Stage 1 Business Analysis

California Department of Technology, SIMM 19A.3 (Ver. 3.0.8, 02/01/2022)

1.1   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 organization code.

   Click or tap here to enter text.

2. **Proposal Name and Acronym: California Integrated Vital Records System Enhancement**

3. **Proposal Description: (Provide a brief description of your proposal in 500 characters or less.)**

   This proposal is requesting the modernization of the infrastructure of existing systems in the Vital Records and Data Dissemination process, for scalability and improve flexible services for timely and appropriate access to actionable data in the public health ecosystem. Continued development (dev-ops) of vital records operating systems to implement interoperability solutions to make data capture more efficient, thereby continuing California's capability for electronic vital records registration and data reporting to our many federal, state, county partners and researchers, contractors, and stakeholders. The versioning upgrades are needed to improve the quality of data at the time of capture and to implement solutions designed to speed the transmission of data to internal and external partners and ensure Cal IVRS is compliant with WCAG 2.1 AA guidelines and accessible to all members of the public.

4. **Proposed Project Execution Start Date: 7/1/2024**

5. **S1BA Version Number: Version 1**

1.2   Submittal Information

1. **Contact Information**

   Contact Name: Ryan Beal

   Contact Email: ryan.beal@cdph.ca.gov

   Contact Phone: 916-621-1541

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 this is a Submission Update: (List all sections 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 **Stage 1 Project Reportability Assessment** to your email submission.

1.3   Business Sponsorship

1. **Executive Champion (Sponsor)**

Title: Deputy Director, State Registrar

Name: Dana Moore

Business Program Area: Center for Health Statistics and Informatics

2. **Business Owner**

Title: Assistant Deputy Director

Name: Romeo Amian

Business Program Area: Center for Health Statistics and informatics

3. **Product Owner**

Title: California Integrated Vital Records System, Section Chief

Name: Ryan Beal

Business Program Area: Center for Health Statistics and Informatics

TIP: Copy and paste or click the + button in the lower right corner on any section to add additional Executive Champions, Business Owners, or Product Owners with their related Business Program Areas as needed.

1.4   Stakeholder Assessment

The Stakeholder Assessment is designed to give the project team an overview of communication channels that the state entity needs to manage throughout the project. More stakeholders may result in increased complexity to a project.

1. **Indicate which of the following are interested in this proposal and/or the outcome of the project. (Select 'Yes' or 'No' for each.)**

    State Entity Only: Yes

    Other Departments/State Entities: Yes

    Public: Yes

    Federal Entities: Yes

    Governor's Office: No

    Legislature: No

    Media: No

    Local Entities: Yes

    Special Interest Groups: No

    Other: Yes

2. **Describe how each group marked 'Yes' will be involved in the planning process.**

    State entity CDPH Center for Health Statistics and Informatics (CHSI): CDPH CHSI will participate in the planning process as subject matter experts in the project management lifecycle. CHSI will participate in developing functional requirements, stakeholder identification and analysis, procurement planning, communication planning, risk identification, as well as assisting with defining scope, schedule, and cost.

    State entity CDPH Information Technology Services Division (ITSD): CDPH CHSI will participate in the planning process as subject matter experts alongside CDPH's ITSD Enterprise Portfolio Management Office (ePMO). ePMO will provide project management support and a designated Project Manager (PM) and Project Director (PD). The designated PM and PD will initiate and complete the Project Approval Lifecycle (PAL) deliverables according to the California Department of Technology's (CDT) oversight standards through the end of the planning process. The CDPH Information Security Office (ISO) and the CDPH Enterprise Architecture Team will be engaged early for guidance and support in coordination and collaboration with the Technical Team, and Subject Matter Experts (SMEs). Designated staff will identify, clarify, and validate technical requirements, receive technical knowledge transfer and/or training, and participate in testing prior to solution implementation. Additionally, ITSD will provide input and support in the areas IT governance, infrastructure, and application development, and provide consultation and technical guidance regarding all technical aspects of the project. ITSD will help address any technical challenges encountered during the project. The full scope of project participation depends upon solution selection. CDT will be engaged as a collaborative partner to guide CDPH through the PAL process.

    Other Departments/State Entities: The University of California, San Diego is the vendor responsible for managing and maintaining Cal IVRS and uses the system to provide services to the state. They will be consulted in the planning process.

The public will not be involved in the planning process; however, they may be interested in and affected by the outcome of this project.

