	Equally likely to occur as to not occur (50/50 chance).
Low	Not likely, probably will not occur.

Determine Risk Timeframe

The RMT is responsible for assigning the timeframe within which action must be taken to successfully mitigate the risk. The criteria in the table below should be used as an aid for assigning the risk mitigation timeframe, expressed in terms of long, medium, or short.

Table 5-3: Criteria for Risk Mitigation Timeframe

Timeframe	Criteria: Action must be taken within ...
Long	Greater than six months.
Medium	Three to six months.
Short	Less than three months.

Determine Risk Exposure

The RMT is responsible for determining the risk exposure, which is derived from the impact and probability of the risk. This information is used in conjunction with timeframe to prioritize risks for mitigation and escalation. Risk exposure is determined for each project risk and is done so by finding the intersection of that risk’s impact and probability in the matrix presented in the table below (the bold lines outline the exposure determinations. For example, a risk with a medium impact and a high probability results in a high in terms of risk exposure).

Table 5-4: Risk Exposure Matrix

		Probability		
		HIGH	MEDIUM	LOW
Impact	HIGH	HIGH	HIGH	MEDIUM
	MEDIUM	HIGH	MEDIUM	LOW
	LOW	MEDIUM	LOW	LOW

Determine Risk Severity

RMT is responsible for determining the risk severity, which is a derivative of risk exposure (from table 5-4 above) and risk mitigation timeframe (from table 7-3 above). Risk severity is used to determine the relative priority of the identified risks in the planning step below. Risk severity is determined for each risk from the intersection of that risk’s exposure and timeframe in the matrix below (the bold lines outline the severity determinations. For example, a risk with a short timeframe and low exposure results in a medium in terms of risk severity).

Table 5-5: Risk Severity Matrix

		Exposure		
		HIGH	MEDIUM	LOW
Timeframe	SHORT	HIGH	HIGH	MEDIUM
	MEDIUM	HIGH	MEDIUM	LOW
	LONG	MEDIUM	LOW	LOW

5.4.1 Risk Planning

An integral part of planning for risks on a project is taking ownership of risk mitigation. Risk planning involves prioritizing risks for the Project Team’s attention, assigning risk ownership, developing risk action plans, developing contingency plans, reviewing and approving risk mitigation and contingency plans, and recording risk information changes in the RML.

The six steps in risk planning, which are discussed in more detail in the following subsections, are:

- Determine the impact of the risk.
- Assign an owner to the risk.
- Develop an action plan for the risk.
- Review and communicate the risk status with team and management.
- Approve an action plan for risk mitigation.
- Maintain the RML.

Determine Risk Priority

The RMT is responsible for determining and assigning the priority of each risk based on the severity of the risk as determined earlier in this section of the FSR. Risk severity involves a determination of the importance of the risk based upon:

- The potential impact of the risk on the project.
- The probability of occurrence.
- The timeframe for mitigation actions.

Project risks are grouped and ranked in risk severity order. That is, risks with high severity are ranked in relative order of importance to the project, then medium severity risks and finally low severity risks. The priority (or ranking) allows the Project Team to focus efforts on those risks that have the greatest potential impact, highest probability, and/or shortest timeframe for mitigation first.

Assign Risk Owner

The Project Manager is responsible for identifying an owner for each risk. The Risk Owner is a Project Team member who has primary responsibility for developing the risk response strategy and action plan. While a Risk Owner may have several risks that they own, each risk should have only one owner.

Develop Risk Action Plan

The Risk Owner, in cooperation with the Project Manager and other Project Team members, is responsible for developing the recommended action plan for a given risk. The Risk Action Plan consists of a risk response strategy, action items, and triggers. In most cases, it also includes a contingency plan should the perceived risk become an actual risk.

Possible strategies for responding to a risk include the following:

- Observe – No action is taken at this time. Continue to monitor the identified risk area for changes.
- Research – More information is needed to define the risk and develop a risk strategy.
- Mitigate – Develop and implement a plan to avoid, reduce, or eliminate the impact of the risk or the probability of the risk occurring.
- Accept – Accept the consequences if the risk were to actually occur.

The Project Team seeks to develop responsive actions that are designed to mitigate (avoid, eliminate, or reduce) the risk, rather than recommend acceptance of a risk, for at least high and medium priority risks. There may be circumstances when it is acceptable to just watch or research medium and low risks.

The action items outlined in the action plan are activities to be performed before the risk occurs. Each action item is assigned to a member of the Project Team with a due date.

Trigger points/events are also a key part of any action plan. A trigger is an indicator that a risk has occurred or is about to occur (e.g., increased probability or shortened timeframe). Triggers are warning signs or conditions that are defined during the planning step and tracked throughout the project so that the appropriate action steps or contingency plans are put into action when necessary.

For high severity risks (those with major impact to the project's objectives, schedule, or cost), the Risk Action Plan also includes a contingency plan to be executed in the event mitigation fails or an accepted risk occurs. The contingency plan defines actions to be taken when the consequence of the risk is imminent or has occurred.

Risk Review with Team and Update Project Director

The Project Director and Project Manager are responsible for reviewing the risk with the RMT and the Risk Owner to validate all of the risk information identified at the time of the review, including the risk impact, risk probability, risk timeframe, and recommended action plan. The result of this step is to validate the risk as a confirmed risk and to confirm or modify the recommended action plan for input to approve Risk Action Plans. The Project Director and the Project Manager are responsible for informing the Executive Steering Committee of confirmed high risks and their status on an ongoing basis. Extracts from the RML may be used for this purpose.

The primary forum for reviewing risks is the weekly Project Team meeting where the Risk Owner leads the discussion of the project related issues and risks. Additional meetings are conducted as needed.

Approve Risk Action Plans

The Project Manager and the Risk Owner approve the Risk Action Plan for each defined risk.

Update RML

The Project Manager is responsible for updating RML information for confirmed risks based on risk planning results. Perceived risks that are not confirmed as valid project risks during this step are archived and no longer tracked during the project.

5.4.2 Implement Risk Mitigation

The purpose of risk mitigation implementation is to actively mitigate risks on the project. Implementation involves the execution of Risk Action Plans and recording risk information changes in the RML.

Execute Action Plans

The Risk Owner is primarily responsible for the execution of the Risk Action Plan according to the timeline (due dates for action items) developed during the planning step. Ultimately, however, the Project Manager is responsible for ensuring that this activity is completed and done so within the time period allotted for this activity.

Other Project Team members may be responsible for performing some of the action items, doing so in coordination with the Risk Owner and Project Manager.

Update RML

The Project Manager is responsible for updating the status of risk action items in the RML based on information provided by the Risk Owner and/or the Project Team Member executing the action plan for a specific project risk. During the track/control steps, the Project Team reviews these updates to the RML.

For high severity project risks, the Risk Owner must update the RML at least weekly, or preferably as soon as action plan activities are completed, so that the Project Director and the Project Manager have up-to-date status information available. Updates to the status of action items for medium and low severity project risks must be performed prior to schedule project status meetings. Updates include the following:

- Status of action items.
- Notes on significant events related to this risk.
- Person executing the action item.
- Date action item was executed.

The primary forum for reviewing risks is the weekly Project Team meeting where the Risk Owner will lead the discussion of the project related issues and risks. Additional meetings are conducted as needed.

5.4.3 Risk Tracking and Control

Risk tracking and control ensures that all steps of the risk management process are being followed as identified in the RMP and, as a result, project risks are being mitigated. Risk tracking and control involves the oversight and tracking of project risk mitigation execution, re-assessment of individual project risks, reporting project risk status, and recording project risk information changes in the RML, as risks evolve during the lifecycle of the project.

The Project Manager tracks and controls project risks using the RML, which includes:

- Assigning a unique number to track the risk.
- Creating a title to identify the risk.
- Describing the risk (also known as the risk statement).
- Categorizing the impact of the risk (high/medium/low).
- Determining the probability of the risk occurring (high/medium/low).
- Estimating a timeframe for responding to the risk (long/medium/short).
- Determining the exposure of the risk (high/medium/low).
- Determining the severity of the risk (high/medium/low).
- Prioritizing the risk.
- Logging the origination date the risk was first identified.
- Documenting the contact (person/organization) that initially identified the risk.
- Assigning owner of risk.
- Logging assigned date.
- Assigning a risk trigger date.
- Developing a risk response strategy.
- Developing a RMP.
- Describing the current status of risk.

