Stage 1 Business Analysis

California Department of Technology, SIMM 19A.2 (Rev. 2.4), Revised 4/2/2018

1.1 General Information

Agency or State Entity Name:	California Public Utilities Commission
Organization Code:	8660
Proposal Name:	Rail Inspection and Corrective Action Plan System (RICAPS)
Proposal Description:	Develop an on-line application, that is accessible by both CPUC and regulated Rail Transit Agency (RTA) staff, that tracks inspection reports and Corrective Action Plans (CAPs) for carrying out safety oversight activities of the Rail Transit Safety Branch.
When do you want to start this project?	10/1/2021
Department of Technology Project Number:	8660-091

1.2 Submittal Information

Contact Information:

Contact First Name	Contact Last Name
Dennis	Hong
Contact Email	**Contact Phone Number**
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Submission Date:	11/16/2020
Version Number:	**3.0**

Project Approval Executive Transmittal

Attachment: Include the Project Approval Executive Transmittal as an attachment to your email submission.

1.3 Business Sponsorship

Executive Sponsors

Title	First Name	Last Name	Business Program Area
Director	Roger	Clugston	Rail Safety Division
Chief Information Officer	Fred	Gomez	Information Technology Services Division

Select + to add additional Executive Sponsors

Business Owners

Title	First Name	Last Name	Business Program Area
Program Manager	Daren	Gilbert	Rail Transit Safety Branch

Select + to add additional Business Owners

Program Background and Context

Pursuant to Public Utilities Code Section 99152 and other statutes, the CPUC has safety and security regulatory authority over all rail transit and other public transit fixed guideway systems, referred to as Rail Transit Agencies (RTAs). The CPUC's Rail Transit Safety Branch (RTSB) implements CPUC's RTA oversight program by conducting triennial safety audits, accident investigations, inspections, and overseeing internal safety audits performed by RTAs, all of which generally result in findings and conditions that must be corrected. This requires the RTAs to submit and get RTSB approval of a Corrective Action Plan (CAP). Issuing inspection reports and CAPs submittal and approval process is currently a manual process for both CPUC Staff and RTA personnel, leading to challenges with tracking and monitoring CAPs to conclusion with a sufficient level of accuracy. Currently, RTSB inspectors and their supervisors use a manual process to track both inspections and CAPs to address deficiencies identified by their field work. This is a time consuming and tedious process, and prone to human

errors. Inspectors track and document the process so close outs can be overseen by supervisors. Furthermore, RTSB engineers and their supervisors use a database to track CAPs generated from activities not related to field inspections (such as triennial audits of RTA records and accident investigations performed by RTAs). Tracking the work of engineers and inspectors in two separate methods creates difficulties for management to oversee the work of the entire branch, and creates the need for additional manual work to combine data on CAPs from the different sources, which again introduces human error when copying data from one source to the other.

Hundreds of CAPs are required annually from the RTAs. RTSB and RTAs find it extremely difficult and time consuming to keep an accurate accounting of the status of all CAPs. Some CAPs are easy to resolve and close, and some require longer term work or capital outlays to correct, and some may extend several years until complete resolution. RTSB must verify closure of CAPs by either reviewing evidence provided by the RTA and/or by field visits to verify. Some RTSB Staff are spending more time with document management than performing their day to day functions. Regulated RTAs have requested a more efficient process to receive inspection reports and submit CAPs, because they also find the current process cumbersome.

The proposed project addresses these deficiencies by creating a web-based application that is accessible by both RTSB staff and RTA personnel, where all inspection reports and CAPs are issued and tracked, and any records of inspection findings and evidence of corrections are tracked in one place. The proposed application will also allow management to easily generate reports to monitor staff performance, and for management and Commission reports.

