
State of California
Department of Technology

Stage 2 Alternatives Analysis

Preparation Instructions

Statewide Information Management Manual – Section 19B

December 2014

INTRODUCTION TO THE STAGE 2 ALTERNATIVES ANALYSIS

Overview

Statewide Information Management Manual (SIMM) Section 19B, Stage 2 Alternatives Analysis, is the second stage of the Project Approval Lifecycle and provides a basis for project management, program management, executive management, and state-level control agencies to understand and agree on how the proposal's business objectives will be achieved, to evaluate multiple alternative solutions, determine which alternative will yield the highest probability of success, and to develop an acquisition strategy/plan for procuring services if needed. The Stage 2 Alternatives Analysis instructions have been prepared to help State of California Agencies and state entities¹ meet the Department of Technology requirements for documentation of proposals for projects.

Clarifications

- ✓ A Stage 1 Business Analysis must be approved by the Department of Technology prior to conducting a Stage 2 Alternatives Analysis.
- ✓ Proposal reporting requirements are initially determined as part of the Stage 1 Business Analysis but may change as the proposal progresses through the Project Approval Lifecycle.
- ✓ For proposals anticipated to be reportable, Agencies/state entities are required to submit a Stage 2 Preliminary Assessment prior to the development of the Stage 2 Alternatives Analysis.
- ✓ For proposals anticipated to be reportable, Agencies/state entities are required to submit a Stage 2 Alternatives Analysis to the Department of Technology.
- ✓ For proposals anticipated to be reportable, a Stage 2 Alternatives Analysis must be approved by the Department of Technology prior to conducting a Stage 3 Procurement Analysis.
- ✓ For proposals anticipated to be non-reportable, Agencies/state entities must receive Stage 2 Alternatives Analysis approval from the Agency/state entity's Director, as applicable.

Stage 2 Alternative Analysis Reporting Requirements

For proposals that are anticipated to be reportable, the Department of Technology requires specific information from Agencies/state entities to carry out its responsibilities in approving the Stage 2 Alternatives Analysis. To evaluate an Agency/state entity's Stage 2 Alternatives Analysis, the Department of Technology needs to fully understand the business investment justification. Each proposal must provide sufficient detail to describe the baseline processes, business requirements, alternative solutions, recommended solution, and staffing plan.

Each Agency or state entity is responsible to ensure its Stage 2 Alternative Analyses meet Department of Technology requirements. The Stage 2 Alternative Analysis must be

¹**State entity:** Includes every state office, officer, department, division, bureau, board, and commission, including Constitutional Officers. "State entity" does not include the University of California, California State University, the State Compensation Insurance Fund, the Legislature, or the Legislative Data Center in the Legislative Counsel Bureau.

comprehensive and cannot rely on verbal or subsequent written responses (e.g., emails) to the Department of Technology staff's questions to provide needed justification for the submission. Incomplete submissions that fail to provide relevant information in written form may be returned without consideration at the discretion of the Department of Technology.

The Department of Technology may, at its discretion, request additional information from the Agency or state entity.

Changes to Previously Approved Submittals

As a proposal progresses through each stage of the Project Approval Lifecycle, further analysis is conducted, uncertainties are cleared, and data used for decision-making improves. As additional information is collected (e.g., cost estimates, schedules, and business objectives), the information submitted in an earlier stage can be refined. If information from a previously approved Stage 1 Business Analysis needs to be updated, the Agency/state entity should submit an updated Stage 1 Business Analysis along with the Stage 2 Alternatives Analysis submittal.

Changes to Reportability Status

If at any stage in the Project Approval Lifecycle a proposal initially anticipated to be non-reportable now meets any of the reportability criteria as per State Administrative Manual (SAM) 4819.37, the Agency/state entity is required to resubmit a Stage 1 Business Analysis and Stage 2 Alternatives Analysis with all sections completed for Department of Technology review and approval.

