



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:** 4265 - Public Health, Department of

If Agency/State entity is not in the list, enter here with the 4265.

NA

2. **Proposal Name:** Lead-Based Paint Renovation, Repair, and Painting Certification System

3. **Department of Technology Project Number (0000-000):** 4265-086

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

5. **CDT Billing Case Number:** CS0072908

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

2.2 Submittal Information

1. Contact Information

Contact Name: Ous Hammour

Contact Email: ous.hammour@cdph.ca.gov

Contact Phone: 279-667-0065

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):

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

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 Lead-Based Paint Renovation, Repair, and Painting (RRP) Rule is a federal regulation that helps to protect the public from lead exposure during renovation, repair, and painting activities in homes and child-occupied buildings built before 1978, when lead-based paint was banned. The rule does this by providing clear requirements for training and certification in lead-safe work practices.

The RRP Rule is managed by the United States Environmental Protection Agency (EPA). The EPA accredits training providers and certifies individuals and firms in lead-safe work practices. The EPA uses a system called the Central Data Exchange (CDX) to manage the accreditation and certification processes.

How the RRP Rule Protects the Public

The RRP Rule helps to protect the public from lead exposure by requiring training and certification in lead-safe work practices. This helps to ensure that renovation, repair, and painting activities are performed in a way that minimizes the risk of lead exposure. Lead exposure can have serious health consequences, especially for children. Lead can damage the brain and nervous system, and it can cause a variety of other health problems. By reducing the risk of lead exposure, the RRP Rule helps to protect the public health.

The Role of Accredited Training Providers

Accredited training providers play a major role in the RRP Rule by providing training to individuals and firms on lead-safe work practices. Trainers use the CDX system to get authorized to train individuals and firms, to submit their accreditation payments, and to pay for student certification fees.

Trainers are also responsible for issuing certifications to individuals who pass the lead-safe work practices training course. Trainers must submit student information, including a photo, legal name, date of birth, and address, to the CDX system in order to issue a certification.

Training and Certification Requirements

To become certified in lead-safe work practices, individuals must take a one-day training course from an accredited training provider. The course covers topics such as lead-based paint identification, lead hazards, lead-safe work practices, and dust control. Once the individual passes the course, the trainer can issue them a certification. Individuals can also take a refresher certification course to maintain their certification.

Firms that perform renovation, repair, and painting activities in homes and child-occupied buildings built before 1978 must be certified by the EPA in order to perform these activities. To become certified, a firm must submit an application and fee to the EPA. The EPA also requires firms to have at least one certified renovator on staff for every five employees.

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

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

The Environmental Protection Agency (EPA) Central Data Exchange (CDX) is an electronic reporting site that supplements EPA reporting systems by performing new and existing functions for receiving legally acceptable data in various formats, including consolidated and integrated data. The CDX serves as the single point of entry for many environmental data submissions to the Agency. It is designed to be EPA's Node on the National Environmental Information Exchange Network (NEIN) which will link EPA and the states over the Internet and will also eventually include other stakeholders. The site can be accessed from the following URL: <https://cdx.epa.gov>.

The CDX team is responsible for developing the technical capabilities to receive and process electronic reports, developing an appropriate policy and legal framework to ensure that electronic submissions are legally acceptable, and working with states, tribes, and reporting entities on electronic reporting. The CDX team has developed a number of web-based applications to support electronic reporting, including the Central Data Exchange (CDX) Gateway, the Electronic Submissions Gateway (ESG), and the Central Data Exchange (CDX) Node Client. The CDX Gateway is a web-based application that allows users to submit electronic reports to the EPA. The ESG is a web-based application that allows users to submit electronic reports to the EPA and other federal agencies. The CDX Node Client is a web-based application that allows users to submit electronic reports to the EPA and other federal agencies.