1.4 Stakeholders

Key Stakeholders	
Org. Name	Name
Regulated Rail Transit Agencies	1. Americana at Brand Trolley 2. Angel's Flight Railway Company 3. Bay Area Rapid Transit District (BART) 4. BART Oakland Airport Connector 5. Getty Center Museum Automated People 6. The Grove Trolley 7. Los Angeles County Metropolitan Transportation Authority 8. Los Angeles World Airports LAX Automated People Mover (Under construction, estimated opening in 2023) 9. North [San Diego] County Transit District 10. Orange County Streetcar (under construction, estimated opening in 2022) 11. Sacramento Airport Automated People Mover System 12. Sacramento Regional Transit District 13. San Diego Trolley Inc. 14. San Francisco International Airport (AirTrain) Automated People Mover 15. San Francisco Municipal Transportation Agency 16. Santa Clara Valley Transportation Authority Systems in Development or Funding Stages 1.Downtown (Sacramento) Riverfront Streetcar 2.Los Angeles Streetcar
Internal or External?	☐ Internal ☒ External
When is the Stakeholder impacted?	

Input to Business Process	During the Business Process	Output of the Business Process
☒	☒	☒

How are Stakeholders impacted?

Since the RTAs will have access to the on-line application, this will create significant efficiencies for them in receiving and submitting inspection reports and CAP responses to them, as well as other relevant supporting information. The application will help them to internally track required safety actions, and share that information with RTSB, eliminating the redundancy of retyping information and reports.

How will the Stakeholders participate in the project?

The RTAs will have very limited involvement. In addition to soliciting input during the semi-annual meetings, RTSB will also request volunteers from the RTAs to help with User Acceptance Testing (UAT) of the new system. Considering the large number of RTAs involved, each with very unique operations and unique data tracking systems, RTSB would need representatives from each RTA if greater involvement from them is required. The safety departments of RTAs that interact with RTSB are generally understaffed, and have difficulty keeping up with their own workload. They would not be able to dedicate personnel to work on this project. RTSB anticipates only a couple of RTAs may be able to provide volunteers for the UAT (for limited number of hours only), and not much more.

Select + to add additional Stakeholders

1.5 Business Program

Org. Name	Name
CPUC	Rail Transit Safety Branch

When is the unit impacted?

Input to the Business Process	During the Business Process	Output of the Business Process
☒	☒	☒

How is the business program unit impacted?

This application will significantly increase the efficiency and accuracy of RTSB by reducing paperwork and centralizing all inspection records and CAPs in one system. The new application will also be used for communications on inspection reports and CAPs between RTSB and RTAs. As a result, management will be able to read all communications, and when staff changes occur (retirement, transfer, new hire, etc), new staff will have access to communications by their predecessors.

How will the business program participate in the project?

RTSB will participate in all aspects of this project. RTSB's Program Manager, supervisors, and a project manager are already holding regular meetings with CPUC's Information Technology Services Division (ITSD), and they will work closely with the application developer. Funds from the RTSB budget will be used to pay for this project.

Select + to add additional Business Programs

1.6 Business Alignment

Business Driver(s)

Financial Benefit

Increased Revenue	Cost Savings	Cost Avoidance	Cost Recovery
☐	☒	☐	☐

Mandate(s)

State	Federal
☐	☐

Improvement

Stage 1 Business Analysis

Better Services to Citizens	Efficiencies to Program Operations	Improved Health and/or Human Safety	Technology Refresh
☐	☒	☒	☐

Security			
Improved Information Security	Improved Business Continuity	Improved Technology Recovery	Technology End of Life
☒	☒	☒	☐

Strategic Business Alignment	
Strategic Plan Last Updated?	2/20/2019
Strategic Business Goal	Alignment
Protect Public Safety	Improved tracking of inspection reports and Corrective Action Plans will improve CPUC's ability to enhance safety of RTA passengers, RTA employees, and roadway users by identifying and developing mitigation measures to avoid accidents and other hazards, and assuring they are implemented in a timely manner.
Select + to add additional Business Goals and Alignment	

Executive Summary of the Business Problem or Opportunity

Currently, RTSB engineer, inspectors, and their supervisors use a manual process to track both inspection reports and CAPs to address findings that the RTA must remedy. This is a time consuming and tedious process, and prone to human errors. The inspectors handwrite notes on a pad while they are conducting their inspections. After they return to their home-office, they use their handwritten notes to create an electronic document (inspection report), which they email to their supervisor for review. Their supervisor exchanges emails with the inspector on edits to the report. Next the supervisor emails the inspection report to the RTA. The supervisor also manually enters information from the inspection report into a spreadsheet they maintain to track the status of inspection reports. RTAs also use their own internal tools, each one being different, to track the above listed items. The inspector then manually updates their inspection report tracking spreadsheet, using information emailed back by the RTAs and/or follow-up inspections performed by RTSB inspectors. If the inspection reports there is a need to create a CAP, then the RTA manually types information on the CAP, emails it to RTSB. Both RTSB and RTA use different tools to set reminders to follow-up on the CAP, and keep notes on the status of the CAP. The process has many other parts that require manually entering information over-and-over into spreadsheets or documents.