Federal Entities will not be involved in the planning process; however, they may be interested in and affected by the outcome of this project. The National Center for Health Statistics and Social Security Administration will be solicited for feedback to make sure the system is in compliance with contract requirements.

Local Entities will be solicited for feedback on system enhancements and testing for the registration process they are utilizing.

Other: Coroners, Funeral Homes and other types of entities will be solicited for system for feedback on system enhancements and testing for the registration process they are utilizing.

1.5   Business Program

1. **Business Program Name:** California Integrated Vital Records System Enhancement

2. **Program Background and Context:** (Provide a brief overview of the entity's business program(s) current operations.)

CHSI is responsible for the registration of vital events, the issuance of legal vital records documents, and the collection and management of public health and vital statistics data. CHSI also compiles vital statistics data from birth, death, and fetal death certificates on more than 750,000 Californians annually. This data is foundational to the federal government, state agencies, local government agencies, policy makers, and researchers for measuring population health, research on health outcomes, and state and local public health reporting and surveillance. Additionally, vital records are essential documents that every single person uses at some point in their life, including, but not limited to securing the following: driver's licenses, health benefits, retirement, school registration, housing, job opportunities, and passports.

The California Integrated Vital Records System (Cal-IVRS) includes three sub-systems: the Electronic Death Registration System (EDRS), the Electronic Birth Registration System (EBRS), and the Vital Records Business Intelligence System (VRBIS). Deaths occurring in California are registered in EDRS. Births occurring in California are registered in EBRS. VRBIS is the system used to distribute vital records data to counties, CDPH programs and to federal stakeholders at the National Center for Health Statistics and Social Security Administration.

Over 300,000 death registrations are performed annually in California. Death registrations are initiated by hospitals, coroners, and funerals homes who enter the certificate data into the registration database. The approved users are provided an account and single sign-on (SSO) login to the secure, web based Electronic Birth Registration System (EBRS) and/or Electronic Death Registration System (EDRS).

Physician Death Attestation Process: The majority of deaths and fetal death registrations require a physician attestation. Of the 315,488 registered death records that occurred in 2022 265,622 (84.2%) were attested by a physician. Currently the attestation step is performed by paper via fax with a voice attestation option. An electronic option is not available. When a death is registered a

fax attestation request is sent to the physician and they return the completed attestation through the fax attestation system, or they may elect the voice attestation system and provides the attestation verbally. Once the attestation is received and accepted, the certificate registration is locked.

CDPH does not currently collect data on the fax attestation process because fax machines do not provide CDPH the ability to track the send/receive times; each instance of a fax transmission overrides the prior transmission data. However, CHSI's review of the attestation process shows that over half of the records attested by a physician require more than one attempt and, on average, it took approximately 4.3 days between the first attestation attempt and successful completion of the attestation. Factors contributing to the delay include:

• The Help Desk receives calls from physicians seeking assistance with the attestation process. Currently, calls per week average is 17.

• When the attestation image quality is affected during transmission preventing optical review, it is sent to queue and must be reviewed manually by CHSI staff.

• If a death record is changed after an attestation request is sent (but not completed), the request is faxed again creating multiple attestation requests for the same record. This creates confusion and can result in a physician attesting to both or attesting to the wrong instance, requiring manual intervention by CHSI staff.

• The fax machine may not be easily accessible for the physician as they may provide care in multiple physical locations.

Transfer of Certificate Images: Once the registration process is completed, the birth or death certificate image (TIFF) is created in the respective EDRS or EBRS. The certificate image must be transferred to FileNet, the content manager used to store the image and index data (provides a way to search for and retrieve a certificate). The transfer is facilitated by ITSD. They download the batch from Cal IVRS and transfer it to FileNet. The batch transfer process is performed daily with a two-day lag before the images are available for Local Registration District (LRD) staff for issuance.

Amendments to Birth and Death Records: CHSI also processes requests for amendments to death and birth certificates. When a birth amendment is requested, it requires dual data entry into Cal-IVRS to process the amendment and in the Certificate Request Tracking System (CRTS) to track the request. Data entry is performed manually by CHSI staff and takes approximately 17 minutes to complete. In 2020, 53,068 birth amendments were keyed into the systems.

Maintaining certificates and amendments in multiple systems results in errors. Although most birth amendments are processed through Cal-IVRS, some are manually updated directly in FileNet. This causes record discrepancies between systems and can result in the issuance of the wrong certificate version.

