



Stage 2 Alternatives Analysis

California Department of Technology, SIMM 19B.2 (Ver. 3.0.8, 02/28/2022)

2.1 General Information

1. **Agency or State Entity Name:** 3480 - Conservation, 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:** Division of Mine Reclamation SMARA-4

3. **Department of Technology Project Number (0000-000):** 3480-052

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

5. **CDT Billing Case Number:** CS0055186

Don't have a Case Number? [Click here to get one.](#)

2.2 Submittal Information

1. **Contact Information**

Contact Name: Sujit Smile

Contact Email: sujit.smile@conservation.ca.gov

Contact Phone: 916-261-2918

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.

- 3480-052-0020 - DMR SMARA-4 - 19G.1-Project-Approval-Executive-Transmittal

4. Attach [Procurement Assessment Form](#) to your email submission.

- 3480-052-0030 - DMR SMARA-4 – 19B.5-STP-Procurement-Assessment

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

None.

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)**

The California Department of Conservation's (DOC) Division of Mine Reclamation (DMR) is responsible for ensuring proper administration of the Surface Mining and Reclamation Act (SMARA) of 1975. The California Legislature enacted SMARA to address the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. At a high level, this is achieved by mine operators establishing adequate financial assurances with DMR and the appropriate regional lead agencies. These financial assurances serve as proof that the mine operators have both plans and means to reclaim the mines once they finish mining, or at least equip the lead agencies with the funds to reclaim in the event an operator cannot. DMR provides ongoing scientific technical (i.e., geological, environmental, ecological, etc.) assistance to both lead agencies and operators, collects annual reports and fees, maintains a statewide database of mine locations and operational information, and is responsible for compliance related matters.

In the process of establishing a mine, mine operators submit a reclamation plan to their regional lead agency. After the lead agency reviews it, the reclamation plan is submitted to DMR for review and comment, which enables DMR to lend its technical expertise to lead agencies and help apply SMARA rules uniformly statewide. When the mine is eventually permitted by the lead agency, the mine operator submits an initial report to DMR and this begins the cycle of annual reporting. Every year, the mine must be inspected by the lead agency and that inspection report is provided to DMR. In conjunction with the inspection report, mine operators submit their annual financial assurance cost estimate (FACE), which provides an estimate cost to reclaim the mine based on current conditions. The lead agencies and DMR both review the FACE prior to approval to make sure the estimate is accurate and sufficient. Subsequently, the mine operator must establish financial assurance mechanisms (FAMs) jointly with the lead agency and DMR, in the form of bonds or other securities, that adequately cover the value determined by the approved FACE. Finally, mine operators also submit an annual report, which contains information on the mine's production, along with a corresponding

fee to DMR. Throughout this process, the lead agencies and DMR may pursue various enforcement actions if mine operators are found to be out of SMARA compliance.

To support this whole effort, DMR relies on four aged custom systems: SMARA-3, Mines Online (MOL), Mines Online Document System (MODS), and Mines Online Annual Reporting System (MOARS). These systems provide limited access for external stakeholders to submit required information, documentation, and payments electronically. This, along with the fact that these systems are limitedly integrated, leads to cumbersome, disjointed workflows for internal DMR staff as they work to process both electronic and paper documentation and uphold SMARA requirements. To bridge the gaps between these systems, DMR staff spend a great deal of time on physical and electronic file management, duplicative data collection and entry, analysis and reconciliation across systems, and manual tracking of workflow progress and deadlines. Because the four main systems do not support case management or reporting, DMR staff must resort to manual tracking in external tools, such as Microsoft Outlook and Excel. Microsoft Outlook is used for draft document submission, review, communication with lead agencies and operators, deadline tracking, and calendar reminders for stakeholder follow-up, while Excel is used for tracking workflow progress, collecting data, and manually assembling reports such as the Purchase Preference List.

All this manual work not only introduces greater opportunity for human error, but also detracts from the time and resources DMR staff should be spending on SMARA enforcement activities. Instead of spending time manually keying annual report data, Reporting Unit staff could be pursuing mine operators for annual report non-filers and ensuring adequate FAMs are secured. Instead of spending time hunting for documents and manually compiling compliance assessments, SMARA Technical Unit staff could be conducting mine site visits to spot burgeoning environmental concerns and building rapport with operators in an effort to improve SMARA compliance. Collectively, this manual work gets in the way of DMR best serving the spirit of SMARA and helping protect California's public health, property, and environment.

Please see the attached documents: 3480-052-0050 – DMR SMARA-4 - As-Is Processes and 3480-052-0210 – DMR SMARA-4 – To-Be Processes. The As Is Process Models identify the current process pain points. As part of the To Be Process development, pain point/problem analysis occurred, solutions were identified and incorporated into the improved To Be Processes.

Tip: Current Environment costs will be asked for in the Financial Analysis Worksheet to be completed in Section 2.12.