The RML is a key tool in tracking, managing, and reporting on project risks. The RML identifies risks in the following categories:

- Resources.

- Schedule.
- Scope.
- Stakeholders.
- System.
- External environment.
- Organization.

Risk Tracking

The Project Manager is responsible for updating the status of risk action items in the RML based on information provided by the Risk Owner and/or the Project Team Member executing the action plan for a specific project risk. During the track/control steps, the Project Team reviews these updates to the RML.

At the present time, one specific tool that is in keeping with risk tracking and control as discussed here is the development of a RML that contains all of the information discussed in this section of the RMP.

Reassess Risks

The Project Manager reassesses the risk information in the RML to determine if any changes are needed to risk priority or timeframe based upon current project events or changes to other risks. At a minimum, reassessment of risk information in the RML is performed on a monthly basis. However, reassessment may be performed more frequently as needed.

Report Risk Status

The Project Team members report project risk status at the recurring project status meetings. Project risk status reporting focuses primarily on high and medium priority risks. The Risk Owner may recommend changes in the schedule or assignment of action items and risk probability, impact, or timeframe for consideration by the Project Team. Information presented at the project status meetings includes the status of risk mitigation action plans, changes in risk priority, as well as any new project risks identified.

Maintain RML

The Project Manager maintains the project risk information in the RML, by updating risk impact, probability, timeframe, exposure, severity, and priority. The Project Manager also updates the status of risk action plan tasks. Newly identified project risks are added to the RML and updated or archived as needed.

5.4.4 Risk Communication and Coordination

Project Team members must communicate with each other to coordinate risk management activities within the context of the overall Project Management Plan. The escalation of risks to the Executive Steering Committee and external oversight agencies is also included in this communication and coordination activity.

Risk Reporting and Escalation

Those responsible for project risk reporting include Project Team members and the Project Manager. Internal and external reporting and escalation of project risks and risk mitigation status is performed as indicated below:

- All verified high risks are reported to the Executive Steering Committee,
- All verified IT risks are reported to the Project Director and the Chief Information Officer, and
- Any verified high or medium risks that include security concerns are reported to the Information Security Officer of the department.

Approve Risk Resolution

When a project risk is no longer a threat to the project as a result of successful risk mitigation, avoidance or changes in the project environment, it is considered resolved. The Project Director approves resolution of all high severity project risks and directs the Project Manager to move them to the archived RML. Resolution of any medium and low severity project risks is approved by the Project Manager and they are also moved to the archived RML.

Update Project Risk Database

The Project Manager updates the RML to indicate the status of all project risk action items and also indicates when the associated project risk has been resolved.

5.5 Risk Register

The following table below contains the project's current risks and assessments as of the writing of this document.

Table 5-6: Risk Register

ID	Risk	Status	Impact	Probability	Timeframe	Mitigation Plan	Contingency Plan	Resolution
1	CalHR Dedicated Resources	Active	High	Medium	< 3 Months	Re-alignment of CalHR business objectives and/or filling existing vacancies and assign them to the project.	1. Acquire budget needed and look for outside resources. 2. Extend schedule	
3	Schedule Rebaseline	Closed	High	Medium	> 12 Months		If project is over 10% on the schedule, an SPR will need to be done. There is a workload on staff that will impact other project work.	The project will be doing an SPR.
4	Losing Resources	Active	High	Medium	> 12 Months	CalHR will need to fill vacancies in a timely manner.	Extend schedule	
6	State Fiscal Budget	Active	High	Low	< 3 Months	CalHR will need to see how the State Fiscal Budget will impact the project team and mitigate accordingly.	Extend schedule and finish with less resources.	
7	Possible furloughs	Closed	High	High	< 6 months	CalHR will need to see how one day furlough impacts project schedule and mitigate accordingly.		Was assured of no further furloughs

8	Possible loss of Students, RAs	Closed	High	High	< 6 months	ECOS has one student Assistant working on Training material and misc tasks. ECOS had one RA whom retired.		Lost them, moved to Issue.
10	Funding for Consultants	Active	High	Medium	< 12 Months	Moving software environment saving to consulting resources.	Redirect existing CalHR resources.	Working with Howard and Pam on this. We met on 10/12 about this. ITD does not have the funds in their budget for this year. We will meet again to discuss this issue.
11	Budget Cut due to Failure of Tax Initiative	Closed	Medium	Medium	> 12 Months	Talk to budgets to have money set aside in case.	1. Acquire budget needed and look for outside resources. 2. Extend schedule	Tax measure passed.
13	CTA - Might have to put it in an SPR now, before knowing how far behind we really are.	Closed	Medium	Medium	< 3 Months	Try to hold off till we know that we are truly over the 10% mark on either in schedule or budget.	All other work is on hold and Chad, Gina, Chris, & Pam will work to get the SPR done as soon as possible.	The project is doing SPR.

16	Training new employees could affect schedule	Active	Low	High	Unknown		Have training material ready for new staff	
18	Legislative Law Changes	Active	Medium	Medium	< 12 Months	NA	Make changes to application as needed. Allocated the appropriate resources. Update Schedule	
19	Waterfall SDLC Methodology - Design vs. Implementation Issues	Active	Medium	High	> 12 Months	Implement more frequent checks backs with business during development.	Continue down path, do frequent check backs with business before QA to ensure the system is on the correct track.	

6.0 Introduction

The purpose of this section is to document the cost and resource analysis conducted for the SPR for the ECOS Project. This information provides a record of the research and estimation of the costs of the following:

- The Current Systems.
- The Proposed Solution.
- The Other Alternative Solutions.

As described in Section 3, the project schedule and cost was under estimated and the original FSR's Economic Analysis Worksheet (EAW) it does not reflect what CalHR perceives to be actual costs. The result is a schedule extended by 22 months and a substantial increase in funding for consulting assistance, a modified EAW for existing cost and proposed solution costs.

6.1 Overview of Changes

Schedule

Phase II, III, & IV schedules were under estimated. They have since been recalculated using the sample calculation in Tables 3.4, 3.5 and 3.6 in Section 3. Additional time has

been included to re-review the Phase II designs that were originally rushed to approval and to document the missing business rules. The additional technical standards and foundations have now been established since CalHR took over the project and will speed up the project's progress going forward.

Budget

The project's budget in the original FSR was under estimated for consulting assistance. If you compare the original EAW, you will note the consulting funding ran out before the project was through Phase III. The new budget accounts for consulting services to be on the project through Phase III, but not during Phase IV or the Post Phase. The business analyst leaves the project once the design of Phase III is complete. One developer leaves the project at the end of coding for Phase III. The final consultant leaves the project at the end of User Acceptance Testing (UAT) for Phase III to assist with testing result fixes.

The project's budget in the original FSR was under estimated for OTECH costs. The original budget was \$410,000 per year and the new budget is \$513,000 per year. The EAW will show the existing budget of \$335,000 per year that CalHR is currently paying and an additional \$178,000 per year need for additional hardware, virtual machines and SQL licensing. The FSR only budgeted for staging and production environments. It did not take into account the need for a QA, UAT, or Training environment or the upgraded Enterprise Microsoft SQL Server License. To save on the additional costs, the project will utilize CalHR's internal existing systems to house these environments.

Resources

As mentioned under the budget section above, consulting assistance is needed throughout the majority of the project. Two consultants are needed for programming the new system. The third consultant is a business analyst who assists in requirements gathering, designing, mocking up designed screens and documentation. The project was originally unable to find qualified programmers for the technologies being used on the project. The project is now fully staffed with programmers that have the extensive knowledge needed to develop the system in the given technology. We will also need additional help with administration duties, QA testing, and database data mapping and documentation. To assist in these areas the project has added two temporary help positions with strong administrative skills and an extensive amount of knowledge of the underlying examination and certification systems. The individuals are working at the full amount allowed for temporary help (960 hours a year). Their hours will be spread out over the life of the project, working 16-24 hours a week.