In summary, the CDX is a central point that supplements EPA reporting systems by performing new and existing functions for receiving legally acceptable data in various formats, including consolidated and integrated data. It is designed to be EPA's Node on the National Environmental Information Exchange Network (NEIN) which will link EPA and the states over the Internet and will also eventually include other stakeholders. The CDX team is responsible for developing the technical capabilities to receive and process electronic reports, developing an appropriate policy and legal framework to ensure that electronic submissions are legally acceptable, and working with states, tribes, and reporting entities on electronic reporting. The CDX team has developed a number of web-based applications to support electronic reporting,

including the Central Data Exchange (CDX) Gateway, the Electronic Submissions Gateway (ESG), and the Central Data Exchange (CDX) Node Client.

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

Not available reason: [Click or tap here to enter text.](#)

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

Data Owner Name: [EPA - Mike Wilson](#)

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

Data Owner Business Program area: [Click or tap here to enter text.](#)

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

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

Data Custodian Technical area: [Click or tap here to enter text.](#)

Security - Data Classification and Categorization [Choose Yes or No.](#)

Security - Privacy Threshold & Impact Assessment. [Choose Yes or No.](#)

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: [No issues identified.](#)

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.

[The CDPH Ecosystem of Data Sharing \(EODS\) governance model considers federal and State standards for data representation, the CMS Electronic Health Records \(EHR\) Incentive Program, Meaningful Use initiative, data sharing opportunities, systems interoperability, accreditation goals, stakeholder collaboration, and funding opportunities.](#)

[The model includes the CDPH Information Technology \(IT\) Governance Council, which is overseen by the EODS Steering Committee. The latter reports to the highest-level](#)

data governance body, which is the EODS Governance Council. These groups provide strategic oversight and direction for CDPH data governance including the governance framework, approved project management artifacts, the portfolio of department enterprise services, business and technical methodology, business planning, technology policy and CDPH policies, standards, and guidelines.

The EODS is implemented from a tactical perspective, through six enterprise-level sub-committees: the CDPH Portfolio, Policies and Standards Committee, Privacy and Security Committee, Enterprise Architecture Committee, Interoperability Data Exchange Committee, Legal Committee and Fiscal/Funding Committee.

- 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.

EODS data governance framework will address the business drivers for data governance, CDPH stakeholders, the EODS project portfolio, and a tiered governance structure. The EODS Governance Framework document describes data governance capabilities, roles and responsibilities, and a development approach for technology projects. For security and confidentiality reasons, we have not attached the draft data governance framework to this S2AA.

- 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.

(1) The CDPH Information System Security Requirements for Projects provides the minimum-security requirements mandated by the CDPH Information Security Office (ISO) for projects governed and/or subject to the policies and standards of CDPH. Projects intending to deploy systems/applications into the CDPH system infrastructure, or utilizing CDPH information system services, are also subject to the minimum-security requirements it contains. The CDPH Information Systems Security Requirements for Projects document explains the criteria CDPH will use when evaluating and certifying the system design, security features, and protocols used by project solutions utilizing CDPH services. These security requirements will also be used in conjunction with the CDPH ISO compliance review program of its information system services customers. These security requirements serve as a universal set of requirements, which must be met regardless of physical hosting location or entities providing operations and maintenance responsibility. For security and confidentiality reasons, we have not attached the CDPH Information System Security Requirements for Projects to this S2AA.

(2) All State departments are required to have implemented an information privacy program (Government Code Section 11019.9), including rules of conduct regarding

personal information (Civil Code Section 1798.20), a designated employee in charge of ensuring program compliance (Civil Code Section 1798.22), and other guidelines, procedures, training, and compliance as outlined in the Information Practices Act (IPA) (Civil Code Section 1798 et seq.) and the State Administrative Manual (Sections 5100 and 5300 through 5399).

(3) CDPH follows the privacy policies contained in the Information Privacy Program documented in Chapter 11 of the Public Health Administrative Manual. For security and confidentiality reasons, we have not attached the Public Health Administrative Manual to this S2AA.

- 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.