Certified Copies of Certificates and Amendments: CHSI also fulfills requests from the public for certified copies of certificates and amendments to a certificate. To request a copy, customers download and complete an Issuance or Amendment Request form and submit it by mail with a check or money order to cover the required fee. There is no electronic payment option. Check processing is performed manually and takes an average of 5-10 business days (1-2 weeks) to be

posted into CHSI banking. The average processing time for a certified copy of a certificate is 10–12 weeks and an amended certificate is 15-19 weeks. Manual processing of checks is a significant driver. In addition, if the check is not received or lost multiple auxiliary procedures are required for monitoring and processing replacement payments further delaying issuance.

Accessibility: In 2022 CHSI obtained a web accessibility assessment of the Cal-IVRS three subsystems EDRS, EBRS and VRBIS for alignment with WCAG 2.1 AA guidelines. The assessment resulted in 11 findings and recommendations which included fixing the color contrast and form field label associations, key board navigation and alt text tags which places CDPH at risk of public scrutiny and potential law suits.

Assembly Bill (AB) 749 Zero Trust Architecture:

AB 749 will add Section 11549.45 to the Government Code which will require CDPH to implement multi-factor authentication (MFA) two-step verification process by January 1, 2025. Currently, Cal-IVRS utilizes single sign-on (SSO) to access the system. The implementation of MFA will ensure users accessing CDPH systems will be authenticated, authorized, and continuously validated for security before being granted or retaining access to applications and data.

3. **How will this proposed project impact the product or services supported by the state entity?**

CHSI has historically registered, stored, and issued vital records for millions of Californians using outdated systems and processes that often require extensive manual data extraction with limited trained staff. Enhancements to the modernization of CHSI's vital records systems will help fill the gaps in data linkage, process automation, and deliverance of enhanced vital records data services to the public.

The proposed project will enhance operational efficiency and improve the timeliness of the registration and issuance of vital records and amendments by eliminating the need for manual processes. The project will position CDPH to better serve the people of California by providing an electronic attestation option for physicians to certify death certificates and an electronic payment method for the public for requesting certificates and amendments. The project will ensure the ongoing compliance of Cal IVRS with accessibility requirements and meet the AB 749 information security requirement for multi-factor authentication.

TIP: Copy and paste or click the + button in the lower right corner to add Business Programs, with background and context and impact descriptions as needed.

1.6   Project Justification

1. **Strategic Business Alignment**

    Enterprise Architect

    Title: Enterprise Architect

    Name: Craig Stone

Strategic Plan Last Updated? 5/31/2019

Strategic Business Goal: Enhance services through agile operations, Optimize data and technology.

Alignment: Strategic Business Goal: Enhance Services Through Agile Operations

Alignment: The proposed project will provide better services to the people of California by providing accurate and timely certificate and amendment images to local agencies and provide an electronic attestation mechanism for physicians to certify certificates timelier. The proposed project will also improve efficiencies to program operations by reducing average payment processing time by providing a method for expedited payment and by reducing the time it takes to process a birth amendment.

Alignment: Strategic Business Goal: Optimize data and technology

Alignment: The proposed project will improve information security by implementing multifactor authentication as part of Zero Trust Architecture as mandated by AB 749.

Mandate(s): State

Bill Number/Code, if applicable: AB 749

Add the Bill language that includes system-relevant requirements:

By January 1, 2026, every state agency shall implement Zero Trust architecture, including the following for all data, hardware, software, internal systems, and essential third-party software, including for on-premises, cloud, and hybrid environments:
(1) Multifactor authentication for access to all systems and data owned, managed, maintained, or utilized by or on behalf of the state agency.
(2) Enterprise endpoint detection and response solutions to promote real-time detection of cybersecurity threats and rapid investigation and remediation capabilities.
(3) Robust logging practices to provide adequate data to support security investigations and proactive threat hunting.

2. **Business Driver(s)**

   Financial Benefit: No

   Increased Revenue: No

   Cost Savings: No

   Cost Avoidance: No

   Cost Recovery: No

   Will the state incur a financial penalty or sanction if this proposal is not implemented? No

If the answer to the above question is "Yes," please explain:

Click or tap here to enter text.

