Stage 2 Alternatives Analysis

California Department of Technology, SIMM 19B.2 (Ver. 3.0.7, 02/28/2022)

2.1 General Information

1. **Agency or State Entity Name:** 3970 - Resources Recycling and Recovery, Department of

   If Agency/State entity is not in the list, enter here with the organization code.

   Click or tap here to enter text.

2. **Proposal Name:** CalRecycle Integrated Information System (CRIIS)

3. **Department of Technology Project Number (0000-000):** 3970-021

4. **S2AA Version Number:** Version 1

5. **CDT Billing Case Number:** CS0060856

   Don't have a Case Number? Click here to get one.

2.2 Submittal Information

1. **Contact Information**

   Contact Name: Anamika Singh

   Contact Email: anamika.singh@calrecycle.ca.gov

   Contact Phone: 916-327-3044

2. **Submission Type: New Submission**

   If Withdraw, select Reason: Choose an item.

   If Other, specify reason here: Click or tap here to enter text.

   Sections Changed if an update or resubmission: (List all the sections that changed.)

   Click or tap here to enter text.

   Summary of Changes: (Summarize updates made.)

   Click or tap here to enter text.

3. **Attach Project Approval Executive Transmittal to your email submission.**

4. **Attach Procurement Assessment Form to your email submission.**

5. **Conditions from Stage 1 Approval** (Enter any conditions from the Stage 1 Business Analysis approval letter issued by CDT or your AIO):

   Approved

2.3 Baseline Processes and Systems

1. **Current Business Environment (Describe the current business environment of which the effort will be understood and assessed in 500 words)**

   CalRecycle was formed in 2010 with the merger of California's Integrated Waste Management Board (CIWMB) and the Division of Recycling (DOR) from the Department of Conservation. Together, they administer recycling and waste management programs established by legislation to regulate Bottles and Cans, E-Waste, Used Oil, Used Tires, Mattresses, Paint, Pharmaceuticals, Food Containers, etc. Historically, each new legislative bill has spawned a new program and a new IT application to support it. CalRecycle currently has over 30 of these siloed applications.

   The current applications consist of 12 major functions or business processes:

   1. Report Submission
   2. Entity Management
   3. Compliance
   4. Financial
   5. GIS Mapping
   6. Grants & Loans
   7. Education
   8. Data Analysis
   9. Communication
   10. Publication
   11. Site Visits
   12. Product Management

   These major functions are shared by many of the applications. The lack of a consolidated system prevents the programs from easily sharing information and adopting new technologies and best practices from their sister programs.

   The **attached As-Is document** defines these functions and their subfunctions in greater detail and identifies the overlap between the different applications. The document also contains Visio documents describing the business process for each of the major functions.

2. **Technical Context (Describe the technical environment of which the effort will be understood and assessed in 500 words)**

   The CRIIS project includes one vendor supported application, DORIIS, which is hosted at CDT's Gold Camp facilities Tenant Managed Services. The Disaster Recovery environment is hosted at the CalEPA data center. Both environments are running on virtualized Solaris LDOM environments. The DORIIS system is built on Oracle's E-Business Suite and maintained by Serrano. All other CalRecycle systems that are part of the CRIIS project are also hosted at Gold Camp (production) and CalEPA (disaster recovery). These systems are running on virtualized MS Hyper-V environments. These systems are built on a shared MS Framework referred to as R3 and its predecessor SasCORE dating from the very early 2000's. Both the framework and systems were designed and maintained by CalRecycle using the MS .Net programming language.

   Sample documentation for one of the CalRecycle system's – SWIS is attached. The environmental diagram is representative of all other R3 systems, as is the supporting documentation. Also, the environmental and data flow for DORIIS is attached. We also include a single sample of the documentation supporting the business rules, which represents less than 1% of the documented business rules. The attachments are representative of the information captured for the approximately 31 current systems included within the CRIIS project scope.

   Attach relevant documentation to email submission (i.e., logical system environment diagrams, system interactions, business rules, application flows, stakeholder information, data flow charts). If these types of documents are not available, please indicate "Not Available," and explain the reason below:

   Not available reason: Click or tap here to enter text.

3. **Data Management (Enter the information to indicate the data owner and custodian of the current system, if applicable.)**

   Data Owner Name: Multiple Data Owners, see 2.3.5 Attachment (31 systems)

   Data Owner Title: Multiple, see 2.3.5 Attachment.

   Data Owner Business Program area: Multiple, see 2.3.5 Attachment.

   Data Custodian Name: Multiple, see 2.3.5 Attachment.

   Data Custodian Title: Multiple, see 2.3.5 Attachment.