6.2 Existing System Cost Worksheet

CalHR found that the original FSR had some mistakes on it for the existing system costs. We have updated it in the figure below to reflect what the project now believes to

be more accurate. This will show a decrease in the cost of existing system. The original existing system costs included the following every fiscal year for 3.5 PYs:

Agency Facilities	\$136,408
Other	\$238,207

After discussing these costs with CalHR's budget office, we believe that this amount was incorrect. The CalHR budget office calculates the Agency Facilities and Other as follows:

Agency Facilities	\$4500 /PY
Other	\$9000 /PY

This means that the existing costs of the system at 3.5 PYs should have been:

Agency Facilities	\$15,750
Other	\$31,500

6.3 Proposed Solution Cost Worksheet

The proposed solution is the most advantageous for CalHR, Department personnel shop users and those individuals seeking employment with the state. CalHR will not be tied down to a 3rd party vendor for maintenance with a proprietary system. Building an in-house solution gives CalHR the freedom to adjust, tweak, and add features as it sees fit. The existing state staff will have intimate knowledge of the system and will have the skills necessary to maintain the system. This also improves response time for maintenance and additional needs. The majority of maintenance on the 7 systems this project will replace will go away.

One-Time IT Project Costs

Project has properly resourced the project with the following state staff.

PY	2012/2013	PY	2013/2014	PY	2014/2015	PY	2015/2016	PY	2016/2017
0.1	Project Director								
0.1	Project Sponsor								
1	Project Manager								

1	Technical Lead	1	Technical Lead	1	Technical Lead	1	Technical Lead	0.5	Technical Lead
1	Business Lead	0.5	Business Lead	0.5	Business Lead	0.5	Business Lead	0.25	Business Lead
2	Developers	3	Developers	3	Developers	3	Developers	2	Developers
0.25	QA	1	QA	1	QA	1	QA	1	QA
2	Business Analysts	2	Business Analysts	2	Business Analysts	2	Business Analysts	0.25	Business Analysts
0.2	Temp Help	1	Temp Help	1	Temp Help	1	Temp Help	0.5	Temp Help
7.65		9.7		9.7		9.7		5.7	

Consulting services are reflected in the 1.8 million dollars needed under Other Contract Services. This consists of the following needs:

PY	2012/13	PY	2013/2014	PY	2014/2015	PY	2015/2016
1	Business Analyst	.5	Business Analyst	0	Business Analyst	0	Business Analyst
.5	Developer	2	Developer	2	Developer	1.1	Developer

The costs for fiscal years 2011/12 and 2012/2013 have already been accounted for. There will be an additional cost of \$1,300,000 to continue with consulting help through the fiscal year of 2015/16.

The business analyst will be on the project throughout the design of Phase III and will not assist in Phase IV or the Post Phase. One developer will be on the project through the coding of Phase III and the other will assist through UAT testing of Phase III. Both developers are off the project for Phase IV and the Post Phase. The project will continue with the existing state staff on the project. There is no need for additional consultant assistance at this point. There will be no need for knowledge transfer as the team mainly consists of state staff and state staff are in key positions on the project including technical lead, business lead, and project manager.

The temp help is split between 2 individuals working half time. They will work a maximum of 960 hours a year. They will provide expertise in system knowledge, QA testing and administrative duties.

6.4 Proposed Alternative Solutions

Alternative 1 - Roll Certification back to legacy system, then continue with in-house custom solution

This solution includes a combination of both the certification system roll back to the legacy mainframe system and continue with the in-house custom solution. This solution pushes the final delivery date back by another 2 years with a final delivery date in 2018. This solution gets CalHR off the JobAps System and back onto the legacy system, and then continues with the in-house solution.

Pros:

- No reliance on 3rd party proprietary systems
- Existing IT staff will have the ability to customize and maintain
- State staff are building the system and will be knowledgeable on the system
- Rapid response for maintenance and improvements
- Seven disparate systems are consolidated, saving time and money
- Save money by not paying for JobAps system

Cons:

- Costs more comparable to just continuing building the in-house custom solution
- The time frame to bring a new system on-line would be significantly longer
- All development work stops and current momentum is disrupted
- Possible loss of knowledgeable resources
- Time spent retraining

Alternative 2 – Go Back to Prior Systems (Legacy)

This solution will roll back the certification system to the legacy certification systems that mainly reside on the mainframe.

Pros:

- Lower cost to the General Fund
- 9-12 months to roll back to legacy as compared to 4 years to complete the entire ECOS Project
- The turn-around time is considered slow and the functionality is limited, but the system is still functioning.

Cons:

- Provides no relief to the inefficient selection system currently in place.
- Not a viable alternative due to the age of the current applications.
- It requires State government to operate with outdated technology costing the state money
- Programmers with skills to support the current systems are becoming more difficult to find, and the current systems are considered to have a limited life.
- The current systems are already built out to capacity and there is no ability to expand. It is just a matter of time before the systems fail.

Alternative 1 & 2

If either of the above alternatives are in place, the seven disparate systems that are to be replaced by the new proposed system will stay as is, which have several maintenance issues and will require additional hours to maintain. They will have to be rewritten at some point in the near future.

There are some processes that will continue to be completed by hand and take several days to complete. One in particular is the CEA exam. The analysts will have to create, give and generate certification lists by hand. This process can take upwards of one analyst one month of work to complete. The exam analysts are constantly making updates to existing exams for the various departments that cannot be accomplished in the current system, taking about 20-24 hours a day between 3 to 4 individuals.

CalHR, departments, and applicants will continue to print off applications, notices, and burn through several thousands of dollars in postage with the continuation of the JobAps system.

6.5 Economic Analysis Summary

This is automatically calculated to compare the estimated costs of the proposed solution to the other considered alternatives (and the existing system).

To help further explain some of the numbers throughout the EAW:

On proposed Alternatives 1 and 2, \$65,000 is included One-Time IT Project Costs – Other to cover the costs of an independent project oversight consultant provided by California Technology Agency. The money will be used to reimburse CTA, through an interagency agreement, to fund a half time Data Processing Manager II position.

The current systems are being housed at OTECH and the new system will also be housed at OTECH. The project team has come up with a plan to repurpose the existing systems for the ECOS project when it goes live. There is a continuing cost of \$335,000 for OTECH that is reflected in Continuing Existing Costs – Other. An additional \$178,000, under Continuing IT Project Costs, is needed for 2 additional servers, 2 virtual machines, and an upgrade to Enterprise SQL Server License.

There is an existing cost for maintenance of the JobAps system of \$33,000 a month or \$396,000 a year under Continuing Existing Costs - Other from 2011/12 through part of 2013/14. This cost will go away once Phase II – Certifications is implemented as of January 2014.

6.6 Project Funding Plan

The CalHR submitted a spring finance letter to the Department of Finance on February 20, 2013, to request additional funding for consulting services and other costs through the remainder of the project. The proposed finance letter is asking for funding from General Funds (65%), Special Funds (3%), and Reimbursements (32%). The total amount is 1.8 million over 4 fiscal years. The first year need is \$821,000, the second year need is \$626,000, the third year need is \$376,000, the fourth year need is \$91,000 and going forward the project is giving back money each fiscal year. This is due to not needing the maintenance money for the existing JobAps System.

7.0 Attachments

Attachment A: Economic Analysis Worksheet (EAW)

Attachment B: 2013-14 Finance Letter ECOS Funding Spreadsheet

Attachment A: Economic Analysis Worksheet (EAW)

Existing Cost Worksheet A

SIMM 20C30C, Rev. 08/2010

Department: California Department of Human Resources

Project: Examination & Certification Online System (ECOS)

EXISTING SYSTEM/BASELINE COST WORKSHEET

All costs to be shown in whole (unrounded) dollars.