Improvement

Better Services to the People of California: Yes

Efficiencies to Program Operations: Yes

Improved Equity, Diversity, and/or Inclusivity: No

Improved Health and/or Human Safety: No

Improved Information Security: Yes

Improved Business Continuity: No

Improved Technology Recovery: No

Technology Refresh: No

Technology End of Life: No

1.7   Business Outcomes Desired

Executive Summary of the Business Problem or Opportunity:

CHSI spends significant amounts of time manually transferring certificate images and processing paper checks which delay processing and issuance of certificates to the public. The current registration process is administratively burdensome and frustrating to physicians responsible for attesting to deaths and the 50 coroners, 1,000 funeral homes and 62 LRD's responsible for the timely issuance of death certificates to the public. The resulting delays in the issuance of certificates can adversely affect the public and places CDPH at risk of public scrutiny. For example, recently the Bureau of State Audits initiated an audit of the CHSI's fetal death and stillborn certificate issuance process. The audit resulted from complaints received by constituents of a member(s) of the Legislature. Also there have been several legislative attempts to enact changes to the state's tax code to provide tax credit for qualified expenses paid or incurred that are tied to the issuance of a Certificate of Still Birth.

CHSI is seeking to modernize the Cal IVRS to provide more efficient processes and improve the delivery of vital records registration, issuance and amendments to local agencies and the public. The proposed project will enable CHSI to reduce manual processes and implement new business processes that are efficient, innovative, transparent, deliver value to customers and promote a proactive culture of continuous quality improvement.

CDPH's Future of Public Health Budget Change Proposal includes Initiative #3 which focuses on "More efficient public health business processes reducing manual burden and waste in providing rapid public health data services." The proposed project will provide measurable improvements that

aligns with the initiative and are crucial to serving the public and facilitate the mission of CDPH. Also, moving forward with the proposed improvements is critical because they will reduce processing time which was the impetus for the audit.

Through this proposed project, CHSI seeks to:

- provide CHSI a single process to transfer birth and death certificates and amendments images to LRDs and eliminate the daily bulk transfer of certificate images from EDRS and EBRS to FileNet. This project allows CDPH the opportunity to make certificate images immediately available to LRDs for issuance and eliminate the staff time performing daily batch transfer tasks, allowing them to focus on higher-value and less redundant activities.

- add the capability to track amendment requests electronically into one system, thus eliminating dual entry into two systems to capture the same information. This will reduce the time currently spent by CHSI staff manually entering the data.

- provide physicians with an electronic attestation option for receiving and completing attestation requests in real time. The electronic attestation option will reduce the number of help desk calls, errors and manual processes associated with the current fax process and provide physicians more time to provide services to patients. It also provides CHSI the ability to implement business process improvements that are efficient, customer focused, and promote continuous quality improvement.

- accelerate amendment request issuance by reducing payment processing times. Currently, CHSI requires the public to make payments by check which delays processing times. An electronic option would significantly reduce the current processing time of 5 - 10 days to fulfill requests for certified copies of certificates and amendments.

Additionally, the project will enable CHSI to address the findings and recommendations in the Cal IVRS Web Accessibility Assessment Report and ensure Cal IVRS and its subsystems are in compliance with WCAG 2.1 AA guidelines and are accessible to all members of the public, thereby reducing CDPH's risk of non-compliance, potential financial loss, and public scrutiny.

The project will further enable CDPH to implement new information security using MFA and meet the AB 749 requirements. The implementation of MFA will ensure users accessing CDPH systems will be authenticated, authorized, and continuously validated for security before being granted or retaining access to applications and data. It will increase the security and protection of vital records data which is crucial to serving the public and facilitating the mission of CDPH.

Business Problem/Opportunities and Objectives List

Objective ID: 1.1

Objective: Provide better services to Californians by accelerating the availability of birth and death certificates, enabling the completion of critical tasks related to new births and deaths. Reduce the overall time required to make certificate images available to LRDs for issuance to the public.

Metric: Number of days between completion of registrations and the availability of certificate images for issuance by LRDs.

Baseline: There is an average two (2) day lag in the availability of certificates with the batch transfer.

Target Result: Within one year of solution implementation, birth and death certificate images will be immediately available for issuance by LRDs upon completion of the state registration process. CHSI will run reports to measure the number days between the completion of registration and availability images to LRDs.

Objective ID: 1.2

Objective: Improve operational efficiency – Increase capacity for high value staff activities by reducing time and effort associated with entering birth amendment requests.

Metric: The minutes required to complete birth amendment request entry.