CDPH understands the importance of ensuring Internet-facing websites are accessible by the intended audiences and internal electronic and information technology systems are accessible by authorized state employees, including persons with disabilities. CDPH IT projects incorporate requirements to address these needs by complying with accessibility requirements, such as the requirements set out in Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. Section 794d), and regulations implementing that act as set forth in Part 1194 of Title 36 of the Code of Federal Regulations. CDPH accessibility practices align with the guidance provided by the following sources.

1. California Department of Technology, IT Accessibility Resource Guide, SIMM Section 25, October 2017. (<https://cdt.ca.gov/wp-content/uploads/2017/10/SIMM-25.pdf>)
2. State Administrative Manual Section 4833, Information Technology Accessibility Policy. (<http://sam.dgs.ca.gov/TOC/4800.aspx>)
3. Office of the State CIO, IT Policy Letter (ITPL): Information Technology Accessibility (ITPL 10-10). (<https://cdt.ca.gov/technology-letters/>)
4. Section 4-1065 of the Public Health Administrative Manual addresses Web Site and Information Technology Accessibility. For security and confidentiality reasons, we have not attached the Public Health Administrative Manual to this S2AA.

5. Security Categorization Impact Table

Consult the [SIMM 5305-A Information Security Program Management Standard - Security Categorization Impact Table](#).

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

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

6. Security Categorization Impact Table Summary

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

Confidentiality: [Medium](#)

Integrity: [Medium](#)

Availability: [Medium](#)

7. Technical Complexity Score: 1.6

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

2.4 Requirements and Outcomes

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

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

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

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

2.5 Assumptions and Constraints

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

[Assumptions and Constraints reside in the Project Charter.](#)

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: Timely approvals by management.

Dependency Description: To meet scheduled milestone and project implementation dates, the project depends on timely approvals from multiple sources, including CDPH leadership, California Health and Human Services Agency (CalHHS), CDT, etc.

Dependency Element: Fall 2024 BCP approval to get funding necessary for project completion.

Dependency Description: Approval of expenditure authority requested through the BCP process is needed to obtain funding for FY 2025/26. Should funding not be available as expected, the project may need to reduce scope, be paused, or postponed pending available funding.

Dependency Element: EPA authorization for CDPH's Renovation Branch.

Dependency Description:

- SB1076 will need to get authorization from EPA before go live. Program will be working on this effort in parallel to project progress.

- While program work on seeking authorization from EPA, project scope might change to accommodate the requirement from the federal agency. State regulations are not less strict and will be building off of Federal regulation in order to ensure authorization. The anticipated change is minimum, and the project team has incorporated a buffer for budget and schedule to accommodate this possible change based on the experience and lessons learned from other states who implemented the replacement system.

Dependency Element: CROMERR application approval.

Dependency Description: Cross-Media Electronic Reporting Rule (CROMERR) provides the legal framework for electronic reporting under EPA's regulatory programs. As per the EPA requirements, SB1076 need to get CROMERR compliance application approved before solution go live.

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

2.7 Market Research

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

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

- 1. Project Management Methodology:** [Hybrid](#)
- 2. Procurement approach recommended:** [Standard Procurement](#)
- 3. Market Research Approach**

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

The market research effort for this project was done based on three pillars:

1. Leveraging the CDPH enterprise-wide research done on IT data systems including licensing applications and considering the CDX system that SB1076 is looking to replace.
2. Reaching out to other states who implemented the same solution to replace EPA's CDX system.
3. Reusing the market research done for other CDPH projects for solutions that are similar in size and complexity.

CDPH Licensing Systems:

According to the "CDPH Centralized Application Inventory" as of December 29, 2020, the California Department of Public Health (CDPH) manages 32 distinct licensing systems. These systems exhibit significant variation in terms of license types, user counts, functionality, and underlying technology. These details are relevant for our alternatives analysis.