This manual process introduces many opportunities for mistyping information or omitting information that should have been typed into the various methods for tracking activities and generating reminders. Furthermore, it takes time for RTSB inspectors, their supervisors, and RTA personnel to handwrite and then type the same information into different documents/spreadsheets or systems that provide reminders to follow-up on items.

The proposal is to create a new database, where inspectors would type in the information once into the system. That information will be available to all the stakeholders. The system also automatically sets reminders and provides them. Again, eliminating the need to create reminder alarms using different tools.

The manual process is currently working, but it is very inefficient and significant time savings can be achieved by automating many manual processes, in addition to reducing human errors introduced when information is manually entered into different tracking tools. The reminder feature of the new system eliminates the need for inspectors, supervisors, and RTA personnel to use various tools to make sure important deadlines do not fall through the cracks. The new system will also make data readily available to management on the status of inspection reports and CAPs.

Business Problem or Opportunity and Objectives Table

Problem ID	Problems/Opportunities
1	Opportunity: Saving CPUC Staff and RTA personnel time in preparing reports, submitting reports, and follow-up in-person meetings. Problem: Gathering information and data for the monthly Division report to the Commission, and for annual reporting to the FTA and Governor has been a manual process that is labor intensive. The new system will allow a report to be developed that extracts the information automatically to eliminate the Staff time to compile this information.
Objective ID	1.1
Objectives	Time spent by CPUC Staff checking on status of inspections reports will decrease from 648 hours per year to 216 hours per year (66.7% decrease) after implementation.
Metric	66.7% improvement after implementation with improved notifications and user interface for checking status of inspection reports.
Baseline	Every week each senior inspector spends 4 hours reviewing x 4.5 week/month = 18 hours/mo. Plus 1 hour of back-and-forth with each inspector per week 8 inspectors x 1 hr/week x 4.5 weeks/mo = 36 hrs/mo. Total of 54 hours/mo (= 18 hrs/mo + 36 hrs/mo) 54 hours/mo x 12 mos/year = **648 hours/year**
Target	Seniors inspectors will still need to check on pending items once a week. 4 hours/week x 4.5 weeks/mo x 12 mos/year = **216 hours/year**
Measurement Method	Time spent by CPUC Staff to check status of inspection reports.
Objective ID	1.2
Objectives	A new application with functions such as drop-down menus and selectable options will reduce time spent in completing information needed for inspections reports, which will see a decrease from 832 hours per year to 208 hours per year (75% decrease) after implementation.
Metric	75% improvement after implementation as information to complete inspections are provided via drop-down menus and selectable options instead of data entry.
Baseline	It takes each inspector about 2 hour for each inspection report. In 2019 inspectors had done 312 inspections. RTSB had only 6 of 8 authorized positions filled. If all 8 positions were filled, then 416 inspections could have been done