Date Prepared: 04/2013

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		SUBTOTAL	
	PYs	Amts	PYs	Amts										
Continuing Information														
Technology Costs														
Staff (salaries & benefits)	3.5	367,726	3.5	367,726	3.5	386,112	3.5	386,112	3.5	386,112	3.5	386,112	21.0	2,279,901
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		291,667		391,663		399,996		399,996		399,996		399,996		2,283,314
Contract Services		0		0		0		0		0		0		0
Data Center Services		335,000		335,000		335,000		335,000		335,000		335,000		2,010,000
Agency Facilities		15,750		15,750		15,750		15,750		15,750		15,750		94,500
Other		31,500		31,500		31,500		31,500		31,500		31,500		189,000
Total IT Costs	3.5	1,041,643	3.5	1,141,639	3.5	1,168,358	3.5	1,168,358	3.5	1,168,358	3.5	1,168,358	21.0	6,856,715
Continuing Program Costs:														
Staff	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	90.0	7,608,000
Other		245,000		245,000		245,000		245,000		245,000		245,000		1,470,000
Total Program Costs	15.0	1,513,000	90.0	9,078,000										
TOTAL EXISTING SYSTEM COSTS	18.5	2,554,643	18.5	2,654,639	18.5	2,681,358	18.5	2,681,358	18.5	2,681,358	18.5	2,681,358	111.0	15,934,715

Existing Cost Worksheet B

SIMM 20C30C, Rev. 08/2010

Department: California Department of Human Resources

Project: Examination & Certification Online System (ECOS)

EXISTING SYSTEM/BASELINE COST WORKSHEET

All costs to be shown in whole (unrounded) dollars.

Date Prepared: 04/2013

	Subtotal		FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
Continuing Information														
Technology Costs														
Staff (salaries & benefits)	21.0	2,279,901	3.5	386,112	0.0	0	0.0	0	0.0	0	0.0	0	24.5	2,666,014
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		2,283,314		399,996		0		0		0		0		2,683,310
Contract Services		0		0		0		0		0		0		0
Data Center Services		2,010,000		336,000		0		0		0		0		2,346,000
Agency Facilities		94,500		15,750		0		0		0		0		110,250
Other		189,000		31,500		0		0		0		0		220,500
Total IT Costs	21.0	6,856,715	3.5	1,169,358	0.0	0	0.0	0	0.0	0	0.0	0	24.5	8,026,074
Continuing Program Costs:														
Staff	90.0	7,608,000	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	90.0	7,608,000
Other		1,470,000		0		0		0		0		0		1,470,000
Total Program Costs	90.0	9,078,000	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	90.0	9,078,000
TOTAL EXISTING SYSTEM COSTS	111.0	15,934,715	3.5	1,169,358	0.0	0	0.0	0	0.0	0	0.0	0	114.5	17,104,074

Proposed Alternative
A

California Department of Human Resources
Examination & Certification Online System (ECOS) Project

SIMM 20C30C, Rev. 08/2010

D ALTERNATIVE:

In-House Custom Built Exam & Cert Online System

Date Prepared: 04/2013

Department: California Department of Human Resources
Project: Examination & Certification Online System (ECOS)

All Costs Should be shown in whole (unrounded) dollars.

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		SUBTOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs														
Staff (Salaries & Benefits)	6.0	472,262	7.5	733,022	9.7	912,389	9.7	912,389	9.7	912,389	5.7	584,846	48.3	4,527,297
Hardware Purchase		0		0		0		0		0		0		0
Software Purchase/License		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services														
Software Customization		0		0		0		0		0		0		0
Project Management		0		0		0		0		0		0		0
Project Oversight		0		0		0		0		0		0		0
IV&V Services		0		0		0		0		0		0		0
Other Contract Services		39,185		449,990		550,000		500,000		250,000		0		1,789,175
TOTAL Contract Services		39,185		449,990		550,000		500,000		250,000		0		1,789,175
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		0		0	0.0	65,000	0.0	65,000	0.0	65,000	0.0	65,000		260,000
Total One-time IT Costs	6.0	511,447	7.5	1,183,012	9.7	1,527,389	9.7	1,477,389	9.7	1,227,389	5.7	649,846	48.3	6,576,472
Continuing IT Project Costs														
Staff (Salaries & Benefits)	0.0	0	0.0	0	0.5	59,858	1.0	119,716	1.0	119,716	1.8	199,534	4.3	498,824
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Data Center Services		0		0		257,500		513,000		513,000		513,000		1,796,500
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total Continuing IT Costs	0.0	0	0.0	0	0.5	317,358	1.0	632,716	1.0	632,716	1.8	712,534	4.3	2,295,324
Total Project Costs	6.0	511,447	7.5	1,183,012	10.2	1,844,747	10.7	2,110,105	10.7	1,860,105	7.5	1,362,380	52.6	8,871,796
Continuing Existing Costs														
Information Technology Staff	3.5	367,726	3.5	367,726	3.0	307,868	2.5	248,010	2.5	248,010	1.7	168,192	16.7	1,707,532
Other IT Costs		627,669		727,663		400,831		0		0		0		1,756,163
Total Continuing Existing IT Costs	3.5	995,395	3.5	1,095,389	3.0	708,699	2.5	248,010	2.5	248,010	1.7	168,192	16.7	3,463,695
Program Staff	0.0	0	0.0	0	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	60.0	5,072,000
Other Program Costs		0		0		245,000		245,000		245,000		245,000		980,000
Total Continuing Existing Program Costs	0.0	0	0.0	0	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	60.0	6,052,000
Total Continuing Existing Costs	3.5	995,395	3.5	1,095,389	18.0	2,221,699	17.5	1,761,010	17.5	1,761,010	16.7	1,681,192	76.7	9,515,695
TOTAL ALTERNATIVE COSTS	9.5	1,506,842	11.0	2,278,401	28.2	4,066,446	28.2	3,871,115	28.2	3,621,115	24.2	3,043,572	129.3	18,387,491
INCREASED REVENUES		0		0		0		0		0		0		0

Proposed Alternative

B

Project: Examination & Certification Online System (ECOS)

	Subtotal		FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY 0		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs														
Staff (Salaries & Benefits)	48.3	4,527,297	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	48.3	4,527,297
Hardware Purchase		0		0		0		0		0		0		0
Software Purchase/License		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Software Customization		0		0		0		0		0		0		0
Project Management		0		0		0		0		0		0		0
Project Oversight		0		0		0		0		0		0		0
IV&V Services		0		0		0		0		0		0		0
Other Contract Services		1,789,175		0		0		0		0		0		1,789,175
TOTAL Contract Services		1,789,175		0		0		0		0		0		1,789,175
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		260,000		0		0		0		0		0		260,000
Total One-time IT Costs	48.3	6,576,472	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	48.3	6,576,472
Continuing IT Project Costs														
Staff (Salaries & Benefits)	4.3	498,824	5.5	561,414	0.0	0	0.0	0	0.0	0	0.0	0	9.8	1,060,238
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Data Center Services		1,796,500		513,000		0		0		0		0		2,309,500
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total Continuing IT Costs	4.3	2,295,324	5.5	1,074,414	0.0	0	0.0	0	0.0	0	0.0	0	9.8	3,369,738
Total Project Costs	52.6	8,871,796	5.5	1,074,414	0.0	0	0.0	0	0.0	0	0.0	0	58.1	9,946,210
Continuing Existing Costs														
Information Technology Staff	16.7	1,707,532	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	16.7	1,707,532
Other IT Costs		1,756,163		0		0		0		0		0		1,756,163
Total Continuing Existing IT Costs	16.7	3,463,695	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	16.7	3,463,695
Program Staff	60.0	5,072,000	15.0	1,268,000	0.0	0	0.0	0	0.0	0	0.0	0	75.0	6,340,000
Other Program Costs		980,000		245,000		0		0		0		0		1,225,000
Total Continuing Existing Program Costs	60.0	6,052,000	15.0	1,513,000	0.0	0	0.0	0	0.0	0	0.0	0	75.0	7,565,000
Total Continuing Existing Costs	76.7	9,515,695	15.0	1,513,000	0.0	0	0.0	0	0.0	0	0.0	0	91.7	11,028,695
TOTAL ALTERNATIVE COSTS	129.3	18,387,491	20.5	2,587,414	0.0	0	0.0	0	0.0	0	0.0	0	149.8	20,974,905
INCREASED REVENUES		0		0		0		0		0		0		0

California Department of Human Resources
Examination & Certification Online System (ECOS) Project

SIMM 20C30C, Rev. 08/2010

ALTERNATIVE #1: Roll Cert back to legacy, continue with in-house custom so

Date Prepared: 04/2013

Department: California Department of Human Resources

All Costs Should be shown in whole (unrounded) dollars.