Baseline: It currently takes an average of 17 minutes to complete the dual entry of birth amendment requests; 53,068 were entered in 2020.

Target Result: Within one year of solution implementation, the average time to enter birth amendment requests will be reduced to 10 minutes from 17 minutes. CHSI will conduct a sample study to measure staff time to complete data entry for each record against the target goal and report the results.

Objective ID: 1.3

Objective: Provide better services to Californians – Increase time available for physicians to provide services to patients by reducing effort associated with death attestation.

Metric: Number of days to complete the fax attestation process.

Baseline: Currently the fax attestation process takes an average of 4.3 days.

Target Result: Within one year of solution implementation, at least 50 percent of physician death attestations using the electronic death attestation option will be completed within two days. CHSI will run reports to calculate the number of days between initiation and successful completion of attestation for each record and verify the average number days meets the target goal.

Objective ID: 1.4

Objective: Improve operational efficiency and services to Californians – Accelerate amendment request issuance by reducing payment processing times.

Metric: Number of days to process payments.

Baseline: The average time to process a check is 5-10 business days (1-2 weeks).

Target Result: Within one year of solution implementation, for those who submit payments electronically the average payment processing time will be reduced by 50%. CHSI will run reports to calculate the number of days between receipt of online payments and posting to CHSI banking.

1.8 Project Management

1. **Project Management Risk Score: 0.9**

   (Attach a completed Statewide Information Management Manual (SIMM) Section 45 Appendix A Project Management Risk Assessment Template to the email submission.)

2. **Project Approval Lifecycle Completion and Project Execution Capacity Assessment**

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

   Answer: Yes

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

   Answer (No, New, Existing, or Both)**:** Both New and Existing Processes

1.9 Initial Complexity Assessment

1. **Business Complexity Score:** 1.1

   (Attach a completed SIMM Section 45 Appendix C to the email submission.)

2. **Noncompliance Issues:** (Indicate if your current operations include noncompliance issues and provide a narrative explaining how the business process is noncompliant.)

   Programmatic regulations: No

   HIPAA/CIIS/FTI/PII/PCI: No

   Security: No

   ADA: Yes

   Other: No

   Not Applicable: No

   Noncompliance Description:

   Current Cal-IVRS is not ADA compliant because the features, colors, and fonts cannot be adjusted.

3. **Additional Assessment Criteria**

If there is an existing Privacy Threshold Assessment/Privacy Information Assessment, include it as an attachment to your email submission.

How many locations and total users is the project anticipated to affect?

Number of locations: 1 program at CDPH, 50 coroner offices, 62 public health offices, 300 hospitals, 1,000 funeral homes

Estimated Number of Transactions/Business Events (per cycle): about 450,000 births, 300,000 deaths, and 2,200 fetal deaths. A cycle is a calendar year.

Approximate number of internal end-users: 150 CHSI users

Approximate number of external end-users: 600 county, 1,500 hospital, 600 coroner, and 2,500 funeral home users

1.10 Funding

Planning

1. Does the Agency/state entity anticipate requesting additional resources through a budget action to *complete planning* through the project approval lifecycle framework? No

   If Yes, when will a budget action be submitted to your Agency/DOF for planning dollars?

   Click or tap to enter a date.

2. Please provide the Funding Source(s) and dates funds for planning will be made available:

   Heath Statistics Special Fund 0099. Funds are currently available.

Project Implementation Funding

1. Has the funding source(s) been identified for *project implementation*? Yes

   If known, please provide the Funding Source(s) and dates funds for implementation will be made available:

   Heath Statistics Special Fund 0099

   Will a budget action be submitted to your Agency/DOF? No

   If "Yes" is selected, specify when this BCP will be submitted: Click or tap here to enter text.

2. Please provide a rough order of magnitude (ROM) estimate as to the total cost of the project: Less than $10 Million

End of agency/state entity document.

Please ensure ADA compliance before submitting this document to CDT.

When ready, submit Stage 1 and all attachments in an email to ProjectOversight@state.ca.gov.

Department of Technology Use Only

Original "New Submission" Date: 8/30/2023

Form Received Date: 8/30/2023

Form Accepted Date: 8/30/2023

Form Status: Completed

Form Status Date: 8/30/2023

Form Disposition: Approved

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

Form Disposition Date: 8/30/2023

Department of Technology Project Number (0000-000): 4265-090