



## 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:** XXXX - Other

If Agency/State entity is not in the list, enter here with the [organization code](#).

1115 – Department of Cannabis Control

**2. Proposal Name:** Cannabis Data Warehouse and Business Intelligence Reporting Tool

**3. Department of Technology Project Number (0000-000):** 1115-004

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

**5. CDT Billing Case Number:** Click or tap here to enter text.

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

### 2.2 Submittal Information

**1. Contact Information**

Contact Name: Sean O'Connor

Contact Email: [sean.o'connor@cannabis.ca.gov](mailto:sean.o'connor@cannabis.ca.gov)

Contact Phone: 916-282-0384

**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):

No conditions from Stage 1 Approval

## 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)**

Currently, Department staff are limited in their reporting capabilities. The Department has three licensing and compliance platforms: Accela, Pega, and Metrc. None of these platforms currently replicate data to a business intelligence and reporting tool. The reporting software in these platforms provide some access to the data they capture; however, DCC staff must frequently rely on software vendor staff to assist in building or running reports, which creates inefficiencies in accessing the data to run daily pragmatic functions or operations. Additionally, the Department frequently gets requests for data from stakeholder groups and control agencies. Improving the reporting capabilities of the Department at the enterprise level is a major necessity for the department.

The three platforms: Accela, Pega, and Metrc are all cloud based and have some native reporting capability that is not robust enough to meet the needs of the Department's business units and stakeholders. Descriptions of the reporting capabilities of the platforms are described below. The cost of the native reporting tools are included in the general software licensing of the platform. There will be no increase in software licensing costs as a result of this effort, but there will be additional costs associated with the creation of the infrastructure, baseline reports, and software associated with setting up the business intelligence and reporting tool. The Department received \$2,000,000 in approved expenditure authority for FY 2022/23 to purchase and implement the reporting tool.

### Summary of Native Reporting Capability

Accela – Accela offers two reporting options in the Department's environments. The first is a GUI-based ad hoc reporting tool that can allow users to develop basic list-based reports and some reports with limited graphic capabilities. These reports can be created directly in the Accela production, test, or development environments by users with appropriate roles and permissions. The second reporting option can only be used by technical Accela support staff who develop reports utilizing Crystal Reports and then request the software provider to migrate the completed reports to their production report environment.

Pega – The Pega application offers multiple ways of reporting. The first which was based on the California Department of Public Health (CDPH) standard of using Tableau. Information is transferred from a SQL database using an SSIS package to a reporting database on which a separate Tableau application instance is linked. These reports in the past have been built by a

separate development team. Managers have access to log into a dashboard and access those reports. Within Pega itself there are multiple ways to run create/run a report. There are out of the box reports and data visualizations that rely on case data from Pega. Pega provides a reporting browser out of the box which allows users to create simple custom reports and modify reports that exist out of the box. The only precondition is for reports not available out of the box is the columns need to be exposed for reporting, this must be requested and performed during the development of new features or with the reporting in mind. For reports that require complex joins (those pulling information from multiple tables) a developer must generate that report and add it to the reporting browser, so it is available in the future.

Metrc – Metrc offers two reporting options to the Department. Both development options require the reports be developed by technical Metrc support staff. The first option is a SQL-based option where the developer drafts an SQL statement to extract data sets from the platform to a text or Excel file. The second option is a recent additional reporting feature that Metrc has made available: a Tableau-based reporting option that allows for reporting against database views created by the Metrc vendor. While this is an improvement, it does not provide the flexibility needed to the Department to create database reports using its own customizable views with performance tuning.

*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:

Not available reason: Not available. See explanation above of business environment.

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

The platforms are cloud-based SaaS systems. All three platforms have the technical capability to replicate their databases to a cloud-based data warehouse. The licensing and enforcement platform is a product named Accela. The cannabis track and trace platform is a product named Metrc. Pega will be retired as part of another project occurring in parallel, so that platform will not be included in the scope of this data reporting improvement effort. The Accela platforms are based in an Azure cloud environment with a FedRamp Tier 3 rating.