Attach relevant documentation to email submission (i.e., business process, workflow, problem analysis, user/stakeholder list, research findings). If these types of documents are not available, please indicate "Not Available," and explain the reason below:

- 3480-052-0040 – DMR SMARA-4 – As-Is Process Context Diagram
- 3480-052-0050 – DMR SMARA-4 – As-Is Processes
- 3480-052-0200 – DMR SMARA-4 – To-Be Process Context Diagram
- 3480-052-0210 – DMR SMARA-4 – To-Be Processes
- 3480-052-0275 – DMR SMARA-4 – Stakeholder Register

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

DMR currently relies on four main disjointed, custom-built systems along with tremendous ad hoc support from network drives and user-maintained, Microsoft Office-based tracking procedures to ensure appropriate enforcement of SMARA related activities.

The primary internal system takes its name from the Surface Mining and Reclamation Act and is the third revision of said legacy system: SMARA-3. SMARA-3 is the system responsible for maintaining all key mine information, including mine locations, operators, annual reporting, and financial assurances. The original SMARA was initially built as a Paradox database in 1991. It was later updated by migrating the database into SQL Server 2000 with a Microsoft VB6 front-end. However, in the migration, the structure of the original Paradox database was perpetuated, which is not optimal for modern databases and has led to substantial technical issues that have plagued the iterations of SMARA to follow. A subsequent “lift and shift” of the application in 2018 resulted in the current SMARA-3 which uses SQL 2016 with an ASP .Net MVC web based front end.

On the external-facing front, the Mines Online Annual Reporting System (MOARS) is the application used by mine operators to complete and submit their Annual Reports electronically, including submitting supporting documents and redirection to the First Data Payment Processor for online fee collection. The original MOARS 1.0, built in 2019 on a C# ASP.net Core, was not integrated with the SMARA database, which meant a nightly SQL script was required to manually import the Annual Report data from MOARS to SMARA. Additionally, MOARS 1.0 did not provide a means for collecting payments or handling exception path Annual Reports, such as Multi-Site Single Fee Requests or Low Gross Estimates. Eventually in 2020, MOARS 1.0 was completely rewritten onto a more modern technology stack and integrated desired features. MOARS 2.0 now integrates with the SMARA-3 database and delicately supports exception path reporting, but still requires manual user import of online payment data from First Data Payment Processor.

For the broader public use, the Mines Online (MOL) application was built in 2012 in response to Senate Bill 110, which required DMR to publicly provide key mine information on a map interface. MOL was built with ESRI ARCGIS Enterprise 10.9.1, SQL Server 2016, and Python 2.7 and pulls data from SMARA-3 to display on a map. MOL also links to the Mines Online Document Storage (MODS) system by Mine ID.

The most recent addition to the DMR toolkit, MODS provides not only a place for Lead Agencies to upload approved documents, but a place for the public to access these documents in compliance with PRC 2774.2.5. While built on a similar technical stack to SMARA, MODS does not currently integrate with SMARA, making document management a cumbersome challenge.

In addition to these four main systems, DMR uses a network drive as its primary document storage repository for working and historically approved documents since the SMARA system does not support document or case management. To keep track of deadlines and processes,

the DMR teams use a mix of Microsoft Outlook calendars, events, and reminders, along with copious Microsoft Excel spreadsheets.

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:

- 3480-052-0040 – DMR SMARA-4 – As-Is Process Context Diagram
- 3480-052-0050 – DMR SMARA-4 – As-Is Processes
- 3480-052-0070 – DMR SMARA-4 – Technical Architecture with Functional Perspective
- 3480-052-0080 – DMR SMARA-4 – Current Technical System Inventory
- 3480-052-0090 – DMR SMARA-4 – SMARA Database Architecture
- 3480-052-0091 – DMR SMARA-4 – SMARA Database by Table
- 3480-052-0092 – DMR SMARA-4 – SMARA Database by Form
- 3480-052-0093 – DMR SMARA-4 – SMARA Database Compliance
- 3480-052-0275 – DMR SMARA-4 – Stakeholder Register

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

Data Owner Name: [Lindsay Whalin](#)

Data Owner Title: [Interim Supervisor of Mine Reclamation](#)

Data Owner Business Program area: [Division of Mine Reclamation](#)

Data Custodian Name: [Lyle Pinlac](#)

Data Custodian Title: [Infrastructure Manager](#)

Data Custodian Technical area: [Enterprise Technology Services Division](#)

Security - Data Classification and Categorization: [No – DOC actively working to address finding from latest Plan of Action and Milestones Report.](#)

Security - Privacy Threshold & Impact Assessment: [No – DOC actively working to address finding from latest Plan of Action and Milestones Report.](#)

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: [Some 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): [Yes](#)

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

- [3480-052-0145 - DMR SMARA-4 - CNRA Information Policy Binder](#)

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

Answer (Unknown, Yes, No): [Yes](#)

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

- [3480-052-0145 - DMR SMARA-4 - CNRA Information Policy Binder](#)

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.

- [3480-052-0145 - DMR SMARA-4 - CNRA Information Policy Binder](#)

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.