Table of Contents

Overview.....	1
Stage 2 Alternative Analysis Reporting Requirements	1
Changes to Previously Approved Submittals	2
Changes to Reportability Status	2
Stage 2 Preliminary Assessment.....	5
Stage 2 Preliminary Assessment – General Instructions	5
General Information.....	5
Submittal Information.....	5
Impact Assessment Questions	6
Business Complexity Assessment	7
Scalability Table	9
Stage 2 Alternatives Analysis Transmittal Requirements	10
Project Approval Executive Transmittal.....	10
2.1 General Information	10
2.2 Submittal Information	11
Condition(s) from Previous Stage(s).....	12
2.3 Baseline Processes and Systems	12
2.3.1 Description	13
2.3.2 Business Process Workflow.....	13
2.3.3 Current Architecture Information.....	13
2.3.4 Current Architecture Diagram	17
2.3.5 Security Categorization Impact Table	17
2.4 Mid-Level Solution Requirements.....	19
2.4.1 Functional Requirements.....	19
2.4.2 Non-Functional Requirements	23
2.4.3 Project/Transition Requirements.....	23
2.5 Assumptions and Constraints.....	24
2.6 Dependencies.....	25
2.7 Market Research.....	25
2.7.1 Market Research Methodologies/Timeframes.....	26
2.7.2 Results of Market Research.....	26
2.8 Alternative Solutions	27
2.8.1 Recommended Alternative Solution.....	27
2.8.2 Other Alternative Solutions	34
2.9 Recommended Solution	34
2.9.1 Rationale for Selection.....	35
2.9.2 Technical/Initial CA-PMM Complexity Assessment.....	35
2.9.3 Procurement and Staffing Strategy	38
2.9.4 Enterprise Architecture Alignment.....	40
2.9.5 Project Phases	40
2.9.6 High Level Proposed Project Schedule.....	41
2.9.7 Cost Summary.....	42
2.10 Staffing Plan.....	43
2.10.1 Administrative	43
2.10.2 Business Program	43
2.10.3 Information Technology (IT).....	43
2.10.4 Testing.....	43
2.10.5 Data Conversion/Migration	43
2.10.6 Training and Organizational Change Management.....	44

2.10.7 Resource Capacity/Skills/Knowledge.....	44
2.10.8 Project Management.....	44
2.10.9 Organization Charts.....	44
2.11 Financial Analysis Worksheets.....	45

STAGE 2 ALTERNATIVES ANALYSIS PREPARATION INSTRUCTIONS

Stage 2 Preliminary Assessment

The purpose of the Stage 2 Preliminary Assessment is to help recognize and mitigate project risks early and to introduce an opportunity for scalability in the Project Approval Lifecycle. Additionally, the Preliminary Assessment provides the Department of Technology and its Critical Partners with an opportunity to provide guidance during the collaborative development process, with the goal of mitigating risks. The Preliminary Assessment will be evaluated by the Department of Technology in order to communicate requirements related to either additional deliverable content and/or risk mitigation strategies to be utilized prior to moving on to the next stage.

Determination if a Stage 2 Preliminary Assessment is Required - All Agencies/state entities that are anticipated to have reportable proposals, as determined in the Stage 1 Business Analysis, must submit a Stage 2 Preliminary Assessment to the Department of Technology. The Stage 2 Preliminary Assessment should be completed following the Stage 1 Business Analysis submission and is to be discussed at the Gate 1 Collaborative Review, prior to beginning development of the Stage 2 Alternatives Analysis. If the Stage 2 Preliminary Assessment is submitted after the Gate 1 Collaborative Review has taken place, the Information Technology Project Oversight and Consulting (ITPOC) Division Oversight Manager will schedule a meeting with the Agency/state entity and Critical Partners to address the Stage 2 Preliminary Assessment and provide guidance. The Stage 2 Preliminary Assessment should be submitted to the Department of Technology through the CIO PMOSubmission email address: (PMOSubmission@state.ca.gov).