**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:

**File:** DCC - Reporting Platform.pdf

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: Sean O'Connor

Data Owner Title: Chief Information Officer

Data Owner Business Program area: Sean O'Connor

Data Custodian Name: Donovan Dutt

Data Custodian Title: Chief of Infrastructure and Enterprise Services Branch

Data Custodian Technical area: Infrastructure, Network, and Database Administration

Security - Data Classification and Categorization Yes

Security - Privacy Threshold & Impact Assessment. Yes

**4. Existing Data Governance and Data**

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

**Answer** (Unknown, Yes, No): No

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

Select data quality rating: Not Applicable

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.

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.

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.

**SecurityCategorizationImpactTable.pdf**

## 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: **Low**

## 7. Technical Complexity Score: .9

(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

Data Warehouse requirements:

- Data Warehouse application needs to be fully housed on vendor cloud servers

- Resources scalability (Increase number of cores, RAM, Storage space to deliver faster results)
- Data Warehouse includes Extraction, Transformation and Loading (ETL) tool for data movement internally and externally.
- Monitor ETL Jobs (Success, Abort, etc.)
- ETL Job Triggers (support time and file-based trigger)
- No limits on data ingestion from source systems
- Data Warehouse must support REST API
- Data Warehouse support/maintenance after deployment
- DCC - Admin control access level to all datasets
- DCC - control user access (row, column, table, view level)
- Data masking option for sensitive datasets
- File Sharing location to internal and external team members

#### Business Intelligence Requirements:

- Business Intelligence application needs to be fully housed on vendor cloud servers
- DCC - admin control over user access level
- Connection to various data sources
- Security:
  - ✓ Report level
  - ✓ Folder Level
  - ✓ Site Level
  - ✓ Data Level
  - ✓ Object, Row & Column level
  - ✓ Personal space for report modification storage
- Tool functions:
  - ✓ Version control
  - ✓ Single sign on capability
  - ✓ Penetration testing (security)
  - ✓ Data modeling
  - ✓ Updating Metadata
  - ✓ Drill up and down options
  - ✓ Interactive visuals
  - ✓ Interactive data tables
  - ✓ Adding new fields
  - ✓ Removing fields
  - ✓ Updating existing fields
  - ✓ Alerts via email
  - ✓ data formatting Reports, last update timestamp
  - ✓ Sizing (fit laptops, desktops, mobile & tablet devices)
  - ✓ Updates: Realtime capable
  - ✓ OLAP
  - ✓ Governance
  - ✓ Mapping (Geocoding)
  - ✓ Application support/maintenance after deployment
- 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 B\_3\_Stage\_2\_Midlevel\_Solution\_Requirements\_Biz Intel and DW**

## 2.5 Assumptions and Constraints

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

**Assumption:** Data warehouse tool will be able to load initial baseline data sets and load based on differential sets after that.

**Description/Potential Impact:** The model that has worked for similar enterprise set ups based on market research is an initial data load of the source data, then incremental loads of the updates to the database from that baseline after. This allow for more of a performant overall solution.

**Assumption:** Business users will participate as testers and provide validation of the data.

**Description/Potential Impact:** While technical contractors and staff will be completing the work of setting up the reporting environment, business users will be needed to complete testing and perform validation that the data being reported out is correct.

**Constraint:** Availability of source data partners to provide replicated data on appropriate interval.

**Description/Potential Impact:** The project will be reliant on data partners (Accela and Metrc) to provide replication services of the source databases to the Department's data warehouse solution. While initial discussions with both companies has led to a high level of confidence this replication can be achieved, it has not yet been achieved for the Department's data. However, both partners have achieved the Department's desired replication outcome with other organizations.

**Constraint:** Bandwidth of support required from data partners.

**Description/Potential Impact:** The setup of the initial data loads and connection to the data warehouse solutions from the source databases will require a degree of work from the software partners Accela and Metrc. The availability of resources at those companies to assist in the work will be one constraint on the velocity at which the Department can get the enterprise data reporting architecture stood up.