   Data Custodian Technical area: Multiple, see 2.3.5 Attachment.

   Security - Data Classification and Categorization Yes

   Security - Privacy Threshold & Impact Assessment. No This work is currently underway but not complete for all systems.

4. Existing Data Governance and Data

a) Do you have existing data that must be migrated to your new solution?

Answer (Unknown, Yes, No): Yes

If data migration is required, please rate the quality of the data.

Select data quality rating: Few issues identified with the existing data.

b) Does the Agency/state entity have an established data governance body with well-defined roles and responsibilities to support data governance activities?

Answer (Unknown, Yes, No): No

If Yes, include the data governance organization chart as an attachment to your email submission.

Note: CalRecycle is currently developing a data governance body as part of a larger Data Governance effort.

c) Does the Agency/state entity have data governance policies (data policies, data standards, etc.) formally defined, documented, and implemented?

Answer (Unknown, Yes, No): No

If Yes, include the data governance policies as an attachment to your email submission.

Note: CalRecycle is currently developing data governance policies as part of a larger Data Governance effort.

d) Does the Agency/state entity have data security policies, standards, controls, and procedures formally defined, documented, and implemented?

Answer (Unknown, Yes, No): Yes

If Yes, attach the existing documented security policies, standards, and controls used to your email submission.

e) Does the Agency/state entity have user accessibility policies, standards, controls, and procedures formally defined, documented, and implemented?

Answer (Unknown, Yes, No): Yes

If Yes, attach the existing documented policies, accessibility governance plan, and standards used to the email submission.

5. Security Categorization Impact Table

Consult the SIMM 5305-A Information Security Program Management Standard - Security Categorization Impact Table.

Attach a table (in PDF) that categorizes and classifies the agency/state entity's information assets related to this effort (e.g., paper and electronic records, automated files, databases requiring appropriate protection from unauthorized use, access, disclosure, modification, loss,

or deletion). Each information asset for which the agency/state entity has ownership responsibility shall be inventoried and identified.

6. **Security Categorization Impact Table Summary**

   Consult the SIMM 5305-A Information Security Program Management Standard - Security Categorization Impact Table to provide potential impact levels of the following areas:

   Confidentiality: Medium

   Integrity: Medium

   Availability: Medium

7. **Technical Complexity Score: Business Complexity 3.5; Technical Complexity 3.3 - Zone IV**

   (Attach a SIMM Section 45 Appendix C with Business and Technical Complexity sections completed to the email submission.)

2.4 Requirements and Outcomes

At this time in the project planning process, requirements and outcomes should be documented and indicative of how the Agency/State Entity envisions the final solution. This shall be accomplished either in the form of mid-level requirements (predictive methodology)/business capabilities or representative epics and user stories (adaptive methodology) that will become part of the product backlog. The requirements or representative epics and user stories must tie back to the Objectives detailed in the Stage 1 Business Analysis. Regardless of which tool/method is used, an understanding of the following, at a minimum, must be clearly articulated:

- Functional requirements
- Expected user experience(s)
- Expected system outcome
- Expected business operations (e.g., How do you envision operations in the future?)
- Alignment to the project's objectives identified in Stage 1
- Product ownership (e.g., Who owns these requirements?); and
- Verification of need(s) fulfillment (e.g., How will success be measured?)

Tip: If providing requirements, the recommended range of requirements is between 50 and 100.

Attach Requirements and/or Outcomes narratives, mid-level requirements, and/or epics/user stories to submission email.

The attached Future State document describes

2.5 Assumptions and Constraints

Relevant assumptions and constraints help define boundaries and opportunities to shape the scope and complexity of the project.

Assumption: The SaaS or PaaS alternatives will have a shorter implementation than a custom build.

Description/Potential Impact:

Assumption: The CRIIS solution will interface with existing and new third-party systems.

Description/Potential Impact: CalRecycle's 31 systems currently interface with external systems, including FI$Cal, GIS, API online payment, and others.

Assumption: CalRecycle will secure funding for the CRIIS solution.

Description/Potential Impact: The CRIIS project is dependent on DOF's approval through the BCP process.

Assumption: The implementation will involve concurrent development with external stakeholder system updates.

Description/Potential Impact: External stakeholders will need to re-evaluate and potentially update their systems/reporting for ability to upload data to CRIIS system (e.g., certified processors send "DR7" data through DORIIS currently based on what is collected in their individual systems)

Assumption: The CRIIS implementation will occur in a phased approach.

Description/Potential Impact: A phase approach will benefit CRIIS implementation for this significant number of systems and programs involved.

Assumption: Executives and Deputy Directors must continue to be visible sponsors and supporters through active participation in steering committee(s) and core team.