	416 inspections/year = 312 inspections/yr x 8 inspector positions/6 filled positions. 2 hours/inspection x 416 inspections/year = **832 hours/year**.
Target	30 minutes per inspection report. 0.5 hours/inspection x 416 inspections/year = **208 hours/year**
Measurement Method	Time spent by CPUC Staff on data entry for inspection reports.
Objective ID	1.3
Objectives	The new application will allow electronic submission of CAPS records by RTAs, which will eliminate the need for data entry activities by CPUC Staff, decreasing from 600 hours per year to 0 hours per year (100% decrease) after implementation.
Metric	100% improvement as electronic submission of CAPS records will eliminate the need for data entry after implementation.
Baseline	Average 300 CAPs per/year created by engineers (excludes inspection CAPs). 2 hour for each record (1 hour to create a new one + 1 hour to maintain). 300 CAPs/year x 2 hours per CAP = **600 hours/year**
Target	**0 hour/year** as there will no longer be a need to conduct data entry by CPUC Staff.
Measurement Method	Time study on length of time it takes for Staff to create a CAP record.
Objective ID	1.4
Objectives	Improve accuraracy of the new application will reduce time spent on reconciling CAPs and inspection responses from 1,176 hours per year to 280 hours per year (76% decrease) after implementation.
Metric	76% improvement as a result of the new application with improved notifications and interfaces.
Baseline	We typically do it every 2 months (6 times per year), 3.5 staff attend each meeting, spend a full day (8 hours) including travel, and we do this for the 7 large RTAs 6 meetings/RTA/year x 3.5 staff attend/meeting x 8 hours/day x 7 RTA= **1,176 hours/year**
Target	Reduce to 2 hour meetings 4 times per year, but 5 staff attend (since no travel) 2 hours/meeting x 4 meetings/RTA/year x 5 staff attend/meeting x 7 RTA = **280 hours/year**
Measurement Method	Time spent by CPUC Staff on review reconciling reports and records.
Objective ID	1.5
Objectives	CPUC staff will see a decrease from 279 hours per year to 4 hours per year (99% decrease) in preparing monthly reports after implementation.
Metric	99% improvement after implementation with improved dashboards and interfaces from the new application.

Baseline	For monthly report it takes the two inspection seniors/supes 3 hours per month, and the Analyst compiling the report spends 1 additional hour to combine the numbers to calculate numbers included in the monthly report. (3 hrs/mos x 2 seniors + 1 hr/mo) x 12 mos/year = 84 hours/year For the Annual report one Senior UE Specialist spends 40 hour; 3 other Senior UE Specialists, the Program & Project Supervisor, and the Program Manager each spend 15 hours; and two senior inspectors spend 20 hours each . 40 hrs + 5 x 15 hrs + 2 x 40 hrs = 195 hours/year 84 hrs/yr + 195 hrs/yr = **279 hours/year**
Target	Monthly reports Analyst compiling data spends 15 minutes per month. 0.25 hours/mo x 12 mos = 3 hours/year for monthly reports Annual report Analyst can compile data in 1 hour. 3 hours/year + 1 hour/year = **4 hours/year**
Measurement Method	Time spent by CPUC Staff in preparing reports.
Select + to add additional Objectives	
2	Problem: The current process does not allow an efficient process to track locations where inspections are performed, beyond the agency and type of inspections. Typically, it would require a manual review of each type of inspections to determine the specific locations.
Objective ID	2.1
Objectives	Time spent identifying locations that need to be inspected decrease from 176 hours/year to 72 hours/year (59% decrease) after implementation.
Metric	New interfaces differentiating between locations that were inspected and those that still needs to be inspected will improve on the previous manual process by 59%.
Baseline	2 hours per week for the seniors to track on a spreadsheet what their inspectors have inspected. There are 2 seniors. Out of 52 weeks per year, 6 weeks per year are dedicaed to for triennial audits. Assume average inspector takes 2 weeks per year for vacation or sick leave. That leaves 44 weeks per year when they do inspections. 2 hours/week/senior x 2 seniors x 44 weeks/year = **176 hours/year**
Target	Once a week the seniors run a report that shows what inspection has been and had not been done. It takes about an hour a month to generate the report and decide what needs to be done. 1 hour a month x 2 seniors x 12 mos/year = 24 hours/year Eight Inspectors spend 30 min per month to run reports to see what they need to do