**Constraint:** 2022/23 expenditure authority.

**Description/Potential Impact:** The Department has expenditure authority in FY 2022/23 to purchase software and implementation services. The agreements must be executed this year to allow the department to take advantage of this one-time expenditure authority augmentation.

*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:** [Purchase of data warehouse and business intelligence software and implementation services.](#)

**Dependency Description:** [To begin implementation of the solution, the successful purchase of a data warehouse and business intelligence software tool will need to be executed.](#)

*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**

Our market research is categorized into two sections, first being for our data warehouse and second, for our business intelligence tool which will be used for data analytics and reporting needs for our agency.

During market research Departmental staff reached out to vendors to obtain pricing, conduct demos, and consulted with organizations who have enterprise data reporting solutions of a similar nature to that which the Department aspires. In general, our research showed that a robust set of products were available, and many of them were available via leveraged procurement agreements like the Department of General Service's Software Licensing Program (SLP).

Technical and business experts reviewed business intelligence software via a variety of demonstrations from industry leading products. The review of data warehouse demonstrations was limited to technical users as business users will not interact with the data at that layer of the architecture. Prior to the demonstrations, technical experts shared the specifics of the use case and goals and objectives of the effort with the software companies to ensure the software demonstrated was well suited to the Department's purpose.

The Department received demonstrations from the following business intelligence reporting tools:

1. Tableau – December 13<sup>th</sup>, 2022
2. ESRI/ArcGIS – December 14<sup>th</sup>, 2022
3. SAS – November 15<sup>th</sup>, 2022
4. Google Looker – January 6, 2023

The Department received demonstrations or had discovery discussions from the following data warehouse vendors:

1. IBM – January 10<sup>th</sup> 2023, January 25<sup>th</sup>, 2023
2. TeraData - January 10<sup>th</sup>, 2023
3. Google - December 16<sup>th</sup>, 2022
4. Microsoft Azure – January 20<sup>th</sup>, 2023

Costing and architecture discussions were conducted outside of the demonstrations. Some vendors also provided performance demonstrations to show that their data warehouse software solutions can handle loading large amounts of data (e.g. a petabyte loaded in less than a minute). During market research, technical and business users identified high performance as a key differentiator between different software alternatives.

Artifacts reflecting cost and architecture options are provided as supplemental market research artifacts.

#### 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.

Refer to file: DCC - Yearly Product Cost Estimate.pdf

## 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:** Cloud-based singular business intelligence reporting and warehouse solution

**Description:**

This alternative will provide a cloud-based business intelligence reporting and warehouse solution that can exist in a single cloud-based architecture without the need to interface with additional

software for any core functionality. Unlike other alternatives, this alternative will provide better performance and mitigate against bottlenecks that can occur with a segmented solution where the warehouse component exists in a separate cloud-based environment than the business intelligence tool. One vendor can provide this sort of architecture via its tools: Google.

Google's BigQuery software can provide the data warehouse tools needed while its business intelligence tool Looker can provide the necessary reporting and data visualization functionality.

Google BigQuery is a completely serverless enterprise data warehouse. It has built-in machine learning and scales with your data.

Google Looker is a business intelligence solution that organizes your data and makes it universally accessible and useful. This tool will enable our agency to build insight-powered workflows and applications that meets program area reporting needs. It can also provide internal and external facing interactive visualizations.

**Why is this a viable solution?** Please explain:

Both Data Warehouse and Business Intelligence tools (BigQuery and Looker) are established by one vendor: Google. These products exist on Google's cloud server, and both products are utilized for similar use cases in other public organizations. It is beneficial to have both tools owned by the same vendor since this will be a one-stop-shop allowing the Department to save time and money in tool reconfiguration which will be needed if we mix data warehouse and business intelligence products.