Project: Examination & Certification Online System (ECOS)

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		SUBTOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs														
Staff (Salaries & Benefits)	6.0	472,262	7.5	733,022	4.1	350,000	6.0	472,262	9.7	912,389	9.7	912,389	43.0	3,852,324
Hardware Purchase		0		0		0		0		0		0		0
Software Purchase/License		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services														
Software Customization		0		0		0		0		0		0		0
Project Management		0		0		0		0		0		0		0
Project Oversight		0		0		0		0		0		0		0
IV&V Services		0		0		0		0		0		0		0
Other Contract Services		39,185		449,990		0		0		550,000		500,000		1,539,175
TOTAL Contract Services		39,185		449,990		0		0		550,000		500,000		1,539,175
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0	0.0	65,000	0.0	65,000		130,000
Total One-time IT Costs	6.0	511,447	7.5	1,183,012	4.1	350,000	6.0	472,262	9.7	1,527,389	9.7	1,477,389	43.0	5,521,499
Continuing IT Project Costs														
Staff (Salaries & Benefits)	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Data Center Services		0		0		0		0		90,000		178,000		268,000
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total Continuing IT Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	90,000	0.0	178,000	0.0	268,000
Total Project Costs	6.0	511,447	7.5	1,183,012	4.1	350,000	6.0	472,262	9.7	1,617,389	9.7	1,655,389	43.0	5,789,499
Continuing Existing Costs														
Information Technology Staff	3.5	367,726	3.5	367,726	3.5	367,726	3.5	367,726	3.5	367,726	3.5	367,726	21.0	2,206,356
Other IT Costs		627,669		727,663		727,663		727,663		568,331		335,000		3,713,989
Total Continuing Existing IT Costs	3.5	995,395	3.5	1,095,389	3.5	1,095,389	3.5	1,095,389	3.5	936,057	3.5	702,726	21.0	5,920,345
Program Staff	0.0	0	0.0	0	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	60.0	5,072,000
Other Program Costs		0		0		245,000		245,000		245,000		245,000		980,000
Total Continuing Existing Program Costs	0.0	0	0.0	0	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	60.0	6,052,000
Total Continuing Existing Costs	3.5	995,395	3.5	1,095,389	18.5	2,608,389	18.5	2,608,389	18.5	2,449,057	18.5	2,215,726	81.0	11,972,345
TOTAL ALTERNATIVE COSTS	9.5	1,506,842	11.0	2,278,401	22.6	2,958,389	24.5	3,080,651	28.2	4,066,446	28.2	3,871,115	124.0	17,761,844
INCREASED REVENUES		0		0		0		0		0		0		0

California Department of Human Resources
Examination & Certification Online System (ECOS) Project

Alternative 1 Worksheet B

Date Prepared: 04/2013

Department: California Department of Human Resources
Project: Examination & Certification Online System (ECOS)

All Costs Should be shown in whole (unrounded) dollars.

	SUBTOTAL		FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY 0		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs														
Staff (Salaries & Benefits)	43.0	3,852,324	9.7	912,389	5.7	584,846	0.0	0	0.0	0	0.0	0	58.4	5,349,559
Hardware Purchase		0		0		0		0		0		0		0
Software Purchase/License		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services														
Software Customization		0		0		0		0		0		0		0
Project Management		0		0		0		0		0		0		0
Project Oversight		0		0		0		0		0		0		0
IV&V Services		0		0		0		0		0		0		0
Other Contract Services		1,539,175		250,000		0		0		0		0		1,789,175
TOTAL Contract Services		1,539,175		250,000		0		0		0		0		1,789,175
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		130,000	0.0	65,000	0.0	65,000		0		0		0		260,000
Total One-time IT Costs	43.0	5,521,499	9.7	1,227,389	5.7	649,846	0.0	0	0.0	0	0.0	0	58.4	7,398,734
Continuing IT Project Costs														
Staff (Salaries & Benefits)	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Data Center Services		268,000		178,000		178,000		178,000		0		0		802,000
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total Continuing IT Costs	0.0	268,000	0.0	178,000	0.0	178,000	0.0	178,000	0.0	0	0.0	0	0.0	802,000
Total Project Costs	43.0	5,789,499	9.7	1,405,389	5.7	827,846	0.0	178,000	0.0	0	0.0	0	58.4	8,200,734
Continuing Existing Costs														
Information Technology Staff	21.0	2,206,356	3.5	367,726	3.5	367,726	5.5	561,413	0.0	0	0.0	0	33.5	3,503,221
Other IT Costs		3,713,989		335,000		335,000		335,000		0		0		4,718,989
Total Continuing Existing IT Costs	21.0	5,920,345	3.5	702,726	3.5	702,726	5.5	896,413	0.0	0	0.0	0	33.5	8,222,210
Program Staff	60.0	5,072,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	0.0	0	0.0	0	105.0	8,876,000
Other Program Costs		980,000		245,000		245,000		245,000		0		0		1,715,000
Total Continuing Existing Program Costs	60.0	6,052,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	0.0	0	0.0	0	105.0	10,591,000
Total Continuing Existing Costs	81.0	11,972,345	18.5	2,215,726	18.5	2,215,726	20.5	2,409,413	0.0	0	0.0	0	138.5	18,813,210
TOTAL ALTERNATIVE COSTS	124.0	17,761,844	28.2	3,621,115	24.2	3,043,572	20.5	2,587,413	0.0	0	0.0	0	196.9	27,013,944
INCREASED REVENUES		0		0		0		0		0		0		0

Alternative 2 Worksheet A

SIMM 20C30C, Rev. 08/2010

ALTERNATIVE #2: Go Back to Prior Systems (Legacy)

Date Prepared: 02/2013

Department: California Department of Human Resources

All Costs Should be shown in whole (unrounded) dollars.

Project: Examination & Certification Online System (ECOS)

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		SUBTOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs														
Staff (Salaries & Benefits)	6.0	472,262	7.5	733,022	4.1	350,000	6.0	472,262	0.0	0	0.0	0	23.6	2,027,546
Hardware Purchase		0		0		0		0		0		0		0
Software Purchase/License		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services														
Software Customization		0		0		0		0		0		0		0
Project Management		0		0		0		0		0		0		0
Project Oversight		0		0		0		0		0		0		0
IV&V Services		0		0		0		0		0		0		0
Other Contract Services		39,185		449,990		0		0		0		0		489,175
TOTAL Contract Services		39,185		449,990		0		0		0		0		489,175
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total One-time IT Costs	6.0	511,447	7.5	1,183,012	4.1	350,000	6.0	472,262	0.0	0	0.0	0	23.6	2,516,721
Continuing IT Project Costs														
Staff (Salaries & Benefits)	0.0	0	0.0	0	0.0	0	0.0	0	1.5	156,673	1.5	156,673	3.0	313,346
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total Continuing IT Costs	0.0	0	0.0	0	0.0	0	0.0	0	1.5	156,673	1.5	156,673	3.0	313,346
Total Project Costs	6.0	511,447	7.5	1,183,012	4.1	350,000	6.0	472,262	1.5	156,673	1.5	156,673	26.6	2,830,067
Continuing Existing Costs														
Information Technology Staff	3.5	367,726	3.5	367,726	3.5	367,726	3.5	367,726	3.5	367,726	0.0	0	17.5	1,838,630
Other IT Costs		627,669		727,663		727,663		735,996		335,000		0		3,153,991
Total Continuing Existing IT Costs	3.5	995,395	3.5	1,095,389	3.5	1,095,389	3.5	1,103,722	3.5	702,726	0.0	0	17.5	4,992,621
Program Staff	0.0	0	0.0	0	0.0	0	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	45.0	3,804,000
Other Program Costs		0		0		0		245,000		245,000		245,000		735,000
Total Continuing Existing Program Costs	0.0	0	0.0	0	0.0	0	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	45.0	4,539,000
Total Continuing Existing Costs	3.5	995,395	3.5	1,095,389	3.5	1,095,389	18.5	2,616,722	18.5	2,215,726	15.0	1,513,000	62.5	9,531,621
TOTAL ALTERNATIVE COSTS	9.5	1,506,842	11.0	2,278,401	7.6	1,445,389	24.5	3,088,984	20.0	2,372,399	16.5	1,669,673	89.1	12,361,688
INCREASED REVENUES		0		0		0		0		0		0		0

California Department of Human Resources
Examination & Certification Online System (ECOS) Project

Alternative 2 Worksheet B

Department: California Department of Human Resources
Project: Examination & Certification Online System (ECOS)

All Costs Should be shown in whole (unrounded) dollars.