Description/Potential Impact: Many currently separate programs fall under the CRIIS project, which requires an enterprise approach to making decisions. The project will need the ability to make quick executive decisions using the CRIIS Governance Management Plan. If this assumption is not correct, the project may not achieve user acceptance.

Assumption: Appropriate staff will have availability to complete assigned tasks within planned timeframes.

Description/Potential Impact: CRIIS recognizes that some critical resources may need to focus on operational work, e.g., quarterly reporting, annual applications. CRIIS will schedule work as needed to avoid impacting operational work. CRIIS will also secure expert resources full-time on the project.

Assumption: The State will be responsible for the larger data cleansing and data transformation with support from the solution vendor.

Description/Potential Impact: CalRecycle understands current state data and is best positioned to review and clean current data before extracting, transforming, and loading to a new system. Data cleansing benefits CalRecycle immediately and is planned to start in calendar year 2023. This assumption was identified during market research with CDT and external entities. Data conversion will be the responsibility of the chosen solution integrator. If this assumption is not correct then there will be a potential impact to schedule and cost.

Assumption: Various Assumptions and Constraints related to Project Management.

Description/Potential Impact: The CRIIS Project Management Plan and each subsidiary plan identifies assumptions and constraints relative to each area of project management. Refer to each plan for the specific assumptions and constraints identified. These assumptions and constraints were identified during the development of the various project plans. If these assumptions and constraints are not true or addressed, the project schedule; cost and quality will be impacted.

Assumption: Legislative and regulatory updates will occur during the span of the CRIIS project.

Description/Potential Impact: Depending on the legislative/regulatory outcomes, the result may impact schedule, scope, and/or cost.

Assumption: CalRecycle will have a continuous need for hiring to fill vacant positions through turnover.

Description/Potential Impact: CalRecycle will follow the standard recruitment and hiring process to backfill behind vacant positions.

Constraint: State laws, rules, regulations may define policies, procedures, processes, and requirements for the solution that may change multiple time during the course of the project.

Description/Potential Impact: Each year, several bills have the potential to alter how information is collected, what and when data collected, and extending CalRecycle's oversight role.

Constraint: The PAL Stage 3 and Stage 4 timeline roughly spans through January 2024.

Description/Potential Impact: If the Stage 3-4 timeline expands beyond, the project's key funding may be at risk (e.g., Spring BCP internal development occurs in January for the next fiscal year).

Constraint: CRIIS relies on approved funding through the annual DOF budget process.

Description/Potential Impact: Funding for the project will have to be requested and approved through the DOF. Failure to receive adequate funding puts the project timeline at risk and threatens the ability to deliver the project scope. This constraint is ongoing, throughout each stage of the project. The project is a reportable project and relies on funding approved by DOF. If this constraint is not addressed the project faces complete failure.

Constraint: CRIIS subject matter expert resources are available to the project.

Description/Potential Impact: The project would be at risk of stalling or missing alignment with key functionality needs if the appropriate SMEs are unable to participate in the project.

Constraint: One or more vendors are capable and willing to implement the CRIIS solution.

Description/Potential Impact: The CRIIS project cannot proceed without a competent vendor performing the CRIIS system implementation.

TIP: Copy and paste to add Assumptions/Constraints with Descriptions/Impacts as needed.

2.6 Dependencies

Dependencies are elements or relationships in a project reliant on something else occurring before the function, service, interface, task, or action can begin or continue.

Dependency Element: The project team must be able to work with SMEs, often during recurring meetings.

> **Dependency Description**: Staff availability for project activities is critical. Staff time for project must be prioritized with normal work activities.

Dependency Element: Any required regulation changes may impact currently identified functionality needs.

> **Dependency Description**: CalRecycle may not be the decision owner for all regulatory changes. Some changes may rely on the decisions of other regulatory departments or boards.

Dependency Element: Availability and accuracy of cost data from vendors for planning purposes.

> **Dependency Description**: Sufficient cost data is required to develop FAW worksheets and accurate cost estimates.

Dependency Element: Vendor will train users on access and navigation of the solution.

> **Dependency Description**: Vendors commonly provide “train the trainers” for knowledge transfer. A lack of training quality risks the knowledge transfer process.

Dependency Element: The CRIIS project requires data cleanup, and validation for migration.

> **Dependency Description**: Data preparation for migration is dependent on the current effort, which includes documenting business rules, current data dictionaries, and other critical tasks in getting to a final data conversion and migration state.

Dependency Element: The CRIIS project requires data migration.

> **Dependency Description**: CalRecycle will migrate the data from approximately 31 separate systems in preparation for the system integrator onboarding.