As part of the IT Data Future of Public Health initiative, CDPH conducted research to identify the optimal solution for its IT data systems including the licensing ones considering the needs and features that are required for those systems, considering the CDX system which SB1076 is going to replace. The overarching vision is to provide cost-effective, secure, and sustainable solutions by leveraging "Preferred" platforms. These platforms empower the IT Services Division (ITSD) to swiftly address business needs and facilitate digital transformation. For a comprehensive understanding of this process, refer to the attached document: "CDPH Architecture Tool Analysis."

The research concluded that Microsoft Power Platform is the preferred Software as a Service (SaaS) solution. The decision was based on several key pillars: cost-effectiveness, security, time-to-market, governance, extensibility, and access to developer resources. Detailed analyses of various tools are available in the attached document: "CDPH Architecture Tool Analysis."

Outreach to Other States:

The project team proactively engaged with the federal agency EPA to obtain contacts from states that have successfully implemented in-house systems to replace the CDX system. Among the seven states provided by the EPA, Vermont and Wisconsin shared detailed information. Both states confirmed the utilization of customizable SaaS solutions. Refer to the attached document: "Market Research Summary" for further insights.

Outreach to Other Projects Market Research:

The SB1076 Project team also collaborated with other CDPH projects of similar scale and scope. These projects had conducted market research studies, and their findings were integrated into our project. Specifically, Office of Problem Gambling Data Management System (OPG-DMS) and Centralized Application Branch Online (CAB Online). The related results from those two projects' studies can be found in the attached file: Market Research Summary. Those results confirmed that Microsoft Power Platform has the lowest costs when compared to other tools and platforms. For SB1076 project, Salesforce was used as second alternative however we project we can deliver the solution with the preferred platform most effectively and in alignment with our preferred SaaS.

Market Research Artifacts

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

Attach Market Research artifacts to the email submission.

2.8 Viable Alternative Solutions

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


1. Viable Alternative Solution #1

Name: Microsoft Power Platform

Description: The primary alternative leverages the CDPH enterprise preferred low code platform (Microsoft Power Platform) and Power Apps. This alternative most closely aligns with the strategies identified in the Future of Public Health (FoPH) workstream. We expect to achieve this alignment through direct utilization of the recommended CDPH Information Sharing Interoperability Reference Architecture. This alternative will exist in the cloud and have the potential to directly utilize components such as Message Broker and/or Azure DataBricks to take advantage of the suite of enterprise Integration Services available to connect this solution with the greater CDPH enterprise data ecosystem.

This alternative will be web-based and be built using the MS Power Apps low-code platform. The alternative will be built using discreet functional modules that provide services which are connected using an integration API(s).

Why is this a viable solution? Please explain:

- This alternative aligns with FoPH strategic initiatives. It consumes information from components being defined in the licensing aspect of Objective 2: Create a valuable, agile, cost-effective technology ecosystem that contributes to equity and the health and safety of Californians, and from the Initiative 2 of that objective:
- Streamlined transactional systems that create an enterprise-scale core backbone for surveillance and licensing activities . In addition, this project aligns with Initiative 3 Rapid Public Health Data Services. This will be accomplished by directly funneling data into the enterprise data ecosystem. Additionally, this alternative will utilize the enterprise data analytics platform for reporting and analytics purposes. This alignment removes data siloes, providing scalable public health data.
- This solution is the lowest in one time cost by far from the other alternatives by more than \$1,900,000.
- This solution's maintenance and operation cost is the lowest compared to the other alternatives by more than \$900,000.
- This solution will allow for efficient integration with the existing lead-related construction certification system which is being migrated to this platform in 2024. 

Approach

Increase staff – new or existing capabilities: **Yes**

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

Reduce the services or level of services provided: **No**

Utilize new or increased contracted services: **Yes**

Enhance the existing IT system: **No**

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

Please Specify: **This is a new system for a new established branch.**

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.