- [3480-052-0145 - DMR SMARA-4 - CNRA Information Policy Binder](#)

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.

- [3480-052-0140 - DMR SMARA-4 - Security Categorization Impact Table](#)

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](#)

7. Technical Complexity Score: 2.1

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

- [3480-052-0150 - DMR SMARA-4 - SIMM45 Appendix C Complexity Assessment](#)

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.

- [3480-052-0160 – DMR SMARA-4 – User Stories](#)

2.5 Assumptions and Constraints

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

Assumption: [Sufficient funding will be allocated by the BCP to successfully deliver the project as scoped.](#)

Description/Potential Impact: [Lack and/or delay of funding from the BCP will have adverse effects on the continuity and efficiency of the project deliverables.](#)

Assumption: [Funding will be available no later than July 1, 2024.](#)

Description/Potential Impact: [BCP is approved for funding to start in the Fiscal Year 2024/25 and to continue through implementation.](#)

Assumption: [A requirements traceability matrix will help ensure all requirements are met.](#)

Description/Potential Impact: Program staff will measure the new system results against business requirements to ensure that they meet business objectives. They will provide feedback to the vendor and additional requirements, as needed.

Assumption: Qualified program and technical staff will be available to support and participate in design, configuration, testing, training, and implementation of the selected solution.

Description/Potential Impact: If the identified subject matter experts and other qualified program and technical staff are not available, the Department will need to take the steps necessary to secure adequate staff, which may affect costs, budget, and ability to meet the scheduled project implementation date.

Assumption: Mine Operators and Lead Agencies will willingly adopt the new solution to improve and expedite processing of SMARA related documents.

Description/Potential Impact: If Mine Operators and Lead Agencies resist using the new solution, DMR will be limited in its ability to improve processing efficiency.

Assumption: Vendor solution integrates with DOC architecture and technologies.

Description/Potential Impact: The vended solution must be built with appropriate technologies to integrated into existing DOC architecture.

Constraint: Scope – the scope of the project is constrained to the replacement of the 4 current legacy systems (SMARA-3, MOARS, MOL, and MODS).

Description/Potential Impact: Expanding the scope would impact the schedule and budget.

Constraint: Solution Type - SaaS

Description/Potential Impact: A SaaS solution is desired as it will likely include the necessary functionality and limit the cost and impact to existing IT team workloads.

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: Project Approval Process

Dependency Description: To meet deadlines for contract award to vendor, the approval process must be done in a timely fashion to allow contract award in the first quarter of 2025.

Dependency Element: SMARA Funding

Dependency Description: All funding is available starting in Fiscal Year 2024/25

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:** [Adaptive Approach \(Agile\)](#)
2. **Procurement approach recommended:** [Standard Procurement](#)
3. **Market Research Approach**

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

Time Spent Conducting Market Research: 10 Months

Market Research Started: October 2022

Market Research Completed: July 2023

Methodologies Used to Perform Market Research:

- Internet Research
- Vendor Forums/Presentations
- Collaboration with Other Agencies/State Entities or Governmental Entities

Market Research Team:

- Project Sponsors:
 - Division of Mine Reclamation Supervisor
 - Chief Information Officer
- Enterprise Technology Services Division (ETSD):
 - Procurement Officer
 - Contracting Office Analyst
 - IT Portfolio and Standards Manager
 - Technology, Operations, Projects, and Strategy Manager
- Division of Mine Reclamation (DMR):
 - Reporting Unit Manager
 - Reporting Unit Subject Matter Experts
 - SMARA Technical Unit Managers
 - SMARA Technical Unit Subject Matter Experts
 - Administrative Unit Manager
 - Administrative Analyst

DMR began its market research in October 2022 with a two-pronged initial exploratory approach – internet research coupled with talking with other California State agencies in similar environmental fields and other States’ mining agencies. The intention of this initial exploratory research phase was to get a sense of what features and technology were on the market and how other agencies were leveraging them to address their similar business challenges.

As a result of this exploratory research, DMR refined its market research to vendors who met their business needs and could potentially align with DMR’s requirements.

Internet Research

Preliminary internet research for “mine tracking” software initially yielded limited results. Mining Data Solutions’ Mining Data Online tool did catch DMR’s eye for its industry specific attributes, but proved to not meet DMR’s requirements. However, DOC’s Enterprise Technology Services Division (ETSD) team helped identify some ticketing and case management platforms that might meet the DMR team’s needs, such as Accela, Cherwell, and Track-It!.

In addition to these software-oriented searches, DMR found a fruitful arm of the initial internet research phase to be researching other states with the comparable mining industries and other agencies to California.

From this effort, DMR reached out to and met with the Nevada’s Division of Minerals and Colorado’s Division of Reclamation, Mining, and Safety.

Other States’ Agencies

In talking with Nevada, DMR realized that Nevada’s Division of Minerals’ processes were quite different from theirs and were not perfectly transferrable. However, Nevada still relies heavily on paper processing – a problem DMR also faces because both agencies interact with public stakeholders who are historically slow adopters of web-based applications.