TIP: Copy and paste to add Dependency Elements and Descriptions as needed.

2.7 Market Research

Market Research (CDT Market Research Guidelines) determines whether products or services available in the marketplace can meet the business needs identified in this proposal. Market Research can also determine whether commercial practices regarding customizing/modifying products or tailoring services are available, or even necessary, to meet the business needs and objectives of the business.

Before undertaking a Market Research approach. Contact your PAO Manager to schedule a collaborative review to review planning to date and discuss the procurement approach.

1. **Project Management Methodology:** Hybrid

2. **Procurement approach recommended:** Standard Procurement

3. **Market Research Approach**

   Provide a concise narrative description of the approach used to perform market research.

The CRIIS Project Team performed three phases of research. Each phase became more focused, based on the knowledge gained from the prior phase. Market research was carried out between September 2022 and January 2023. The CRIIS Project Team involved in market research included technical staff, business analysts, IT Services management, and executive leadership.

During the first phase, the team performed exploratory research that included internet research and outreach to other states to help understand possible solution options, trends, and other information. This phase also included reviewing the CRIIS Project portfolio of systems and programs (elements of 2.3 Baseline Processes and Systems tasks). During this phase the team was able to define a future state vision and define initial mid-level requirements (elements of 2.4 Requirements and Outcomes).

The second phase built off the first phase, shifting to qualitative research. This phase included development and issuance of a request for information (RFI). Releasing the RFI allowed for more targeted inquiries to the broader vendor community. The CRIIS project team reviewed RFI responses, performed follow-up interviews, observed demonstrations, and obtained additional clarifying information from vendors.

In the final phase the team synthesized results from the broad research and vendor solution information. During this phase the team was better able to understand implementation methodologies, potential benefits and risks of each solution type, and rough order of magnitude costs for each alternative.

The team also reached out to experts for more information regarding targeted software products and platforms. These experts provided insight into the technical aspects of the solutions, additional costing considerations, and additional information that improved the team's understanding of the marketplace. To note, these experts were outside the potential vendor pool that would vie for the primary CRIIS procurement.

The results of this market research allowed the team to re-evaluate the initial set of 292 functional requirements and determine a small subset that no longer were applicable. The results also informed the team strategy for future implementation, including level of effort estimates for program and IT resources, and subsequent buildout of the Financial Analysis Worksheets (FAWs). Finally, the results of the market research allowed the team to confidently determine the best alternative(s) strategy to meet CalRecycle's needs, which is currently a flexible approach that allows for either of the top two alternatives to be considered within the later PAL stages.

4. **Market Research Artifacts**

   Market Research Artifacts can include internet research, collaboration with other governmental entities, or other documentation.

   Attach Market Research artifacts to the email submission.

2.8 Viable Alternative Solutions

The CDT expects Agencies/state entities to conduct a thorough analysis of all feasible alternatives that will meet the proposal's objectives and requirements. Agencies/state entities should provide at minimum the three (3) most viable solutions, one (1) of which could be leveraging and/or enhancing the existing solution (if applicable).

1. **Viable Alternative Solution #1**

Name: Software as a Service (SaaS)

Description: Software as a service (SaaS) is software that is owned, delivered and managed remotely by one or more providers. The provider delivers software based on one set of common code and data definitions that is consumed in a one-to-many model by all contracted customers at anytime on a pay-for-use basis or as a subscription based on use metrics.

Why is this a viable solution? Please explain:

- Consistent with CDT and CalRecycle directives
- Flexibility with back-end database components
- Fastest option to implement
- Many vendors and options available for adding modules to underlying SaaS solutions
- Marketplace includes well-established solution foundations
- Less dependency on single vendor for M&O support

Approach

Increase staff – new or existing capabilities: Yes

Modify the existing business process or create a new business process: Yes

Reduce the services or level of services provided: No

Utilize new or increased contracted services: Yes

Enhance the existing IT system: No

Modify Statute/Policy/Regulations: No

Please Specify: The system is to assist in the implementation/enforcement of existing Statute/Policy/Regulations.

Create a new IT system: Yes

Other: No Specify: Click or tap here to enter text.

Architecture Information

Data Analysis
Entity Management
Product Management
Grants & Loans

Report Submission
Education
Compliance
GIS Mapping
Communications
Financials
Site Visit
Publication

TIP: Copy and paste or click the + button in the lower right corner to add business processes with the same application, system, or component; COTS/Cloud Technology or custom solution; runtime environment; system interfaces, data center location; and security.

Conceptual Architecture

Refer to document "2.8 Alternative Solutions conceptual architecture diagrams.docx"

Attach a copy of the conceptual architecture to your email submission.