	SUBTOTAL		FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY 0		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs														
Staff (Salaries & Benefits)	23.6	2,027,546	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	23.6	2,027,546
Hardware Purchase		0		0		0		0		0		0		0
Software Purchase/License		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services														
Software Customization		0		0		0		0		0		0		0
Project Management		0		0		0		0		0		0		0
Project Oversight		0		0		0		0		0		0		0
IV&V Services		0		0		0		0		0		0		0
Other Contract Services		489,175		0		0		0		0		0		489,175
TOTAL Contract Services		489,175		0		0		0		0		0		489,175
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total One-time IT Costs	23.6	2,516,721	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	23.6	2,516,721
Continuing IT Project Costs														
Staff (Salaries & Benefits)	3.0	313,346	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	3.0	313,346
Hardware Lease/Maintenance		0		0		0		0		0		0		0
Software Maintenance/Licenses		0		0		0		0		0		0		0
Telecommunications		0		0		0		0		0		0		0
Contract Services		0		0		0		0		0		0		0
Data Center Services		0		0		0		0		0		0		0
Agency Facilities		0		0		0		0		0		0		0
Other		0		0		0		0		0		0		0
Total Continuing IT Costs	3.0	313,346	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	3.0	313,346
Total Project Costs	26.6	2,830,067	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	26.6	2,830,067
Continuing Existing Costs														
Information Technology Staff	17.5	1,838,630	3.5	367,726	0.0	0	0.0	0	0.0	0	0.0	0	21.0	2,206,356
Other IT Costs		3,153,991		338,000		0		0		0		0		3,491,991
Total Continuing Existing IT Costs	17.5	4,992,621	3.5	705,726	0.0	0	0.0	0	0.0	0	0.0	0	21.0	5,698,347
Program Staff	45.0	3,804,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	15.0	1,268,000	0.0	0	105.0	8,876,000
Other Program Costs		735,000		245,000		245,000		245,000		245,000		0		1,715,000
Total Continuing Existing Program Costs	45.0	4,539,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	0.0	0	105.0	10,591,000
Total Continuing Existing Costs	62.5	9,531,621	18.5	2,218,726	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	0.0	0	126.0	16,289,347
TOTAL ALTERNATIVE COSTS	89.1	12,361,688	18.5	2,218,726	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	0.0	0	152.6	19,119,414
INCREASED REVENUES		0		0		0		0		0		0		0

Summary Worksheet A

		ECONOMIC ANALYSIS SUMMARY										Date Prepared: 02/2013		
SIMM 20C30C, Rev. 08/2010		All costs to be shown in whole (unrounded) dollars.												
Department: California Department of Human Resources														
Project: Examination & Certification Online System (ECOS)														
	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		SUBTOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
EXISTING SYSTEM														
Total IT Costs	3.5	1,041,643	3.5	1,141,639	3.5	1,168,358	3.5	1,168,358	3.5	1,168,358	3.5	1,168,358	21.0	6,856,715
Total Program Costs	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	90.0	9,078,000
Total Existing System Costs	18.5	2,554,643	18.5	2,654,639	18.5	2,681,358	18.5	2,681,358	18.5	2,681,358	18.5	2,681,358	111.0	15,934,715
PROPOSED ALTERNATIVE														
In-House Custom Built Exam & Cert Online System														
Total Project Costs	6.0	511,447	7.5	1,183,012	9.7	1,617,389	9.7	1,655,389	9.7	1,405,389	5.7	827,846	48.3	7,200,472
Total Cont. Exist. Costs	3.5	995,395	3.5	1,095,389	18.5	2,449,057	18.5	2,215,726	18.5	2,215,726	18.5	2,215,726	81.0	11,187,019
Total Alternative Costs	9.5	1,506,842	11.0	2,278,401	28.2	4,066,446	28.2	3,871,115	28.2	3,621,115	24.2	3,043,572	129.3	18,387,491
COST SAVINGS/AVOIDANCES	9.0	1,047,801	7.5	376,238	(9.7)	(1,385,088)	(9.7)	(1,189,757)	(9.7)	(939,757)	(5.7)	(362,214)	(18.3)	(2,452,776)
Increased Revenues		0		0		0		0		0		0		0
Net (Cost) or Benefit	9.0	1,047,801	7.5	376,238	(9.7)	(1,385,088)	(9.7)	(1,189,757)	(9.7)	(939,757)	(5.7)	(362,214)	(18.3)	(2,452,776)
Cum. Net (Cost) or Benefit	9.0	1,047,801	16.5	1,424,039	6.9	38,951	(2.9)	(1,150,805)	(12.6)	(2,090,562)	(18.3)	(2,452,776)		
ALTERNATIVE #1														
Roll Cert back to legacy, continue with in-house custom solution														
Total Project Costs	6.0	511,447	7.5	1,183,012	4.1	350,000	6.0	472,262	9.7	1,617,389	9.7	1,655,389	43.0	5,789,499
Total Cont. Exist. Costs	3.5	995,395	3.5	1,095,389	18.5	2,608,389	18.5	2,608,389	18.5	2,449,057	18.5	2,215,726	81.0	11,972,345
Total Alternative Costs	9.5	1,506,842	11.0	2,278,401	22.6	2,958,389	24.5	3,080,651	28.2	4,066,446	28.2	3,871,115	124.0	17,761,844
COST SAVINGS/AVOIDANCES	9.0	1,047,801	7.5	376,238	(4.1)	(277,031)	(6.0)	(399,293)	(9.7)	(1,385,088)	(9.7)	(1,189,757)	(13.0)	(1,827,129)
Increased Revenues		0		0		0		0		0		0		0
Net (Cost) or Benefit	9.0	1,047,801	7.5	376,238	(4.1)	(277,031)	(6.0)	(399,293)	(9.7)	(1,385,088)	(9.7)	(1,189,757)	(13.0)	(1,827,129)
Cum. Net (Cost) or Benefit	9.0	1,047,801	16.5	1,424,039	12.4	1,147,008	6.4	747,716	(3.3)	(637,372)	(13.0)	(1,827,129)		
ALTERNATIVE #2														
Go Back to Prior Systems (Legacy)														
Total Project Costs	6.0	511,447	7.5	1,183,012	4.1	350,000	6.0	472,262	1.5	156,673	1.5	156,673	26.6	2,830,067
Total Cont. Exist. Costs	3.5	995,395	3.5	1,095,389	3.5	1,095,389	18.5	2,616,722	18.5	2,215,726	15.0	1,513,000	62.5	9,531,621
Total Alternative Costs	9.5	1,506,842	11.0	2,278,401	7.6	1,445,389	24.5	3,088,984	20.0	2,372,399	16.5	1,669,673	89.1	12,361,688
COST SAVINGS/AVOIDANCES	9.0	1,047,801	7.5	376,238	10.9	1,235,969	(6.0)	(407,626)	(1.5)	308,959	2.0	1,011,685	21.9	3,573,027
Increased Revenues		0		0		0		0		0		0		0
Net (Cost) or Benefit	9.0	1,047,801	7.5	376,238	10.9	1,235,969	(6.0)	(407,626)	(1.5)	308,959	2.0	1,011,685	21.9	3,573,027
Cum. Net (Cost) or Benefit	9.0	1,047,801	16.5	1,424,039	27.4	2,660,008	21.4	2,252,383	19.9	2,561,342	21.9	3,573,027		

California Department of Human Resources
Examination & Certification Online System (ECOS) Project

Summary Worksheet B

SIMM 20C30C, Rev. 08/2010

Department: California Department of Human Resources
Project: Examination & Certification Online System (ECOS)

ECONOMIC ANALYSIS SUMMARY

All costs to be shown in whole (unrounded) dollars.