Colorado’s Division of Reclamation, Mining, and Safety Colorado’s business challenges are remarkably like DMR’s, but they have refined their custom .NET desktop application over 20 years to automate many processes and subsequently reduce the staff required to handle administrative tasks. Watching the Colorado team navigate their application gave the DMR team a number of ideas for features in SMARA-4, particularly Colorado’s CIRCES (Colorado Integrated Reclamation/Bond Cost Estimation System) tool. CIRCES is a custom developed plug-in used to estimate reclamation costs to determine the required financial warranties for permitted mining and has improved Colorado’s ability to compute reclamation costs quickly, consistently, and accurately. Similar functionality would allow DMR to process more FACES annually, provide more accurate cost estimates, and ensure that more appropriate financial assurance mechanisms are maintained for mine reclamation, which align with DMR’s business objectives. While happy with many of the features of their application, the Colorado team mentioned that they too are working on migrating to a more modern technology platform in the near future to support web-based access to their systems for their staff while in the field, so DMR is not alone in the effort to use technology to better serve its state.

Other California Agencies

In addition to contacting mining agencies outside of California, DMR reached out to other environmentally-involved California state agencies to find out what tools they use – namely the

Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB). Both agencies used tools developed by EcoInteractive. DTSC uses EcoInteractive's EnviroStor to gather and track information on hazardous waste sites and their cleanup and then make that information available to the public in an organized format. The way in which information is presented publicly for each site is similar conceptually to how information about mines could be displayed for DMR. Additionally, the workflow of gathering and capturing the information on hazard sites seemed like it would be easily translatable to mines. The SWRCB uses EcoInteractive's GeoTracker tool to gather and track data on sites that might have impact on California's water quality and display that information on a geographical interface. The workflow and features were overall similar to what DTSC had shared and appeared to fit DMR's business needs.

Outcomes from Initial Exploratory Research

From this collective initial exploratory research phase, the DMR team gained a fresh sense of possibility for its new system, which was critical after having grown accustomed to using an aging custom system with limited viable functionality. Seeing that other States' mining agencies faced many of the same challenges was reassuring, but seeing how they had found paths for automation and efficiency, like CIRCES, was inspiring. Additionally, the Team's eyes were opened to the possibility of platforms like EcoInteractive addressing their collective system concerns via Software-as-a-Service models, rather than being pre-destined to build a custom system to meet their unique business process needs. With this fresh perspective, DMR refined its list of essential functional requirements and ETSD helped reach out to vendors of interest found during internet research or discussions with other agencies.

Vendor Demonstrations

Representatives from DMR management, the Administrative Unit, the Reporting Unit, the SMARA Technical Unit, and DOC's Enterprise Technology Services Division attended a series of individual vendor demonstrations, in order to ensure that the demonstrations were considered from each impacted team's perspective. Vendors were provided with the same list of essential functions with which to prepare their demonstrations. Attendees took notes and considered how each demonstrated software could meet the essential functions and how confident they were in the vendor's ability to work with DMR and meet its business needs. A few vendors returned for additional demonstrations after DMR refined their essential functions more from the initial round of demonstrations.

For the listing and comparative results from the vendor demonstrations, please see the 3480-052-0180 – DMR SMARA-4 – Market Research Summary file in the submission attachments.

Outcomes from Demonstrations and Refined Exploratory Research

A key takeaway from the vendor demonstrations for the DMR team was that a SaaS solution really could meet their needs and potentially be the most cost-effective use of financial and ETSD resources for ongoing support of the new system. Additionally, with SaaS solutions, it could be more cost effective and provide a better internal and external user experience to incorporate functions such as Mines Online and MOARS into the new system, rather than pay to have a vendor integrate with these older modules that would need updates and continued maintenance in

the near future. All of this information, in conjunction with gaining a better understanding of what features were more costly to build or incorporate in a solution relative to their business value, helped DMR develop a strong set of viable alternative solutions.

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.

- 3480-052-0180 – DMR SMARA-4 – Market Research Summary

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: SaaS – Consolidated Configurable Enterprise Platform with Vendor Development and Support

Description: Viable Alternative 1 is a vendor-developed, -supported, and -hosted Software-as-a-Service solution that would replace all four core DMR systems (SMARA-3, MOL, MOARS, and MODS) with a unified configurable platform. In alignment with DMR’s documented To-Be business processes, this consolidated system would provide external-facing services to mine operators and lead agencies while adding case management and document management functionality for internal DMR users. Viable Alternative 1 not only provides all the functionality needed to meet DMR’s requirements and objectives, but also does it with minimal-to-no need for coded customization, which helps expedite the time to implementation and reduce the cost and effort to maintain the system. Additionally, with the vendor supporting the system in an all-inclusive manner, Viable Alternative 1 leaves room and flexibility to adapt with changing legislation and grow into process improvement opportunities as lead agencies and mine operators adopt the new system. This onboarding and user adoption will be further aided by the modern-looking and intuitive user interface.