COTS/SaaS/Cloud Technology or Custom: COTS/SaaS/Cloud Technology

Name/Primary Technology: SaaS

TIP: Copy and paste or click the + button in the lower right corner to add system software information if the application, system, or component uses additional system software.

Explain Existing System Interfaces: Fi$Cal (Sending/receiving of accounting data), ESRI (GIS analysis, coordinate mapping and map display)

Explain New System Interfaces: Fi$Cal (Sending/receiving of accounting data), ESRI (GIS analysis, coordinate mapping and map display)

Data Center Location of the To-be Solution: Commercial data center

If Other, specify: Click or tap here to enter text.

Security

Access

Public: Yes

Internal State Staff: Yes

External State Staff: Yes

Other: Yes Specify: Local Government

Type of Information (Select Yes or No for each to identify the type of information that requires protection. See the SAM Section 5305.5 for more information.)

Personal: Yes

Health: No

Tax: Yes

Financial: Yes

Legal: No

Confidential: Yes

Other: No Specify: Click or tap here to enter text.

Protective Measures (Select Yes or No to identify the protective measures used to protect information.)

Technical Security: Yes

Physical Security: Yes

Backup and Recovery: Yes

Identity Authorization and Authentication: Yes

Other, specify: Click or tap here to enter text.

Total Viable Alternative #1 Solution Cost (copy from FAW – Executive Cost Summary tab, cells E7 through E11):

Planning Costs: $3,562,250

One-Time (Project) Costs: $59,119,206

Total Future Ops. IT Staff OE&E Costs: 18,847,067

Total Proposed Cost: $81,528,523

Annual Future Ops. Costs (M&O): $12,687,681

2. Viable Alternative Solution #2

Name: Platform as a Service (PaaS)

Description: Platform as a service (PaaS) is a type of cloud offering that delivers application infrastructure (middleware) capabilities as a service. There are multiple types of PaaS (xPaaS), including, among many more, application platform as a service (aPaaS), integration PaaS (iPaaS), API management PaaS (apimPaaS), function PaaS (fPaaS), business analytics PaaS (baPaaS), IoT PaaS and database PaaS (dbPaaS). PaaS capability can be delivered as provider-managed or self-managed, multitenant or dedicated.

Why is this a viable solution? Please explain:

- Highly customizable solutions to align to program needs (e.g., legislative changes)
- Provides upgraded platform for future application development
- Potentially low/no licensing costs, depending on solution

Approach

Increase staff – new or existing capabilities: Yes

Modify the existing business process or create a new business process: Yes

Reduce the services or level of services provided: No

Utilize new or increased contracted services: Yes

Enhance the existing IT system: No

Modify Statute/Policy/Regulations: No

Please Specify: The system is to assist in the implementation/enforcement of existing Statute/Policy/Regulations.

Create a new IT system: Yes

Other: No Specify: Click or tap here to enter text.

Architecture Information

Data Analysis
Entity Management
Product Management
Grants & Loans
Report Submission
Education
Compliance
GIS Mapping
Communications
Financials
Site Visit
Publication

TIP: Copy and paste or click the + button in the lower right corner to add business processes with the same application, system, or component; COTS/Cloud Technology or custom solution; runtime environment; system interfaces, data center location; and security.

Conceptual Architecture

Refer to document "2.8 Alternative Solutions conceptual architecture diagrams.docx"

Attach a copy of the conceptual architecture to your email submission.

COTS/SaaS/Cloud Technology or Custom: COTS/SaaS/Cloud Technology

Name/Primary Technology: TBD

TIP: Copy and paste or click the + button in the lower right corner to add system software information if the application, system, or component uses additional system software.

Explain Existing System Interfaces: Fi$Cal (Sending/receiving of accounting data), ESRI (GIS analysis, coordinate mapping and map display)

Explain New System Interfaces: Fi$Cal (Sending/receiving of accounting data), ESRI (GIS analysis, coordinate mapping and map display)

Data Center Location of the To-be Solution: Commercial data center

If Other, specify: Click or tap here to enter text.

Security

Access:

Public: Yes

Internal State Staff: Yes

External State Staff: Yes

Other: Yes Specify: Local Government

Type of Information (Select Yes or No for each to identify the type of information that requires protection. See the SAM Section 5305.5 for more information.)

Personal: Yes

Health: No

Tax: Yes

Financial: Yes

Legal: No

Confidential: Yes

Other: No Specify: Click or tap here to enter text.

Protective Measures (Select Yes or No to identify the protective measures used to protect information.)