Date Prepared: 04/2013

	SUBTOTAL		FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY 0		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
EXISTING SYSTEM														
Total IT Costs	21.0	6,856,715	3.5	1,169,358	0.0	0	0.0	0	0.0	0	0.0	0	24.5	8,026,074
Total Program Costs	90.0	9,078,000	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	90.0	9,078,000
Total Existing System Costs	111.0	15,934,715	3.5	1,169,358	0.0	0	0.0	0	0.0	0	0.0	0	114.5	17,104,074
PROPOSED ALTERNATIVE														
	In-House Custom Built Exam & Cert Online System													
Total Project Costs	52.6	8,871,796	5.5	1,074,414	0.0	0	0.0	0	0.0	0	0.0	0	58.1	9,946,210
Total Cont. Exist. Costs	76.7	9,515,695	15.0	1,513,000	0.0	0	0.0	0	0.0	0	0.0	0	91.7	11,028,695
Total Alternative Costs	129.3	18,387,491	20.5	2,587,414	0.0	0	0.0	0	0.0	0	0.0	0	149.8	20,974,905
COST SAVINGS/AVOIDANCES	(18.3)	(2,452,776)	(17.0)	(1,418,056)	0.0	0	0.0	0	0.0	0	0.0	0	(35.3)	(3,870,832)
Increased Revenues		0		0		0		0		0		0		0
Net (Cost) or Benefit	(18.3)	(2,452,776)	(17.0)	(1,418,056)	0.0	0	0.0	0	0.0	0	0.0	0	(35.3)	(3,870,832)
Cum. Net (Cost) or Benefit	(18.3)	(2,452,776)	(17.0)	(1,418,056)	0.0	0	0.0	0	0.0	0	0.0	0	(35.3)	(3,870,832)
ALTERNATIVE #1														
	Roll Cert back to legacy, continue with in-house custom solution													
Total Project Costs	43.0	5,789,499	9.7	1,405,389	5.7	827,846	0.0	178,000	0.0	0	0.0	0	58.4	8,200,734
Total Cont. Exist. Costs	81.0	11,972,345	18.5	2,215,726	18.5	2,215,726	20.5	2,409,413	0.0	0	0.0	0	138.5	18,813,210
Total Alternative Costs	124.0	17,761,844	28.2	3,621,115	24.2	3,043,572	20.5	2,587,413	0.0	0	0.0	0	196.9	27,013,944
COST SAVINGS/AVOIDANCES	(13.0)	(1,827,129)	(24.7)	(2,451,757)	(24.2)	(3,043,572)	(20.5)	(2,587,413)	0.0	0	0.0	0	(82.4)	(9,909,871)
Increased Revenues		0		0		0		0		0		0		0
Net (Cost) or Benefit	(13.0)	(1,827,129)	(24.7)	(2,451,757)	(24.2)	(3,043,572)	(20.5)	(2,587,413)	0.0	0	0.0	0	(82.4)	(9,909,871)
Cum. Net (Cost) or Benefit	(13.0)	(1,827,129)	(24.7)	(2,451,757)	(24.2)	(3,043,572)	(20.5)	(2,587,413)	0.0	0	0.0	0	(82.4)	(9,909,871)
ALTERNATIVE #2														
	Go Back to Prior Systems (Legacy)													
Total Project Costs	26.6	2,830,067	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	26.6	2,830,067
Total Cont. Exist. Costs	62.5	9,531,621	18.5	2,218,726	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	0.0	0	126.0	16,289,347
Total Alternative Costs	89.1	12,361,688	18.5	2,218,726	15.0	1,513,000	15.0	1,513,000	15.0	1,513,000	0.0	0	152.6	19,119,414
COST SAVINGS/AVOIDANCES	21.9	3,573,027	(15.0)	(1,049,368)	(15.0)	(1,513,000)	(15.0)	(1,513,000)	(15.0)	(1,513,000)	0.0	0	(38.1)	(2,015,341)
Increased Revenues		0		0		0		0		0		0		0
Net (Cost) or Benefit	21.9	3,573,027	(15.0)	(1,049,368)	(15.0)	(1,513,000)	(15.0)	(1,513,000)	(15.0)	(1,513,000)	0.0	0	(38.1)	(2,015,341)
Cum. Net (Cost) or Benefit	21.9	3,573,027	(15.0)	(1,049,368)	(15.0)	(1,513,000)	(15.0)	(1,513,000)	(15.0)	(1,513,000)	0.0	0	(38.1)	(2,015,341)

California Department of Human Resources
Examination & Certification Online System (ECOS) Project

SIMM 20C30C, Rev. 08/2010

PROJECT FUNDING PLAN

Department: California Department of Human Resources

All Costs to be in whole (unrounded) dollars

Date Prepared: 04/2013

Project: Examination & Certification Online System (ECOS)

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		SUBTOTALS	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
TOTAL PROJECT COSTS	6.0	511,447	7.5	1,183,012	10.2	1,844,747	10.7	2,110,105	10.7	1,860,105	7.5	1,362,380	52.6	8,871,796
RESOURCES TO BE REDIRECTED														
Staff	6.0	472,262	7.5	733,022	8.2	789,490	8.7	849,348	8.7	849,348	6.0	636,831	45.1	4,330,301
Funds:														
Existing System		0		0		67,000		300,000		300,000		300,000		967,000
Other Fund Sources		39,185		449,990		167,500		335,000		335,000		335,000		1,661,675
TOTAL REDIRECTED RESOURCES	6.0	511,447	7.5	1,183,012	8.2	1,023,990	8.7	1,484,348	8.7	1,484,348	6.0	1,271,831	45.1	6,958,976
ADDITIONAL PROJECT FUNDING NEEDED														
One-Time Project Costs	0.0	0	0.0	0	2.0	730,757	2.0	447,757	2.0	197,757	1.5	0	7.5	0
Continuing Project Costs	0.0	0	0.0	0	0.0	90,000	0.0	178,000	0.0	178,000	0.0	90,549	0.0	536,549
TOTAL ADDITIONAL PROJECT FUNDS NEEDED BY FISCAL YEAR	0.0	0	0.0	0	2.0	820,757	2.0	625,757	2.0	375,757	1.5	90,549	7.5	1,912,820
TOTAL PROJECT FUNDING	6.0	511,447	7.5	1,183,012	10.2	1,844,747	10.7	2,110,105	10.7	1,860,105	7.5	1,362,380	52.6	8,871,796
Difference: Funding - Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Estimated Cost Savings	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0

FUNDING SOURCE*														
General Fund ¹	68%	347,784	62%	733,467	66%	1,217,533	66%	1,392,669	62%	1,153,265	64%	871,923	64%	5,716,642
Federal Fund	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Special Fund	0%	0	4%	47,320	4%	73,790	4%	84,404	4%	74,404	3%	40,871	4%	320,790
Reimbursement	32%	163,663	34%	402,224	30%	553,424	30%	633,032	34%	632,436	33%	449,585	32%	2,834,364
TOTAL FUNDING	100%	511,447	100%	1,183,012	100%	1,844,747	100%	2,110,105	100%	1,860,105	100%	1,362,380	100%	8,871,796

*Type: If applicable, for each funding source, beginning on row 29, describe what type of funding is included, such as local assistance or grant funding, the date the funding is to become available, and the duration of the funding.