Why is this a viable solution? Please explain:

Viable Alternative 1 is the recommended solution because it not only addresses all of DMR’s business objectives and requirements but does so with many advantages over the other considered alternatives.

The following advantages and disadvantages of Viable Alternative 1 were considered:

- **Advantages:**
 - Ease of configuration on a flexible and configurable platform that does not require heavy coding to configure to DMR’s business processes

- Reduces time to implementation by not having to spend time on customization and coding
 - Reduces maintenance efforts and costs
 - Makes adapting to changing legislation easier
 - Reduces friction for updating processes as user behaviors and patterns are observed in order to improve efficiency
- Modern-looking, intuitive, and appealing user interface
 - Encourages user adoption
 - Makes user training easier
 - Reduces friction in onboarding
- All-inclusive vendor support
 - Vendor not only supports basic updates and maintenance, but supports implementation, configuration, and enhancement
- Available and emerging functionality to grow into
 - Vendor platform updates will make new functionality available
 - Could onboard already demonstrated Inspection Reports at a later point in time
- Proven platform used by government agencies in multiple industries with a large user-base
- Replaces all core DMR systems with a single unified platform
 - Eliminates the need to support and maintain multiple aging systems
 - Merging all key functionality to a unified platform improves data continuity and access
 - Enables process automation that would not have previous been available because of siloed systems
- **Disadvantages:**
 - Annual software subscription price is higher than other viable alternatives

Approach

Increase staff – new or existing capabilities: No

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: [Click or tap here to enter text.](#)

Create a new IT system: Yes

Other: [Choose Yes or No. Specify: Click or tap here to enter text.](#)

Architecture Information

Business Function(s)/Process(es): [See attached:](#)

- [3480-052-0200 – DMR SMARA-4 – To-Be Process Context Diagram](#)

- [3480-052-0210 – DMR SMARA-4 – To-Be Business Processes](#)
- [3480-052-0185 – DMR SMARA-4 – Viable Alternative Comparison Matrix](#)

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

- [3480-052-0220 - DMR SMARA-4 - Viable Alternative 1 Technical Diagram](#)

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: [Existing system interfaces would be sunset as this solution offers a unified platform that doesn't require integrating with existing systems since it is replacing them.](#)

Explain New System Interfaces: [No new system interfaces](#)

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: [Lead Agency employees](#)

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: [Yes](#)

Confidential: [Yes](#)

Other: [Choose Yes or 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: [\\$2,751,699](#)

One-Time (Project) Costs: [\\$1,534,341](#)

Total Future Ops. IT Staff OE&E Costs: [\\$3,348,896](#)

Total Proposed Cost: [\\$7,634,936](#)

Annual Future Ops. Costs (M&O): [\\$1,026,427](#)

2. Viable Alternative Solution #2

Name: [SaaS – Modified Configurable Enterprise Platform with Vendor Development and Support](#)

Description: [Viable Alternative 2 is also a vendor-developed, -supported, and -hosted Software-as-a-Service solution. It targets the same functional architecture as Viable Alternative 1 by replacing all four core DMR systems \(SMARA-3, MOL, MOARS, and MODS\) with a unified, mostly configurable platform that provides internal document and case management functionality to DMR staff and extends external-facing services to mine operators and Lead Agencies. However, Viable Alternative 2 does not offer the same level of configurability, flexibility, and user-friendliness that Viable Alternative 1 offers. To meet DMR’s requirements and desired functionality, Viable Alternative 2 would need to make non-configured modifications. While the vendor support is extensive \(but not all-inclusive\), these modifications and any future modifications needed for changing legislation would be at an additional cost and lead to ongoing maintenance costs to maintain non-out-of-the-box code. Viable Alternative 2 also has a less friendly and intuitive user interface, which would hamper user adoption, onboarding, and training.](#)

Why is this a viable solution? Please explain:

[Viable Alternative 2 was considered as a viable alternative because it addresses most of the DMR core needs identified in the business objectives and requirements, but is not recommended as the primary Viable Alternative because Viable Alternative 1 has a few more advantages.](#)

[The following advantages and disadvantages of Viable Alternative 2 were considered:](#)

- **Advantages:**
 - Replaces all core DMR systems with a single unified platform
 - Eliminates the need to support and maintain multiple aging systems
 - Merging all key functionality to a unified platform improves data continuity and access
 - Enables process automation that would not have previously been available because of siloed systems
 - Vendor-hosted and development supported along with ongoing maintenance
 - While not a full “all-inclusive” support structure, the vendor will help set up and configure the system and maintain with ongoing updates
 - Modifications or changes to functionality would come at a cost
 - Has been implemented at other environmentally-oriented California agencies, such as the State Water Resource Control Board and the Department of Toxic Substances Control
 - Annual software subscription fee is lower than Viable Alternative 1
- **Disadvantages:**
 - Not as user-friendly or intuitive of a user interface
 - This means that training and user onboarding will take more effort to garner the same results a more intuitive and modern-looking user interface would achieve organically
 - Features not natively included in configurable platform would need code-based modification
 - The solution does not currently support mass email or automated communications
 - Vendor support not the “all-inclusive” structure that Viable Alternative 1 offers
 - A recent dramatic price drop raised concerns about price variability
 - With no change in requirements, the vendor was able to offer a significant price drop, which raised concerns about price volatility and the potential for a push towards change requests in the future