Technical Security: Yes

Physical Security: Yes

Backup and Recovery: Yes

Identity Authorization and Authentication: Yes

Other, specify: Click or tap here to enter text.

Total Viable Alternative #2 Solution Cost (copy from FAW – Summary tab, cell AL33):

Total Proposed Cost: $64,756,401

3. **Viable Alternative Solution #3**

Name: Custom

Description: Custom Off-The-Shelf (COTS) : Software that is built and maintained by a 3rd party vendor. The software can be purchased or leased. Given the consumer the right to install and

operate the software. Consumer is responsible for the management and configuration of the software.

Why is this a viable solution? Please explain:

- Solution can most closely meet all potential requirements

Approach

Increase staff – new or existing capabilities: Yes

Modify the existing business process or create a new business process: Yes

Reduce the services or level of services provided: No

Utilize new or increased contracted services: Choose Yes or No.

Enhance the existing IT system: No

Modify Statute/Policy/Regulations: No

Please Specify: The system is to assist in the implementation/enforcement of existing Statute/Policy/Regulations.

Create a new IT system: Yes

Other: No Specify: Click or tap here to enter text.

Architecture Information

Business Function(s)/Process(es):

Data Analysis
Entity Management
Product Management
Grants & Loans
Report Submission
Education
Compliance
GIS Mapping
Communications
Financials
Site Visit
Publication

TIP: Copy and paste or click the + button in the lower right corner to add business processes with the same application, system, or component; COTS/Cloud Technology or custom solution; runtime environment; system interfaces, data center location; and security.

Conceptual Architecture

Refer to document “2.8 Alternative Solutions conceptual architecture diagrams.docx”

Attach a copy of the conceptual architecture to your email submission.

COTS/SaaS/Cloud Technology or Custom: Custom

Name/Primary Technology: Microsoft .Net

TIP: Copy and paste or click the + button in the lower right corner to add system software information if the application, system, or component uses additional system software.

Explain Existing System Interfaces: Fi$Cal (Sending/receiving of accounting data), ESRI (GIS analysis, coordinate mapping and map display)

Explain New System Interfaces: Fi$Cal (Sending/receiving of accounting data), ESRI (GIS analysis, coordinate mapping and map display)

Data Center Location of the To-be Solution: Commercial data center

If Other, specify: Click or tap here to enter text.

Security

Access:

Public: Yes

Internal State Staff: Yes

External State Staff: Yes

Other: Yes Specify: Local Government

Type of Information (Select Yes or No for each to identify the type of information that requires protection. See the SAM Section 5305.5 for more information.)

Personal: Yes

Health: No

Tax: Yes

Financial: Yes

Legal: No

Confidential: Yes

Other: No Specify: Click or tap here to enter text.

Protective Measures (Select Yes or No to identify the protective measures used to protect information.)

Technical Security: Yes

Physical Security: Yes

Backup and Recovery: Yes

Identity Authorization and Authentication: Yes

Other, specify: Click or tap here to enter text.

Total Viable Alternative #3 Solution Cost (copy from FAW – Summary tab, cell AL50):

Total Proposed Cost: N/A – not currently a viable solution

2.9 Project Organization

Project planning includes the process of identifying how and when specific labor skill sets are needed to ensure that the proposed project has sufficient staff with the appropriate knowledge and experience by the time the project moves into execution. All staff identified in the following sections should be included in the Financial Analysis Worksheet to be completed in Section 2.12.

1. **Project Organization Chart:**

   Attach the Project Organization Chart to your email submission.

2. **Is the department running this project as a matrixed or projectized organization?**

   Matrixed

In each of the following sections, provide a concise description of the approach to staffing the proposed project including contingencies for business/program, IT, or administrative areas to maintain ongoing operations in conjunction with the proposed project.

1. **Administrative**

   Administrative activities associated with the CRIIS project include procurement, contract management, and budget activities. The CRIIS project will leverage existing staff to perform project related activities. CalRecycle commits the staff to support the CRIIS project as its top priority project, which may include roughly 10-15% PYs of select individuals time to perform needed administrative tasks. These individuals have the procurement, contract management, and budget experience needed for a project of this size.

2. **Business Program**

   This project will include involvement from select SMEs within each program area at the department for requirements gathering, data governance, solution development, user acceptance testing, and other project implementation efforts. Individual SMEs will be utilized during one or more of the implementation phases, with key SMEs engaged between 1% and 50% PY, dependent on the implementation phase and with regard to existing operations. During this time, the SMEs/core members may engage additional program resources to assist with specific topic discussions and reviews to ensure minimal impacts to existing program activities. Significant changes to processes are not expected though programs will participate in OCM related to new solution adoption and data convergence.