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

*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

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

File Reference: [DCC - Reporting Platform - Google.pdf](#)

## COTS/SaaS/Cloud Technology or Custom: [COTS/SaaS/Cloud Technology](#)

Name/Primary Technology: [Google Data Warehouse Products and Looker BI Tool](#)

*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: [None](#)

Explain New System Interfaces: [None](#)

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: [No](#)

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

**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: [No](#)

Financial: [No](#)

Legal: [No](#)

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: [\\$346,170](#)

One-Time (Project) Costs: [\\$1,694,891](#)

Total Future Ops. IT Staff OE&E Costs: [\\$907,006](#)

Total Proposed Cost: [\\$2,948,067](#)

Annual Future Ops. Costs (M&O): [\\$907,006](#)

## 2. Viable Alternative Solution #2

**Name:** [Cloud-based bifurcated reporting and data warehouse solution](#)

### **Description:**

[A bifurcated reporting and data warehouse solution would be architected with one product serving as the data warehouse layer that would interface with a separate business intelligence reporting product. This model allows you to mix and match product sets; however, it creates a potential performance risk because an additional connection must be established between the data warehouse software and the business intelligence and reporting software. This potential alternative is diagrammed in DCC - Reporting Platform - IBM & Tableau.pdf.](#)

**Why is this a viable solution?** Please explain:

[This solution is a model used by other state organizations. The products that would be considered for this alternative \(Tableau, SAS, IBM DB2, Microsoft\) are all industry standard products. Nothing in the market research suggested this is not a viable path forward, but it is not the most optimal for the Department.](#)

### **Approach**

Increase staff – new or existing capabilities: [No](#)

Modify the existing business process or create a new business process: [No](#)

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

*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

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

File Reference:

[DCC - Reporting Platform.pdf](#)

**COTS/SaaS/Cloud Technology or Custom:** [COTS/SaaS/Cloud Technology](#)

Name/Primary Technology: [Multiple](#)

*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:** [None](#).

**Explain New System Interfaces:** [None](#)

**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: [No](#)

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

**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: [No](#)

Financial: [No](#)

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: \$3,001,350

### 3. Viable Alternative Solution #3

**Name:** Status quo – rely on native reporting tools for data reporting needs.

#### Description:

The native reporting tools within the Accela and Metrc platforms allow for extraction of the data and then manipulation of the data utilizing tools like MS Excel. This approach often requires the involvement of the software vendor when report parameters are broad. Also, this solution requires the involvement of technical staff to run many reports as opposed to alternatives that incorporate a business intelligence reporting tool that can allow non-technical users to construct reports using user interface tools.

**Why is this a viable solution?** Please explain:

This is a viable solution as it is the Department's current reporting state. It is not a desirable state however as it does not provide robust access to the Department's data and requires a tremendous amount of coordination and resources to arrive at reports and products that are easily developed using data warehouse and business intelligence software. Furthermore, the creation of these reports consumes staff and vendor resources that would be otherwise spent on enhancing the platforms, so there is a significant opportunity cost in remaining with the status quo.

#### Approach

Increase staff – new or existing capabilities: No

Modify the existing business process or create a new business process: No

Reduce the services or level of services provided: No

Utilize new or increased contracted services: [No](#)

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: [No](#)

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

## Architecture Information

**Business Function(s)/Process(es):** [Click or tap here to enter text.](#)

*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

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

**COTS/SaaS/Cloud Technology or Custom:** [COTS/SaaS/Cloud Technology](#)

Name/Primary Technology: [Accela and Metrc](#)

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

**Explain New System Interfaces:** [Click or tap here to enter text.](#)

**Data Center Location of the To-be Solution:** [Commercial data center](#)

If Other, specify: [Click or tap here to enter text.](#)

### Security

#### Access:

Public: [No](#)

Internal State Staff: [Yes](#)

External State Staff: [No](#)

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

**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: [No](#)

Financial: [No](#)

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

## 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** DCC DW and BI Project Org Chart

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

[Projectized](#)

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 tasks required of the project will be completed by staff within the IT services division. Since this project does not require an augmentation of staff resources, the administrative work outside of contract creation and execution is low. Staff within the Project Management and Administrative Office along with the Chief Information Officer will be completing the administrative tasks required.](#)

## **2. Business Program**

Business program experts will participate in a workgroup or steering committee to prioritize what data elements and source databases will be integrated into the solution first. Also, these experts will provide a moderate level of testing once the software is close to implementation. Multiple staff from Department divisions are represented in the workgroup, so the probability is low that any division's staff will not be able to participate as required.