Approach

Increase staff – new or existing capabilities: **No**

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: [Click or tap here to enter text.](#)

Create a new IT system: **Yes**

Other: **Choose Yes or No.** Specify: [Click or tap here to enter text.](#)

Architecture Information

Business Function(s)/Process(es): See attached:

- [3480-052-0200 – DMR SMARA-4 – To-Be Process Context Diagram](#)
- [3480-052-0210 – DMR SMARA-4 – To-Be Business Processes](#)
- [3480-052-0185 – DMR SMARA-4 – Viable Alternative Comparison Matrix](#)

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

- [3480-052-0221 - DMR SMARA-4 - Viable Alternative 2 Technical Diagram](#)

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: [Existing system interfaces would be sunset as this solution offers a unified platform that doesn't require integrating with existing systems since it is replacing them.](#)

Explain New System Interfaces: [No new system interfaces](#)

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: [Lead Agency Employees](#)

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: [Yes](#)

Confidential: [Yes](#)

Other: [Choose Yes or 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: [\\$7,615,559](#)

3. Viable Alternative Solution #3

Name: [SaaS – Minimal Core Application with a la Carte Support](#)

Description: [Viable Alternative 3 is also a vendor-hosted Software-as-a-Service solution, but does not include the vendor development and scale of support found in Viable Alternatives 1 and 2. This solution would consolidate many of DMR's current systems \(SMARA-3, MOARS, and MODS\) into a single unified platform for document and case management internally and electronic submission externally for Lead Agencies and Operators. Since Viable Alternative 3 does not support the GIS interface needed to provide the statutorily required map-based mine data for the public, the legacy MOL system will need to stay online and be integrated with the new SMARA-4 solution. This integration or any other modification or configuration conducted by the vendor will be on an a la carte support basis. That is to say that, unlike Viable Alternatives 1 and 2, Viable Alternative 3's software subscription fee does not include vendor support beyond basic platform maintenance updates. However, vendor training and support for development and configuration is available for a fee.](#)

Why is this a viable solution? Please explain:

[Viable Alternative 3 was considered as a viable alternative because it addresses some of the minimum DMR core needs identified in the business objectives and requirements, but is not recommended as the primary Viable Alternative because the disadvantages of the solution outweighed disadvantages of the other solutions.](#)

[The following advantages and disadvantages of Viable Alternative 3 were considered:](#)

- **Advantages:**
 - [The annual software subscription fee is lower than the other alternatives](#)
 - [Option to self-support in the future, as desired](#)
 - [Configurable platform that covers many DMR business processes](#)

- Configuring helps reduce the time to implementation relative to custom coding
- Fairly modern looking user interface
 - This makes users more willing to adopt and subsequently makes training and user onboarding easier
- **Disadvantages:**
 - Doesn't natively address all objectives, requirements, and desired functionality, such as mass email communications and map interfaces
 - This means continued support and maintenance of the MOL system, while also building or updating interfaces to integrate with the new core SMARA-4 system
 - A la carte vendor support and pricing makes budgeting more difficult
 - Disincentivizes updating the system
 - Adds additional hurdles to adapting system to changing legislation or streamlining business processes
 - Currently requires upgraded subscription to be able to freely query data for ad hoc reporting

Approach

Increase staff – new or existing capabilities: **No**

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: **Yes**

Modify Statute/Policy/Regulations: **No**

Please Specify: [Click or tap here to enter text.](#)

Create a new IT system: **Yes**

Other: **Choose Yes or No.** Specify: [Click or tap here to enter text.](#)

Architecture Information

Business Function(s)/Process(es): See attached:

- 3480-052-0200 – DMR SMARA-4 – To-Be Process Context Diagram
- 3480-052-0210 – DMR SMARA-4 – To-Be Business Processes
- 3480-052-0185 – DMR SMARA-4 – Viable Alternative Comparison Matrix

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

- 3480-052-0222 - DMR SMARA-4 - Viable Alternative 3 Technical Diagram

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: [Because Viable Alternative 3 does not support the GIS interface for map-display of public mine data, the current MOL system would need to remain. This means that the current MOL to SMARA-3 interface would need to be updated to map to a potentially new database structure.](#)

Explain New System Interfaces: [No new system interfaces](#)

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: [Lead Agency Employees](#)

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: [Yes](#)

Confidential: [Yes](#)

Other: [Choose Yes or 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: \$7,839,554

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.