3. **Information Technology**

   Four new full time staff positions are dedicated to this project. In addition, a larger IT services team is engaged up to 45 percent per PY to participate and support the project. Existing staff

responsibilities will shift from current systems support (i.e., enhancement efforts) to future system implementation.

4. Testing

The CRIIS project will utilize current staff to perform testing activities. CalRecycle commits both the program and IT staff to support the CRIIS project as their primary focus, which may include roughly 25-50% of their time during testing cycles. Both program and IT have completed scores of system enhancements and the delivery of new systems. System testing will be completed by the solution integrator (SI) for handoff to CalRecycle IT for completion of integration testing. User acceptance testing will be coordinated by CalRecycle IT with the support of program staff from all divisions as functional areas are completed. As new capabilities are added, regression testing will be completed by both the SI and CalRecycle IT, Performance testing to be completed by the SI and security testing by CalRecycle IT and ISO will be performed at milestone/phase gate completion points.

5. Data Conversion/Migration

CalRecycle's enterprise architect, database architect, business analyst, software architect, and other key IT resources are committed to performing the needed data conversion and migration activities. CalRecycle will migrate existing data from all systems into a single database for use by the solution integrator. Statutory requirements for each program as well as CalRecycle retention policies require the conservation of historical data. The data migration will be a phased approach migrating four systems into a single database with each phase adding all systems over the next year. A data governance committee comprised of the branch managers from CalRecycle's divisions will establish data standards and data definitions for all programs to converge disparate data elements during the migration. This will result in a single standardized database for use by the vendor to migrate CalRecycle data to the new CRIIS solution.

6. Training

CalRecycle will utilize multiple training methods during system implementation. Training is also dependent on solution vendor offerings. Vendor will be expected to provide user and technical documentation and provide business and technical training. Team to utilize 'train the trainer' and other training mediums. Will also have in-house development staff train from solution vendors. Team plans to use Organizational Change Management (OCM) vendor to assist with training planning and execution. Training may be provided on-site or remotely based on vendor capabilities.

Department will leverage its procurement officials, CDT STP, PAL support PM/BA team, and others to provide the appropriate guidance and support during the proposal development and execution. CalRecycle will follow internal procurement procedures in addition to those of the CDT and DGS. CalRecycle will also leverage leading practices utilized by the PAL support PM/BA contractor. These key resources will provide training and guidance to the team,

supporting the overall goal of developing a solid and qualified procurement vehicle for the CRIIS solution.

7. Organizational Change Management

The Department plans to leverage use of outside resources to support organizational change management for the CRIIS project with expertise in this area. Stakeholder management is critical in successfully transitioning to a new solution, as the CRIIS project impacts resources throughout CalRecycle including each of its divisions. The project will also impact thousands of external entities, including state agencies, local governments, manufacturers, producers, processors, recyclers, and others.

Focused OCM activities will start during planning stages (Stage 3 and Stage 4) of the CRIIS project, and complete during the stabilization phase of project implementation. The OCM effort will include knowledge transfer to CalRecycle staff for continuity after project completion.

8. Resource Capacity/Skills/Knowledge for Stage 3 Solution Development

This narrative should include the experience level and quantity of procurement, contract management, and budget staff who will be responsible for the Stage 3 Solution Development.

The CRIIS project will leverage existing staff to perform project related procurement, contract management, and budget activities. CalRecycle will utilize its procurement officials, CDT, STP, PAL support PM/BA team, and others to provide the appropriate guidance and support. CalRecycle commits the staff to support the CRIIS project as its top priority project, which may include roughly 10-15% PYs of select individuals' time to perform needed administrative tasks. CalRecycle will also leverage leading practices utilized by the PAL support PM/BA contractor. These key resources will provide training and guidance to the team, supporting the overall goal of developing a solid and qualified procurement vehicle for the CRIIS solution. The CalRecycle team in collaboration with the PAL support PM/BA contractor, STP, and CDT will have the procurement, contract management, and budget experience needed for a project of this size.

The purchasing policies of the Department of Resources Recycling and Recovery (CalRecycle) are adopted to form compliance with a variety of statutory and policy provisions found in the State of California statutory codes (i.e., Public Contract Code (PCC), Government Code (GC), etc.); Department of Finance (DOF) policy; Department of General Services (DGS) policy.

Procurement related decision-making criteria is located in both the Governance Management Plan and will as well be addressed in the Procurement Management Plan.

CalRecycle's procurement office has experience working in the STP Streamlined Template.

CalRecycle's procurement office is familiar with the protest types and use of Public Contract Code (PCC) 6611.