## **3. Information Technology**

One IT staff person will be the primary individual responsible for implementing the software solution with the assistance of Project Management and Administrative Office and Infrastructure and Enterprise Services Branch staff. Implementation services hours are also being purchased with the software.

## **4. Testing**

Testing will predominantly be completed by IT services division staff with some assistance from business program subject matter experts. The testing workload associated with the implementation of a business intelligence reporting tool is more technical in nature than other types of software implementations with larger end user groups.

## **5. Data Conversion/Migration**

Data conversion will not be in scope of this project.

## **6. Training**

Training of end users will be conducted by IT services division staff. Trainings will be recorded in MS Teams to offer business users the opportunity to revisit the trainings later.

## **7. Organizational Change Management**

Organizational Change Management needs will be lower than other projects as the Department is implementing a business intelligence and reporting tool for the first time. There is no transition for staff to translate business processes from an old platform to a new one since this is a first for the department. As such, change management needs will occur predominantly through the training sessions mentioned above.

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

The staff who will be participating in the Stage 3 solution development have drafted statements of work and acquisition packages based on leveraged procurement agreements before. Additionally, several members of the team have participated on major solicitations for reportable projects in the past.

## 2.10 Project Planning

### 1. Project Management Risk Assessment

Updated Project Management Risk Score: .5

**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 \(Approved\):](#) No

Status: [Artifact is being drafted.](#)

**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 \(Approved\):](#) Not Applicable

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

[Communication Management Plan \(Approved\):](#) Not Applicable

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

[Schedule Management Plan \(Approved\) :](#) Not Applicable

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

[Procurement Management Plan \(Approved\):](#) Not Applicable

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

[Requirements Management Plan \(Approved\):](#) Not Applicable

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

[Stakeholder Management Plan \(Draft\):](#) Not Applicable

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

[Governance Plan \(Draft\):](#) No

Status: Plan will be drafted in advance of closeout of Stage 4

[Contract Management Plan \(Draft\)](#): Not Applicable

Status: Click or tap here to enter text.

[Resource Management Plan \(Draft\)](#): Not Applicable

Status: Click or tap here to enter text.

[Change Control Management Plan \(Draft\)](#): Not Applicable

Status: Click or tap here to enter text.

[Risk Management Plan \(Draft + Risk Log\)](#): No

Status: Plan will be drafted in advance of closeout of Stage 4

[Issue and Action Item Management Plan \(Draft + Issue Log\)](#): No

Status: Plan will be drafted in advance of closeout of Stage 4

[Cost Management Plan \(Approved if planning BCP approved\)](#): Not Applicable

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.

- a) Planning Start Date: [11/1/2022](#)
- b) Estimated Planning End Date: [5/31/2023](#)
- c) Estimated Project Start Date: [6/1/2023](#)
- d) Estimated Project End Date: [9/30/2024](#)

## 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: **Not Applicable**

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

**2. Data Migration Plan: Not Applicable**

Click or tap here to enter text.

**3. Data Profiling: Not Applicable**

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

**7. Data Dictionaries: In Progress**

Click or tap here to enter text.

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

Click or tap here to enter text.

**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](mailto:ProjectOversight@state.ca.gov).**

**Department of Technology Use Only**

**Original "New Submission" Date:** 3/30/2023

**Form Received Date:** 3/30/2023

**Form Accepted Date:** 3/30/2023

**Form Status:** Completed

**Form Status Date:** 5/9/2023

**Form Disposition:** Approved

**Form Disposition Date:** 5/9/2023