- [3480-052-0240 – DMR SMARA-4 – DOC Project Organization Chart](#)

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

[DOC \(Department of Conservation\)](#) will provide the following staff for the administrative needs of the project:

1. The DOC is submitting a Budget Change Proposal (BCP) for Fiscal Year 2024/25 for a full-time Project Manager for the SMARA-4 Project. This PM (Project Manager) will be dedicated full-time to the SMARA-4 Project. The PM will have experience with software implementations and will manage the project from initiation to closing. The PM will ensure that the project team completes their tasks in time and will escalate all issues and risks as appropriate. The PM will facilitate the development of project plans and the project schedule. The PM will work with the SaaS (Software-as-a-Service) Project Manager to confirm all required tasks are completed promptly to ensure successful implementation. The PM oversees the SaaS vendor's submission of deliverables, including review and approval activities. The PM will conduct bi-weekly project status meetings and escalate issues and risks as needed to the SMARA-4 Project Executive Steering Committee for resolutions.

2. The Procurement team will be a collaborative team made up of CDT's Statewide Technology Procurement Division (STP) point of contact, DOC Contract point of contact (Jen Cuny), and Budget Point of Contact (Jordan Conlon). The DOC Contracts and Budget units are experienced in RFP development. Leveraging DMR (Division of Mine Reclamation) Program Experts and ETSD (Enterprise Technical Services Division) technical experts, this team will develop the Procurement Management approach in accordance with CDT (California

Department of Technology) guidelines. The PM will join the procurement team upon assignment to the SMARA-4 Project.

3. The DOC Contracts Manager is responsible for the oversight of the SMARA-4 hosted SaaS contract and any other contracts supporting the project. The Contracts Manager will recommend actions to take when contractual issues are identified, participate in procurement and contract meetings, monitor contractor deliverables, and monitor, analyze, and mitigate procurement-related risks and issues.

2. Business Program

DMR will designate a product owner. The product owner will team with the SMARA-4 PM and the Vendor PM during the SaaS configuration and delivery through to testing and implementation. They will validate that system functions meet the business requirements and support the DMR business processes as intended. The product owner will act as the key decision maker on system functionality and will work closely with the PM and vendor team. DMR will also have various subject matter experts who will work with the selected vendor and the PM to implement the solution. DMR SMEs (Subject Matter Experts) will be matrixed to the project and will also serve as the system's user acceptance testers and execute testing at the direction of the PM and product owner. DMR SME's will also perform data validation activities. The DMR Product Owner and SMEs are essential to the success of the project and must prioritize their time accordingly.

Key DMR staff have been identified to be matrixed to the SMARA-4 Project for 25% of their time. DMR staff will continue to support daily operations while supporting the SMARA-4 Project. Most of the configuration work will be done by the vendor and not all DMR SME's will be needed at the same time. When needed for project tasks, existing workloads for each DMR SME will be adjusted or disseminated across their respective units for completion. This workload management approach worked extremely well during the effort to identify and document the As-Is and To-Be business processes.

3. Information Technology

ETSD will assign the IT support team from ETSD experts who are currently supporting the 4 DMR systems to be replaced and will transition to support the new SMARA-4 SaaS as appropriate. ETSD will have one Technical Lead (Sujit Smile) assigned 25% to the SMARA-4 Project. The technical lead will assist the PM throughout the project to facilitate the SaaS implementation. This will include providing technical knowledge of the current DOC architecture and network to the vendor during configuration of the SaaS and retirement of the 4 existing systems to be replaced by the SMARA-4 SaaS. As the configuration, implementation, and the majority of the technical support of the SMARA-4 SaaS will be the responsibility of the vendor, the workload for DOC to support the implementation will be absorbed by the ETSD in anticipation of the workload reductions due to the retirement of the 4 current systems. No additional staffing will be needed. The current IT support team will be able to available throughout the project lifecycle to address system implementation and interface issues encountered during configuration, testing, and implementation, as needed.

4. Testing

The DMR product owner and SMEs will act as user acceptance testers. Under guidance of the PM and supported by the vendor's team, the testers will participate in project activities as needed to understand the business and functional requirements that the hosted SaaS must meet. They will perform testing based on a test plan and document any issues in a defect and enhancement tracking tool. Once the issue has been resolved, the testers will retest and declare it fixed or report it again until the requirement has been successfully met.

5. Data Conversion/Migration

No technical based data transformation and conversion is needed for the SMARA-4 implementation. Data will not be converted from the 4 legacy systems to be replaced by the SMARA-4 Project. Based on the scale and nature of the data in the legacy systems, any data that is needed in the new system will be manually brought over.

6. Training

Training for the hosted SaaS will be conducted by the SaaS vendor and included in the procurement contract. The vendor and PM will work with the product owner and/or SMEs to train key DMR staff, as identified in the SMARA-4 Project Org Chart, on how to utilize the software. Currently, internal DMR staff cover the training needs for users of the 4 systems to be retired. This same staff will supplement the vendor provided training with appropriate business process documentation as necessary to mitigate any business process change issues. While initial end user training will be provided, DMR staff will work with the vendor to identify and make available online self-directed training tools readily accessible to the SaaS solution end-users.