2.10 Project Planning

1. **Project Management Risk Assessment**

   Updated Project Management Risk Score: 2.0

   Attach Updated PM Risk Assessment to your email submission. SIMM Section 45A

2. **Project Charter**

   Is your project charter approved by the designated Agency/state entity authority and available for the Department of Technology to review? **Choose**: 'Yes,' 'No,' or 'Not Applicable.' If 'No' or 'Not Applicable,' provide the artifact status in the space provided.

   Project Charter (Approved): Yes

   Status: Approved

   Attach a copy of the Project Charter to your email submission.

3. **Project Plans**

   Are the following project management plans or project artifacts approved by the designated Agency/state entity authority and available for the Department of Technology to review? **Choose**: 'Yes,' 'No,' or 'Not Applicable.' If 'No' or 'Not Applicable,' provide the artifact status in the space provided.

   Note: For Low to medium complexity and cost projects, discuss with your PAO manager the option of submitting a Master Project Management Plan in place of individual plans.

   Scope Management Plan (Approved): Yes

   Status: Approved

   Communication Management Plan (Approved): Yes

   Status: Approved

   Schedule Management Plan (Approved) : Yes

   Status: Approved

   Procurement Management Plan (Approved): Yes

   Status: Approved

   Requirements Management Plan (Approved): Yes

   Status: Approved

   Stakeholder Management Plan (Draft): Yes

   Status: Draft Approved

   Governance Plan (Draft): Yes

Status: Draft Approved

Contract Management Plan (Draft): Yes

Status: Draft Approved

Resource Management Plan (Draft): Yes

Status: Draft Approved

Change Control Management Plan (Draft): Yes

Status: Draft Approved

Risk Management Plan (Draft + Risk Log): Yes

Status: Draft Approved

Issue and Action Item Management Plan (Draft + Issue Log): Yes

Status: Draft Approved

Cost Management Plan (Approved if planning BCP approved): Yes

Status: Approved

4. **Project Roadmap (High-Level)**

   Attach a high-level Project Roadmap showing remainder of planning phase and transition into execution phase to the email submission.

   a) Planning Start Date: 1/29/2021

   b) Estimated Planning End Date: 1/31/2024

   c) Estimated Project Start Date: 1/31/2024

   d) Estimated Project End Date: 1/31/2027

2.11 Data Cleansing, Conversion, and Migration

If in Section 2.3 (above) the answer to the question "Do you have existing data that must be migrated to your new solution?" was marked "Yes," please complete this section.

The California Department of Technology recommends having a Data Consultant start data cleansing, conversion, and migration activities as soon as possible.

Identify the status of each of the following data activities. If "Not Applicable" is chosen, explain why the activity is not applicable or if "Not Started" is chosen, explain when the activity will start and its anticipated duration:

1. **Current Environment Analysis: In Progress**

   - Enterprise Relationship Diagrams complete for 90% of systems.
   - Data Element Dictionaries are complete for 15% of systems.

2. **Data Migration Plan: In Progress**

   POC for initial migration of first four systems into a single data repository is 55% complete.

3. **Data Profiling: In Progress**

   - Enterprise Relationship Diagrams complete for 90% of systems.
   - Data Element Dictionaries are complete for 15% of systems.

4. **Data Cleansing and Correction: Not Started**

   Data cleansing and correction activities set to begin when 50% of Data Element Dictionaries have been completed. Work is anticipated to complete in parallel with the Data Migration activities by the end of this calendar year 2023.

5. **Data Quality Assessment: Not Started**

   Data quality assessment activities set to begin when 50% of Data Element Dictionaries have been completed. Work is anticipated to complete in parallel with the Data Migration activities by the end of this calendar year 2023.

6. **Data Quality Business Rules: Not Started**

   Data Quality Business rules will be created by the Data Governance group. Work is anticipated to begin in March 2023 and should be completed by the end of Stage 3 in this calendar year 2023.

7. **Data Dictionaries: In Progress**

   Data Element Dictionaries are complete for 15% of systems

8. **Data Conversion/Migration Requirements: In Progress**

   POC for initial migration of first four systems into a single data repository is 55% complete.

2.12 Financial Analysis Worksheets

Attach F.2 Financial Analysis Worksheet(s) to the email submission.

End of agency/state entity document.

Please ensure ADA compliance before submitting this document to CDT.

When ready, submit Stage 2 and all attachments in an email to ProjectOversight@state.ca.gov.

Department of Technology Use Only

Original "New Submission" Date: 2/28/2023

Form Received Date: 3/1/2023

Form Accepted Date: 3/1/2023

Form Status: Completed

Form Status Date: 3/30/2023

Form Disposition: Approved

Form Disposition Date: 3/30/2023