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

Name/Primary Technology: **Microsoft Power Platform**

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: [System might connect with other California state's systems to get information about contractors' statuses. More information on that in stage 3.](#)

Data Center Location of the To-be Solution: [Other](#)

If Other, specify: [CDPH Azure Cloud](#)

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: [Yes](#)

Legal: [No](#)

Confidential: [No](#)

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

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

Technical Security: [Yes](#)

Physical Security: [Yes](#)

Backup and Recovery: [Yes](#)

Identity Authorization and Authentication: [Yes](#)

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

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

Planning Costs: [\\$721,089.00](#)

One-Time (Project) Costs: \$4,483,888.00

Total Future Ops. IT Staff OE&E Costs: \$1,038,159.00

Total Proposed Cost: \$6,243,136.00

Annual Future Ops. Costs (M&O): \$1,423,554.00

2. Viable Alternative Solution #2

Name: Salesforce

Description: Salesforce is a PaaS low code/no code solution that will be hosted in cloud. CDPH will contract for vendor services to configure and implement the system, train internal/external users, and maintain and operate the system.

Why is this a viable solution? Please explain:

This solution alternative is viable because:

- Market research showed that this PaaS solution with low code/no code technologies can meet SB1076 functional and non-functional requirements.
- CDPH ITSD supports this PaaS low code/no code technology and have been implemented it within the department.

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): [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: [Salesforce](#)

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: [System might connect with other state's systems to get information about contractors' statuses.](#)

Data Center Location of the To-be Solution: [Other](#)

If Other, specify: [Salesforce Cloud](#)

Security

Access:

Public: [Yes](#)

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: [Yes](#)

Legal: [No](#)

Confidential: [No](#)

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: \$10,708,460.00

3. Viable Alternative Solution #3

Name: [ServiceNow](#)

Description: [ServiceNow](#) is PaaS low code/no code solution that will be hosted in cloud. CDPH will contract for vendor services to configure and implement the system, train internal/external users, and maintain and operate the system.

Why is this a viable solution? Please explain:

This solution alternative is viable because:

- [Market research](#) showed that this PaaS solution with low code/no code technologies can meet SB1076 functional and non-functional requirements.
- [CDPH ITSD](#) supports this PaaS low code/no code technology and have been implemented it within the department.

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: [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: [ServiceNow](#)

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: [System might connect with other state's systems to get information about contractors' statuses.](#)

Data Center Location of the To-be Solution: [Other](#)

If Other, specify: [ServiceNow Cloud](#)

Security

Access:

Public: [Yes](#)

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: [Yes](#)

Legal: [No](#)

Confidential: [No](#)

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):

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2.9 Project Organization

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

1. Project Organization Chart:

Attach the Project Organization Chart to your email submission.

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

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

CDPH assessed the administrative staff support required for the SB1076 project (e.g., staff specializing in procurements, contract management, and budgets). Each area of administrative specialty is discussed in the paragraphs below.

PROCUREMENT: CDPH has experienced staff and mature administrative processes in place for departmental procurement, contract management, and budgets. The CDPH Purchasing, Solicitations, and Processing Services Section (PSPSS) is staffed by procurement resources who have experience managing a broad range of State procurements including Invitation for Bid (IFB), Request for Offer (RFO), Request for Proposal (RFP), and Request for a Quote (RFQ). PSPSS and ITSD staff and management have experience conducting procurements for complex IT projects requiring the use of multiple vendors and multiple types of vendor services. Staff in these business units are knowledgeable about Public Contract Code (PCC) 6611.

The SB1076 project team will engage the CDPH PSPSS and the CDPH Procurement and Contracting Officer in the review and approval processes for the Stage 2 Alternatives Analysis (S2AA) package. The project team identified the list of SB1076 project procurements needed and will work with PSPSS staff to confirm corresponding timeframes so they can integrate the needs of the project into their other workload. Each SB1076 project procurement will be planned, scheduled, and managed in the SB1076 project schedule.

The primary SB1076 project procurement will be a modern procurement led by the CDT STP Division in partnership with CDPH consisting of cloud-hosting; SaaS or PaaS services; software licenses; design, development, and implementation (DD&I) services; application training services; and maintenance and operation services. CDPH will use an existing contract for project management support services.