7. Organizational Change Management

DMR staff have spent a significant amount of time developing the targeted To-Be business processes for the new SMARA-4 solution. Analysis has been conducted between the current As-Is and the new To-Be processes with gap analysis results documented. Sufficient communication channels are in place to effectively communicate with all stakeholders regarding the updated SMARA-4 business process impacts. The new processes (and system) will resolve many pain points for the lead agencies, mine operators, and landowners, which will be communicated early and often throughout the project. As sufficient communication channels already exist and this OCM/business change messaging can be added to current planned communications, no additional staff are needed for OCM activities.

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.

DOC has assigned staff experienced in all phases of procurement to the SMARA-4 Project. DOC has experience with many large-scale procurements, including the WellSTAR Project and several other procurements similar in size and complexity to the SMARA-4 Project.

The Project Team will use the combined SMARA-4 Project Plan and continue to leverage the California Project Management Framework as needed to complete the Project Approval Lifecycle process and to manage the SMARA-4 Project.

DOC has relatively low turnover in DMR and ETSD, and a low number of vacancies. Resources leveraged to complete the PAL S2AA are currently anticipated to be available for completion of the PAL Stage 3 activities. These key resources will remain engaged and require no ramp up to begin PAL Stage 3.

2.10 Project Planning

1. Project Management Risk Assessment

Updated Project Management Risk Score: .2

Attach Updated PM Risk Assessment to your email submission. [SIMM Section 45A](#)

- 3480-052-0250 – DMR SMARA-4 – SIMM45A Project Management Risk Assessment

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: [Click or tap here to enter text.](#)

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

- 3480-052-0260 – DMR SMARA-4 – Project Charter

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.

- After discussion with PAO Manager, submitting attached Master Project Management Plan: 3480-052-0270 – DMR SMARA-4 – Master Project Management Plan (which includes the below sections)

[Scope Management Plan \(Approved\):](#) Yes

Status: [Click or tap here to enter text.](#)

[Communication Management Plan \(Approved\):](#) Yes

Status: Click or tap here to enter text.

[Schedule Management Plan \(Approved\)](#) : Yes

Status: Click or tap here to enter text.

[Procurement Management Plan \(Approved\)](#): Yes

Status: Click or tap here to enter text.

[Requirements Management Plan \(Approved\)](#): Yes

Status: Click or tap here to enter text.

[Stakeholder Management Plan \(Draft\)](#): Yes

Status: Click or tap here to enter text.

[Governance Plan \(Draft\)](#): Yes

Status: Click or tap here to enter text.

[Contract Management Plan \(Draft\)](#): Yes

Status: Click or tap here to enter text.

[Resource Management Plan \(Draft\)](#): Yes

Status: Click or tap here to enter text.

[Change Control Management Plan \(Draft\)](#): Yes

Status: Click or tap here to enter text.

[Risk Management Plan \(Draft + Risk Log\)](#): Yes

Status: Click or tap here to enter text.

[Issue and Action Item Management Plan \(Draft + Issue Log\)](#): Yes

Status: Click or tap here to enter text.

[Cost Management Plan \(Approved if planning BCP approved\)](#): Yes

Status: Click or tap here to enter text.

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.

- 3480-052-0280 – DMR SMARA-4 – High Level Project Roadmap
- a) Planning Start Date: 4/4/2022
- b) Estimated Planning End Date: 12/31/2024
- c) Estimated Project Start Date: 1/1/2025
- d) Estimated Project End Date: 12/31/2025

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**

High level artifacts have been drafted, but further detail to be gathered for Stage 3 Solution Development.

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

Due to the nature and scale of data contained in DMR’s legacy systems, DMR does not intend to undergo a sizeable, technical data migration effort. A great deal of DMR’s key information is contained within documents. The majority of the remaining information is updated on an annual basis while processing received statutory documents. Any of the remaining information in the legacy systems that is critical for baseline functionality will be manually entered into the new system, which provides an additional data quality validation opportunity.

3. Data Profiling: **Not Started**

To be drafted during Stage 3 Solution Development.

4. Data Cleansing and Correction: **In Progress**

While preparing the Purchase Preference List quarterly, DMR staff comb through the mine files (all data related to mines, mine operations, etc) and correct any erroneous data. DMR staff also report and escalate any systematic data issues to the ETSD team, who works to resolve the issues. Additionally, ETSD proactively cleanses data and completed an address data cleanse this year.

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

To be drafted during Stage 3 Solution Development.

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

To be drafted during Stage 3 Solution Development.

7. Data Dictionaries: **Not Started**

To be drafted during Stage 3 Solution Development.

8. Data Conversion/Migration Requirements: **Not Started**

To be drafted during Stage 3 Solution Development.

2.12 Financial Analysis Worksheets

Attach [F.2 Financial Analysis Worksheet\(s\)](#) to the email submission.

- 3480-052-0230 – DMR SMARA-4 – Financial Analysis Worksheet

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: 01/09/2024

Form Received Date: 01/09/2024

Form Accepted Date: 01/09/2024

Form Status: Completed

Form Status Date: 01/09/2024

Form Disposition: Approved

Form Disposition Date: 03/22/2024