FY 2013/14: JobAps maintenance money is only needed through Jan. 2014. There will be \$67,000 remaining in the budget year which will be redirected for consulting services

FY 2014/15: JobAps maintenance money, \$300,000, will be redirected towards consulting services

FY 2015/16 & 2016/17: JobAps maintenance money, \$300,000, will be redirected towards consulting services

FY 2017/18: Of the JobAps maintenance money \$178,000 will be used towards the ongoing costs and \$122,000 is the ongoing cost savings

¹ This includes Central Service Cost Recovery Fund

Funding Worksheet B

SIMM 20C30C, Rev. 08/2010

Department: California Department of Human Resources

Project: Examination & Certification Online System (ECOS)

PROJECT FUNDING PLAN

All Costs to be in whole (unrounded) dollars

Date Prepared: 02/2013

	SUBTOTALS		FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY 0		TOTALS	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
TOTAL PROJECT COSTS	48.3	7,200,472	0.0	178,000	0.0	0	0.0	0	0.0	0	0.0	0	48.3	7,378,472
RESOURCES TO BE REDIRECTED														
Staff	40.8	3,831,477	2.0	193,687	0.0	0	0.0	0	0.0	0	0.0	0	42.8	4,025,164
Funds:														
Existing System		967,000		269,000		0		0		0		0		1,236,000
Other Fund Sources		489,175		0		0		0		0		0		489,175
TOTAL REDIRECTED RESOURCES	40.8	5,287,652	2.0	462,687	0.0	0	0.0	0	0.0	0	0.0	0	42.8	5,750,339
ADDITIONAL PROJECT FUNDING NEEDED														
One-Time Project Costs	8.0	0	0.0	(91,000)	0.0	0	0.0	0	0.0	0	0.0	0	8.0	(91,000)
Continuing Project Costs	0.0	536,549	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	536,549
TOTAL ADDITIONAL PROJECT FUNDS NEEDED BY FISCAL YEAR	8.0	1,912,820	0.0	(91,000)	0.0	0	0.0	0	0.0	0	0.0	0	8.0	1,821,820
TOTAL PROJECT FUNDING	48.8	7,200,472	2.0	371,687	0.0	0	0.0	0	0.0	0	0.0	0	50.8	7,572,159
Difference: Funding - Costs	0.5	0	2.0	193,687	0.0	0	0.0	0	0.0	0	0.0	0	2.6	193,687
Total Estimated Cost Savings	0.0	0	0.0	122,000	0.0	0	0.0	0	0.0	0	0.0	0	0.0	122,000
FUNDING SOURCE*														
General Fund ¹	64%	4642448	76%	282,482	0%	0	0%	0	0%	0	0%	0	65%	4,924,930
Federal Fund	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Special Fund	4%	259283	0%	0	0%	0	0%	0	0%	0	0%	0	3%	259,283
Reimbursement	32%	2298742	24%	89,205	0%	0	0%	0	0%	0	0%	0	32%	2,387,947
TOTAL FUNDING	100%	7,200,472	100%	371,687	0%	0	0%	0	0%	0	0%	0	100%	7,572,159

*Type: If applicable, for each funding source, beginning on row 29, describe what type of funding is included, such as local assistance or grant funding, the date the funding is to become available, and the duration of the funding.

FY 2013/14: JobAps maintenance money is only needed through Jan. 2014. There will be \$67,000 remaining in the budget year which will be redirected for consulting services

FY 2014/15: JobAps maintenance money, \$300,000, will be redirected towards consulting services

FY 2015/16 & 2016/17: JobAps maintenance money, \$300,000, will be redirected towards consulting services

FY 2017/18: Of the JobAps maintenance money \$178,000 will be used towards the ongoing costs and \$122,000 is the ongoing cost savings

¹ This includes Central Service Cost Recovery Fund

SIMM 20C30C, Rev. 08/2010

Department: California Department of Human R

Project: Examination & Certification Online System (ECOS)

ADJUSTMENTS, SAVINGS AND REVENUES WORKSHEET

Date Prepared: 04/2013

Annual Project Adjustments	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	
One-time Costs													
Previous Year's Baseline	0.0	0	0.0	0	0.0	0	2.0	730,757	2.0	447,757	2.0	197,757	
(A) Annual Augmentation /(Reduction)	0.0	0	0.0	0	2.0	730,757	0.0	(283,000)	0.0	(250,000)	(0.5)	(197,757)	
(B) Total One-Time Budget Actions	0.0	0	0.0	0	2.0	730,757	2.0	447,757	2.0	197,757	1.5	0	
Continuing Costs													
Previous Year's Baseline	0.0	0	0.0	0	0.0	0	0.0	90,000	0.0	178,000	0.0	178,000	
(C) Annual Augmentation /(Reduction)	0.0	0	0.0	0	0.0	90,000	0.0	88,000	0.0	0	0.0	(87,451)	
(D) Total Continuing Budget Actions	0.0	0	0.0	0	0.0	90,000	0.0	178,000	0.0	178,000	0.0	90,549	
Total Annual Project Budget Augmentation /(Reduction) [A + C]	0.0	0	0.0	0	2.0	820,757	0.0	(195,000)	0.0	(250,000)	(0.5)	(285,208)	

[A, C] Excludes Redirected Resources

Total Additional Project Funds Needed [B + D]

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Annual Savings/Revenue Adjustments

Cost Savings	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	
Increased Program Revenues		0		0		0		0		0		0	

SIMM 20C30C, Rev. 08/2010
 Department: California Department of Human Resources
 Project: Examination & Certification Online System (ECOS)

ADJUSTMENTS, SAVINGS AND REVENUES WORKSHEET

Date Prepared: 04/2013

Annual Project Adjustments	FY 2017/18		FY 2018/19		FY 2019/2020		FY 2020/2021		FY 0		Net Adjustments	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-time Costs												
Previous Year's Baseline	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0		
(A) Annual Augmentation /(Reduction)	(1.5)	0	0.0	0	0.0	0	0.0	0	0.0	0		
(B) Total One-Time Budget Actions	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	7.5	1,376,271
Continuing Costs												
Previous Year's Baseline	0.0	90,549	0.0	0	0.0	0	0.0	0	0.0	0		
(C) Annual Augmentation /(Reduction)	0.0	(90,549)	0.0	0	0.0	0	0.0	0	0.0	0		
(D) Total Continuing Budget Actions	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	536,549
Total Annual Project Budget Augmentation /(Reduction) [A + C]	(1.5)	(90,549)	0.0	0	0.0	0	0.0	0	0.0	0		

[A, C] Excludes Redirected Resources

Total Additional Project Funds Needed [B + D]

7.5	1,912,820
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Annual Savings/Revenue Adjustments

Annual Savings/Revenue Adjustments												
Cost Savings		0.0	122,000	0.0	0	0.0	0	0.0	0	0.0	0	
Increased Program Revenues			0		0		0		0		0	

Attachment B: 2013-14 Finance Letter ECOS Funding Spreadsheet

2013-14 Finance Letter - ECOS Funding

	2013-14 Finance Letter	2014-15 (BY+1)	2015-16 (BY+2)	2016-17 (BY+3)	2017-18 (BY+4)
	2.0	0.0	0.0	-0.5	-1.5
Total Positions	2.0	0.0	0.0	-0.5	-1.5
Salaries & Wages	\$ 85,000	\$ -	\$ -	\$ -	\$ (85,000)
Temp Help	\$ 61,000	\$ -	\$ -	\$ (35,000)	\$ (26,000)
Salaries & Wages	\$ 146,000	\$ -	\$ -	\$ (35,000)	\$ (111,000)
Staff Benefits	\$ 37,000	\$ -	\$ -	\$ -	\$ (37,000)
Total Personal Services	\$ 183,000	\$ -	\$ -	\$ (35,000)	\$ (148,000)
Operating Expenses & Equipment					
Consultant-Internal	\$ 65,000	\$ -	\$ -	\$ -	\$ (65,000)
Consultant-External	\$ 483,000	\$ (283,000)	\$ (250,000)	\$ (250,000)	\$ -
Consolidated Data Center	\$ 90,000	\$ 88,000	\$ -	\$ -	\$ -
Total OE&E	\$ 638,000	\$ (195,000)	\$ (250,000)	\$ (250,000)	\$ (65,000)
Total Budget	\$ 821,000	\$ (195,000)	\$ (250,000)	\$ (285,000)	\$ (213,000)
General Fund	\$ 468,000	\$ (111,000)	\$ (143,000)	\$ (162,000)	\$ (121,000)
CSCR	\$ 353,000	\$ (84,000)	\$ (107,000)	\$ (123,000)	\$ (92,000)
Total Funds	\$ 821,000	\$ (195,000)	\$ (250,000)	\$ (285,000)	\$ (213,000)