CONTRACT MANAGEMENT: ITSD will assign an experienced resource as the CDPH

Contract Manager to manage the SB1076 project contracts. Vendors contracted to provide services to the SB1076 project will each assign a resource to a corresponding contract manager role.

BUDGET: The CDPH budget office is staffed adequately and is experienced in assisting the budgetary needs of CDPH IT projects. The SB1076 project Executive Sponsor and other members of the SB1076 project Team communicate regularly with the budget office about the Project's budget needs and the State's budget request deadlines per fiscal year.

LEGAL: The CDPH Legal Office is amply staffed to provide any necessary legal support during the planning and procurement phases of the project. Legal staff are expected to provide some legal review of documentation during the preparation of solicitations and provide legal support (if necessary) during the execution of contracts with vendors.

2. Business Program

The SB1076 project Team assessed the project's staffing needs and documented the business program project staffing allocation in the FAW attached to the SB1076 project PAL S2AA email submission. CDPH staff and management are aware of the complexities and resource demands involved in implementing complex IT projects that use services from multiple vendors. For the pivotal Product Owner role that has extensive day-to-day involvement with the project and the Solution Vendor team, Center of Healthy Communities (CHC) selected an Environmental Program Manager I who is highly knowledgeable about the SB1076 project. The SMEs are CDPH staff who understand Program business needs and are knowledgeable about business rules and requirements. CDPH will procure vendor services to support multiple areas of the SB1076 project including DD&I, updating business processes to align with the new solution, and project management support. The availability of these additional resources will reduce the workload for program staff. The project Organization Chart is included in the organization charts attached to the SB1076 PAL S2AA email submission.

3. Information Technology

The SB1076 project Team assessed the project's IT staffing needs including EA, business analysts, developers, network analysts, information security, and data analysts. CDPH will support and promote project success without an impact to ongoing ITSD responsibilities by committing staff to the project who have experience, knowledge, and skill, and by obtaining services from experienced vendors. CDPH will procure vendor services for DD&I, which will reduce the project's workload burden on ITSD staff related to these activities; however, ITSD staff will participate in the project to educate vendor staff about CDPH processes, review the vendor's technical project deliverables, ensure the SB1076 project solution conforms to applicable State, security, architecture, and technical standards, and receive technical knowledge transfer from the vendors about the SB1076 project solution.

The SB1076 project is seeking a SaaS or PaaS low code/no code solution, which requires substantially less CDPH support than an on-premises solution but also requires that CDPH provide some level of support. The Solution Vendor and the cloud-hosting vendor (Microsoft Azure Cloud) will provide the primary support for the system during maintenance and operations. CDPH ITSD staff will provide Tier 2 support and will also support Azure integration, security operations, code deployments/management, change management, release management, and integrated components.

The/An Enterprise Project Management Office (ePMO), which manages the Department's IT projects, has mature project management procedures and seasoned project management staff who routinely work with CDPH technical staff and vendors to deliver complex IT projects successfully. The ePMO will assign a Project Manager to oversee the SB1076 project from the tactical and strategic perspectives. ePMO staff are experienced in the application of the California Project Management Framework (CA-PMF). The project management life cycle and the System Development Lifecycle (SDLC) are tightly integrated and must be simultaneously managed. ePMO staff will work with business program staff and the Solution Vendor to maintain CA-PMF alignment and project rigor throughout the project.

4. Testing

CDPH will provide sufficient business program resources, technical resources, and project management resources to support the planned testing activities in partnership with the project's vendor(s). The Executive Sponsor will ensure Program resources are available to participate in testing when they are needed.

The SB1076 project will conduct testing activities and make updates to the corresponding documents throughout the project. Planning for testing will involve participation by CDPH SMEs, ITSD staff, and vendor staff. Testing activities will include but are not limited to unit testing, system testing, regression testing, UAT, load/stress testing, performance testing, security testing, and post release verification and validation.