Stage 2 Preliminary Assessment – General Instructions

General Information

Agency or State Entity Name: Select the Agency/state entity that prepared and is responsible for the Stage 2 Preliminary Assessment. Designate one Agency or state entity as owner if multiple Agencies or state entities have a role in the proposal.

Organization Code: Organization Code populates automatically once the Agency/state entity name is selected.

Proposal Name: Enter the proposal name as determined by the Agency/state entity in the approved Stage 1 Business Analysis.

Department of Technology Project Number: Enter the project number assigned by the Department of Technology provided during the Stage 1 Business Analysis.

Submittal Information

Contact Information:

Contact First Name: Enter the first name of the Agency/state entity person who will be the primary point-of-contact for control agency questions and comments.

Contact Last Name: Enter the last name of the Agency/state entity person who will be the primary point-of-contact for control agency questions and comments.

Contact Email: Enter the email address of the contact provided above.

Contact Phone Number: Enter the ten-digit phone number of the contact provided above.

Submission Date: Enter the date the Stage 2 Preliminary Assessment is being submitted to the Department of Technology for review.

Impact Assessment Questions

The answers to the following questions will determine if additional details are needed to substantiate the proposal. Depending on the response, the Agency/state entity may need to be prepared to discuss additional information in the Gate 1 Collaborative Review or explain further in the specified areas of the Stage 2 Alternatives Analysis, as identified below:

1. The commitment of subject matter expertise from each business program impacted by this proposal is essential for success. Select “Yes” if the Agency/state entity has identified and committed subject matter experts from all business sponsors and key stakeholders. Provide details in the Stage 2 Alternatives Analysis Section 2.10 Staffing Plan. If “No,” provide an explanation and approach to address this issue in Section 2.10.
2. Well-documented baseline systems that are clearly understood by the organization will allow the Agency/state entity to identify what process changes are needed to successfully achieve the proposal’s goals and objectives. Select “Yes” if all current baseline systems that will be impacted by this proposal are documented (e.g., data classification and data exchange agreements, privacy impact assessments, design documents, data flow diagram, data dictionary, application code, architecture descriptions). This information should be provided by the Agency/state entity’s technical resources. If “No,” provide an explanation and approach to address this issue in the Gate 1 Collaborative Review.
3. Agency/state entities may need assistance to conduct market research and can leverage the Department of Technology’s Statewide Technology Procurement Division for assistance. Select “Yes” if the Agency/state entity anticipates needing support from the Department of Technology’s Statewide Technology Procurement Division to conduct market research for this proposal (e.g., Market Survey, Request for Information).
4. As part of the Stage 3 Procurement Analysis, some proposals will require Agency/state entities to undergo complex procurement efforts for the acquisition of a solution. These efforts may require an Agency/state entity to redirect and backfill staff resources for the development of requirements or may require the solicitation of a vendor to help develop a Request for Proposal, which in either situation requires additional funding. Select “Yes” if the Agency/state entity anticipates submitting a budget request (e.g., Budget Change Proposal or Budget Revision) to support the procurement activities of this proposal.

5. The Financial Information System for California (FI\$Cal) will replace the state's financial systems with a financial application that supports the state's fiscal and policy decision processes. The FI\$Cal project's Enterprise Resource Planning system implementation will meet the state's accounting, asset management, budgeting, cash management, cost accounting, financial management, financial reporting grant management, some procurement needs, and project cost management. Select "Yes" if the Agency/state entity anticipates this proposal might involve the development and/or purchase of systems to support activities included in FI\$CAL as identified above. If "Yes," refer to Budget Letter 08-05 for information on the exemption process.
6. The agency Chief Architect or Enterprise Architect should lead or guide the identification and analysis of alternative solutions and assist with the selection of the most appropriate solution to achieve the business objectives being addressed by this proposal. Select "Yes" if the Agency/state entity has a Chief Architect or Enterprise Architect to lead or guide the architecture work for this proposal.
7. The role of the Information Security Officer (ISO) is to assist in the business and organizational security risk assessment at every phase of a proposed project. The ISO should be consulted during the development of IT project requirements, including the review and selection of alternatives considered to meet the business objectives and opportunities being addresses by this proposal. Select "Yes" if the Agency/state entity has or plans to involve the ISO in the requirements development process for security related requirements.