	8 inspectors x 0.5 hour/inspector/month x 12 months/year = 48 hours/year 24 hours/year + 48 hours/year = **72 hours/year**
Measurement Method	Time spent by CPUC Staff to inventory status of Inspected locations.
Select + to add additional Objectives	
3	Problem: Reminders currently consist of a manual process where inspectors and engineers send reminders or wait until quarterly review meetings with the RTA to identify late CAPs submittals. This is highly variable based on the staff member's schedule and competing workload and can result in overdue CAPs. The new system will automate reminders on pending due CAPs so that the reminders are consistently issued and RTAs and Staff are both notified of pending and overdue CAPs.
Objective ID	3.1
Objectives	New functions such as auto notifications will reduce time spent by CPUC Staff in setting reminders for CAPs responses from 360 hours per year to 48 hours per year (87% decrease) after implementation.
Metric	CPUC Staff will reduce hours spent by 87% on setting notifications to CAPS responses after implementation.
Baseline	7 Reps (one for each RTA) and 8 inspectors are meeting monthly with RTAs, spending 2 hours per month. (7 UEs + 8 Inspectors) x 2 hours/months x 12 mos/yr = **360 hours/year**
Target	0 hours, since it will be all be automated. The 2 Sr UE (Supes) + 2 Inspector Supes/Seniors spend 1 hours per month reviewing records and contacting RTAs when necessary. (2 Sr UE + 2 Inspector Supe/Senior)/month x 1 hour/month x 12 months/year = **48 hours/year**.
Measurement Method	Time spent by CPUC Staff to create, set, and verify CAPS responses.
Select + to add additional Objectives	
Select + to add additional Problems	

Project Approval Lifecycle Completion and Project Execution Capacity Assessment

1. Does the proposal development or project execution anticipate sharing resources (state staff, vendors, consultants or financial) with other priorities within the Agency/state entity (projects, PALs, or programmatic/technology workload)?

(•) Yes ( ) No ( ) Clear

2. Does the Agency/ state entity anticipate this proposal will result in the creation of new business processes or changes to existing business processes?

( ) No ( ) New Processes (•) Existing Processes ( ) Both New and Existing ( ) Clear

1.7 Project Management

Project Management Risk Score:	1.7
Attach completed Statewide Information Management Manual (SIMM) Section 45 Appendix A:	Include the completed SIMM 45 Appendix A as an attachment to your email submission.

Existing Data Governance and Data

1. Does the Agency/state entity have an established data governance body with well-defined roles and responsibilities to support data governance activities? If an existing data governance org chart is used, please attach.	○ Unknown ○ Yes ◉ No ○ Clear	If applicable, include the data governance org chart as an attachment to your email submission.
2. Does the Agency/state entity have data governance policies (data policies, data standards, etc.) formally defined, documented, and implemented? If yes, please attach the existing data governance plan, policies or IT standards used.	○ Unknown ○ Yes ◉ No ○ Clear	If applicable, include the data governance policies as an attachment to your email submission.
3. Does the Agency/state entity have data security policies, standards, controls, and procedures formally defined, documented, and implemented? If yes, please attach the existing documented security policies, standards, and controls used.	○ Unknown ◉ Yes ○ No ○ Clear	If applicable, include the documented security policies, standards, and controls as an attachment to your email submission.
4. Does the Agency/state entity have user accessibility policies, standards, controls, and procedures formally defined, documented, and implemented? If yes, please attach the existing documented policies, accessibility governance plan, and standards used, or provide additional information below.	○ Unknown ○ Yes ◉ No ○ Clear	If applicable, include the documented accessibility policies, standards, and controls as an attachment to your email submission.
5. Do you have existing data that you are going to want to access in your new solution?	○ Unknown ◉ Yes ○ No ○ Clear	If applicable, include the data migration plan as an attachment to your email submission.
6. If data migration is required, please rate the quality of the data.	No information available	

1.8 Criticality Assessment

Business Criticality		
Legislative Mandates:	N/A ☒	
Bill Number(s)/Code(s):		
Language that includes system relevant requirements:		
Business Complexity Score	1.8	Include the completed SIMM 45 Appendix C as an attachment to your email submission.
Noncompliance Issues		
Indicate if your current operations include noncompliance issues and provide a narrative explaining the how the business process is noncompliant.		

Programmatic Regulations	HIPPA/CJIS/FTI/PII/PCI	Security	ADA	Other	N/A
☐	☐	☐	☐	☐	☒

1. What is the proposed project start date?	10/1/2021
2. Is this proposal anticipated to have high public visibility?	○ Yes ◉ No ○ Clear
If "Yes," please identify the dynamics of the anticipated high visibility below:	
3. If there is an existing Privacy Information Assessment, include as an attachment to your email submission.	
4. Does this proposal affect business program staff located in multiple geographic locations?	◉ Yes ○ No ○ Clear
If "Yes," provide an overview of the geographic dynamics below and enter the specific information in the space provided.	
Rail Engineers are located all over the State of California. Majority are home based but are associated with the offices listed below because they VDI or VPN into those locations.	