The Solution Vendor will be responsible for testing all parts of the system, including the system architecture, security, performance, and stress/load testing. The Solution Vendor will also be responsible for the overall support of the testing technical environments.

Additional Solution Vendor responsibilities include creating and managing a Master Test Plan; creating user stories, test cases, and test scripts; and performing unit testing, integration testing, and end-to-end testing. CDPH IT staff (i.e., enterprise architect, ISO, and assigned testing resources) will work with the Solution Vendor to review test plans and test results, and to make sure any defects or issues are addressed appropriately. The Product Owner will approve software release(s) based on defined acceptance criteria established in advance. ITSD technical analysts and the project DD&I vendor will perform pre-UAT testing (after system testing), security testing, and load/stress/performance testing. The SB1076 project Product Owner and Program SMEs will help design and develop a plan for UAT. The SB1076 project Product Owner, Program SMEs, and external facility providers will serve as testers during UAT. Under the guidance of the Project Manager and informed by the vendor's expertise, CDPH UAT testers will participate in software requirements meetings, as needed, to understand the business and functional requirements that the software must meet.

UAT will be performed based on the approved test plan. Any issues will be documented in a defect tracking tool. When a defect has been corrected, the testers will re-test and declare it fixed or report it again, until the requirement has been successfully tested and passed.

CDPH program and technical staff will work with the Solution Vendor throughout the testing process. CDPH staff will provide oversight for contractor testing to ensure the testing effort validates system requirements as well as business needs and will sign off on the final testing deliverables and processes. The Solution Vendor will package and provide all test data, test scripts, test results, use cases, and test documentation to CDPH for subsequent reuse.

5. Data Conversion/Migration

CDPH understands the importance of quality, accurate, and complete data, and the need for a well-planned and executed data cleansing, conversion, and migration effort. The SB1076 project will require minimal data cleansing and data conversion activities. To ensure a smooth transition to the new SB1076 project, CDPH will complete data conversion analysis, preparation, and planning well in advance of system implementation. Data errors must be identified and resolved before source data is migrated to the new SB1076 system. The SB1076 project team should begin work three months before the project go live date, to allow time to complete data analyses, prepare a data profile and other essential data documentation, and provide reports and recommendations to CDPH on data quality, data cleansing strategy, and data conversion. During the SB1076 project, the SB1076 DD&I vendor will be responsible for leading, planning, coordinating, and executing data cleansing, data conversion, and data migration activities. The Product Owner and CDPH Project Manager will coordinate with the vendor to assure a thorough and efficient transfer of knowledge to State and vendor staff. Any vendor contracts will include a requirement for vendor cooperation during this transition. The DD&I vendor will develop and execute the SB1076 data conversion and migration plan with cooperation from internal and external stakeholders. Data cleansing, conversion, and migration activities will be collaborative efforts involving the vendor, Product Owner, CDPH SMEs, and ITSD staff. Certain activities, such as requirements validation, data cleansing, and data validation, will also involve representatives from key external stakeholders.

6. Training

CDPH does not have sufficient in-house resources to develop and implement the training required for the SB1076 project. CDPH will work with the DD&I vendor to meet the project's training needs.

The SB1076 project training program will utilize a dedicated training environment. The Training Team will assess and report on training needs; develop a training plan, curricula, training schedules, and training materials; and report on training activities. End-user training that helps stakeholders understand how to perform their responsibilities using the SB1076 project and updated business processes will comprise the bulk of SB1076 project training program. Staff who participate in agile sprints during development of the solution will receive training on the agile methodology used by the project; and testers, help desk staff, system administrators, and others will receive training suitable to their responsibilities. Key opportunities for technical knowledge transfer will be identified and tracked, so they are not overlooked.