Business Complexity Assessment

In many projects, complexities and unanticipated issues are discovered as work progresses, resulting in missed deadlines, budget overruns, and thwarted management expectations. Project complexity assessments completed at the beginning of a proposal help to minimize a last minute patchwork of Band-Aid solutions that most often result in scope creep, poor product quality, and cause the project team to become overwhelmed by problems and lose project control. Early identification of complexities can also assist in planning, estimating, and staffing decisions, including the level of project oversight required for the project. As part of the Stage 2 Preliminary Assessment, the proposal's Business Complexity will be used to identify the Stage 2 Alternatives Analysis sections initially required for Department of Technology review and approval, and those sections delegated to the Agency/state entity for approval.

Business Complexity Score: Use the SIMM Section 17A, California Project Management Methodology (CA-PMM), Complexity Assessment self-assessment tool to complete the Business Complexity section based on the applicable information captured in the Stage 1 Business Analysis. Enter the Business Complexity score in the space provided.

Note: *The Complexity Assessment will be used in the Stage 2 Alternatives Analysis Section 2.9.2 to determine the Technical Complexity and, combined with the Business Complexity, the proposal's overall Complexity Zone. The overall Complexity Zone will determine the remaining Stage 2 Alternatives Analysis sections that require Department of Technology's review and approval.*

Complexity Zone: Use the following criteria to determine the Business Complexity Zone for this proposal. The Business Complexity Zone is also indicated by a red ball in the Complexity Diagram within the Complexity Assessment tool.

- Business Complexity of 0.0 – 1.8, select “Low,”
- Business Complexity of 1.9 – 3.3, select “Medium,”
- Business Complexity of 3.4 – 4.0, select “High”

Following the submission of the Stage 2 Preliminary Assessment, the Department of Technology will perform its own assessment of the proposal using the SIMM Section 17A CA-PMM Complexity Assessment tool. The results will be evaluated by the Department of Technology in order to communicate any additional content requirements related to either additional deliverable content and/or risk mitigation strategies to be utilized during the next stage of deliverable development. The Stage 2 Preliminary Assessment, including the Business Complexity assessment score and Complexity Zone, will be discussed at the Gate 1 Collaborative Review. If the Stage 2 Preliminary Assessment is submitted after the Gate 1 Collaborative Review has taken place, the ITPOC Oversight Manager will schedule a meeting with the Agency/state entity and Critical Partners to address the Stage 2 Preliminary Assessment and provide guidance.

Scalability Table

Based on the initial Business Complexity, the Stage 2 Alternatives Analysis sections indicated by a solid circle in the Scalability Table below must be submitted to the Department of Technology for review and approval. The remaining sections are delegated to the Agency/state entity Director for review and approval.

Stage 2 Alternatives Analysis Sections	Business Complexity		
	Low	Medium	High
2.3 Baseline Processes and Systems			
2.3.1 Description	○	○	○
2.3.2 Business Process Workflow			○
2.3.3 Current Architecture Information		○	○
2.3.4 Current Architecture Diagram		○	○
2.3.5 Security Categorization Impact Table		○	○
2.4 Mid-Level Solution Requirements			
2.4.1 Functional Requirements		○	○
2.4.2 Non-Functional Requirements		○	○
2.4.3 Project/Transition Requirements		○	○
2.5 Assumptions and Constraints	○	○	○
2.6 Dependencies	○	○	○
2.7 Market Research			
2.7.1 Market Research Methodologies/Timeframes	○	○	○
2.7.2 Results of Market Research		○	○
2.8 Alternative Solutions			
2.8.1 Recommended Alternative Solution	○	○	○
2.8.1.1 Name	○	○	○
2.8.1.2 Description	○	○	○
2.8.1.3 Benefit Analysis	○	○	○
2.8.1.4 Assumptions and Constraints	○	○	○
2.8.1.5 Implementation Approach	○	○	○
2.8.1.6 Architecture Information	○	○	○
2.8.2 Other Alternative Solutions			
2.8.2.1 Name	○	○	○
2.8.2.2 Description	○	○	○
2.8.2.3 Benefit Analysis		○	○
2.8.2.4 Assumptions and Constraints		○	○
2.8.2.5 Implementation Approach	○	○	○
2.8.2.6 Architecture Information		○	○
2.9 Recommended Solution			
2.9.1 Rationale for Selection	○	○	○
2.9.2 Technical/Initial Complexity Assessment	○	○	○