City	State	Number of Locations	Approximate Number of Staff
San Francisco	CA	1	10
Sacramento	CA	1	7
Los Angeles	CA	1	17

Select + to add Locations

1.9 Funding

1. Does the Agency/state entity anticipate requesting additional resources through a budget action to complete the project approval lifecycle?	○ Yes ◉ No ○ Clear
2. Will the state possibly incur a financial sanction or penalty if this proposal is not implemented? If yes, please identify the financial impact to the state below:	○ Yes ◉ No ○ Clear
3. Has the funding source(s) been identified for this proposal?	◉ Yes ○ No ○ Clear

FUNDING SOURCE		FUND AVAILABILITY DATE
General Fund	☐	Date Picker
Special Fund	☒	7/1/2020
Federal Fund	☒	7/1/2020
Reimbursement	☐	Date Picker
Bond Fund	☐	Date Picker
Other Fund	☐	Date Picker
If "Other Fund" is checked, specify the funding:	Federal fund 80% and State (Public Transportation Account) 20%.	

1.10 Reportability Assessment

1. Does the Agency/state entity's IT activity meet the definition of an IT Project found in the State administrative Manual (SAM) Section 4819.2?	◉ Yes ○ No ○ Clear

If "No," this initiative is not an IT project and is not required to complete the Project Approval Lifecycle.	
2. Does the activity meet the definition of Maintenance or Operations found in SAM Section 4819.2? If "Yes," this initiative is not required to complete the Project Approval Lifecycle. Please report this workload on the Agency Portfolio Report. And provide an explanation below.	○ Yes ◉ No ○ Clear
3. Has the project/effort been previously approved and considered an ongoing IT activity identified in SAM Section 4819.2, 4819.40? If "Yes," this initiative is not required to complete the Project Approval Lifecycle. Please report this workload on the Agency Portfolio Report.	○ Yes ◉ No ○ Clear
4. Is the project directly associated with any of the following as defined by SAM Section 4812.32? Single-function process-control systems; analog data collection devices, or telemetry systems; telecommunications equipment used exclusively for voice communications; Voice Over Internet Protocol (VOIP) phone systems; acquisition of printers, scanners, and copiers. If "Yes," this initiative is not required to complete the Project Approval Lifecycle. Please report this workload on the Agency Portfolio Report.	○ Yes ◉ No ○ Clear
5. Is the primary objective of the project to acquire desktop and mobile computing commodities as defined by SAM Section 4819.34, 4989? If "Yes," this initiative is a non-reportable project. Approval of the Project Approval Lifecycle is delegated to the head of the state entity. Submit a copy of the completed, approved Stage 1 Business Analysis to the CDT and track the initiative on the Agency Portfolio Report.	○ Yes ◉ No ○ Clear
6. Does the project meet all the criteria for Commercial-off-the-Shelf (COTS) Software and Cloud Software-as-a-Services (SaaS) delegation as defined in SAM 4819.34, 4989.2 and SIMM 22? If "Yes," this initiative is a non-reportable project. Approval of the Project Approval Lifecycle is delegated to the head of the state entity; however, submit an approved SIMM Section 22 form to CDT.	○ Yes ◉ No ○ Clear
7. Will the project require a Budget Action to be completed?	○ Yes ◉ No ○ Clear
8. Is it anticipated that the project will exceed the delegated cost threshold assigned by CDT as identified in SIMM 10?	○ Yes ◉ No ○ Clear
9. Are there any previously imposed conditions place on the state entity or this project by the CDT (e.g., Corrective Action Plan)? If "Yes," provide the details regarding the conditions below.	○ Yes ◉ No ○ Clear

10. Is the system specifically mandated by legislation?	○ Yes ◉ No ○ Clear

Department of Technology Use Only

Original "New Submission" Date	7/30/2020	
Form Received Date	12/15/2020	
Form Accepted Date	12/15/2020	
Form Status	Completed	
Form Status Date	2/22/2021	
Form Disposition	Approved	If "Other," specify:
Form Disposition Date	2/22/2021	