7. Organizational Change Management

CDPH has broad experience with the human centered change-related challenges of IT projects. Program leaders recognize the importance of understanding potential impacts to stakeholders, setting expectations, and sustaining effective bi-directional communication with stakeholders throughout a project. SB1076 project stakeholders of all kinds and at all levels will need information about the SB1076 project to understand, manage, and adapt to changes related to the Implementation of the new system. Additionally, stakeholder communication needs vary by type of stakeholder organization and by the role each person has in their

organization. Assessment of potential project impacts on stakeholders will be a key part of the SB1076 project OCM initiative.

CDPH will rely on in-house staff who possess the experience and expertise required to conduct the OCM activities required by the SB1076 project. OCM activities will begin on the Project Start Date. The project team will plan, conduct, and report on activities that promote acceptance and adoption of the SB1076 project and will help internal and external project stakeholders prepare for the transition to the SB1076 project solution.

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

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

The CDPH governance processes for IT projects are mature and encompass both procurement decisions and project decisions. Governance is already underway for the SB1076 project. The project will have a Steering Committee, and the Executive Sponsor is an active participant in project governance, attends projects meetings routinely, and will continue to be involved in each stage of the PAL process.

CDPH staff have a vast amount of procurement knowledge and experience. The CDPH Contracts and Purchasing Services Section staff are highly proficient with state procurements, including the procurement vehicles and contract types referenced in the Stage 2 Alternatives Analysis template, section 2.11.3 and PCC 6611. The ePMO staff assigned to the SB1076 project are highly experienced, routinely manage complex IT projects, and participate in numerous technical procurements annually. ePMO will assign an experienced contract manager to the SB1076 project. The ITSD technical procurement staff who support the diverse technology procurement needs of the Department also have experience managing a wide range of procurements.

CDPH will partner with the CDT STP Division to conduct a modern procurement to select a solution vendor for the SB1076 project. CDPH understands that successful procurements require a significant amount of time from state staff participants. CDPH is prepared to participate fully, supported by the expertise and guidance of CDT STP Division staff, to complete the procurement process using short-term, concentrated commitments of CDPH expert technical and business program resources.

2.10 Project Planning

1. Project Management Risk Assessment

Updated Project Management Risk Score: 0.1

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

2. Project Charter

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

[Project Charter \(Approved\): Yes](#)

Status: CDPH Approved

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

3. Project Plans

Are the following project management plans or project artifacts approved by the designated Agency/state entity authority and available for the Department of Technology to review?

Choose: 'Yes,' 'No,' or 'Not Applicable.' If 'No' or 'Not Applicable,' provide the artifact status in the space provided.

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

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

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

Status: CDPH Approved

4. Project Roadmap (High-Level)

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

- a) Planning Start Date: [2/9/2023](#)
- b) Estimated Planning End Date: [8/31/2025](#)
- c) Estimated Project Start Date: [9/1/2025](#)
- d) Estimated Project End Date: [4/30/2026](#)

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**

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

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

[Waiting to on board the DD&I vendor who is going to develop the data migration plan.](#)

3. Data Profiling: **In Progress**

[We received the data from CDX but are still working on the data from CSLB \(contractor state license board.\)](#)

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

[Data analysis is going to be completed by the DD&I vendor, then the decision if there is a need for data cleansing is going to be made.](#)

5. Data Quality Assessment: Not Started

Assessing the data is going to be completed by the DD&I vendor.

6. Data Quality Business Rules: Not Applicable

Click or tap here to enter text.

7. Data Dictionaries: Completed

Data dictionary is ready.

8. Data Conversion/Migration Requirements: In Progress

Data conversion and migration requirements are going to be completed by the DD&I vendor.

2.12 Financial Analysis Worksheets

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

End of agency/state entity document.

Please ensure ADA compliance before submitting this document to CDT.

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

Department of Technology Use Only

Original “New Submission” Date: 9/13/2024

Form Received Date: 9/13/2024

Form Accepted Date: 9/13/2024

Form Status: Completed

Form Status Date: 5/15/2025

Form Disposition: Approved

Form Disposition Date: 5/15/2025