Note: The Department of Technology reserves the right to request, at any time, a copy of the fully completed Stage 2 Alternatives Analysis.

Stage 2 Alternatives Analysis Transmittal Requirements

The Project Approval Executive Transmittal Form, located in SIMM Section 19H, will be used to satisfy the transmittal requirements for Stage 2 Alternatives Analysis.

- ✓ State entities are required to sign and submit the Project Approval Executive Transmittal to their governing Agency for approval.
- ✓ Agencies are required to sign and submit the Project Approval Executive Transmittal to the Department of Technology.

Exception – State entities that are not governed by Agencies can sign and submit the Project Approval Executive Transmittal directly to the Department of Technology.

***State entity:** Includes every state office, officer, department, division, bureau, board, and commission, including Constitutional Officers. “State entity” does not include the University of California, California State University, the State Compensation Insurance Fund, the Legislature, or the Legislative Data Center in the Legislative Counsel Bureau.*

Project Approval Executive Transmittal

The Transmittal template (available in SIMM Section 19H) contains the approving Agency/State entity executive signatures, with the following components:

1. **State Entity Name:** Enter the state entity name that prepared the Stage 2 Alternatives Analysis. Designate one state entity as owner if multiple state entities have a role in the proposal.
2. **Agency Name:** Enter the Agency name that prepared the Stage 2 Alternatives Analysis. Designate one Agency as owner if multiple Agencies have a role in the proposal. This field is not required for state entities not governed by an Agency.
3. **Name of Proposal:** Enter the proposal name as determined by the Agency/state entity in the approved Stage 1 Business Analysis.
4. **Department of Technology Project Number:** Enter the project number assigned by the Department of Technology during the Stage 1 Business Analysis.
5. **Submission Deliverable:** Select the Stage/Gate deliverable(s), as applicable.
6. **Approval Signatures:** The Agency/state entity executive approval signatures are required, documenting commitment and involvement at the Agency/state entity level. The required signatures include those of the Information Security Officer, Enterprise Architect, Chief Information Officer, Budget Officer, State Entity Director, Agency Information Officer and the Agency Secretary.

2.1 General Information

Agency or State Entity Name: Select the Agency/state entity name that prepared and is responsible the Stage 2 Alternatives Analysis. Designate one Agency/state entity as owner if multiple Agencies or state entities have a role in the proposal.

Organization Code: Organization Code populates automatically once the Agency/state entity name is selected.

Proposal Name: Enter the proposal name as determined by the Agency/state entity in the approved Stage 1 Business Analysis.

Department of Technology Project Number: Enter the project number assigned by the Department of Technology provided during the Stage 1 Business Analysis.

2.2 Submittal Information

Contact Information:

Contact First Name: Enter the first name for Agency/state entity person who will be the primary point-of-contact for control agency questions and comments.

Contact Last Name: Enter the last name for Agency/state entity person who will be the primary point-of-contact for control agency questions and comments.

Contact email: Enter the email address of the contact provided above.

Contact Phone: Enter the ten-digit phone number of the contact provided above.

Submission Date: Select the date the Stage 2 Alternatives Analysis is being submitted to the Department of Technology for review.

Submission Type: Select one of the following types of submission.

New Submission: Initial submission to the Department of Technology.

Withdraw Submission: An Agency/state entity may decide to withdraw the Stage 2 Alternatives Analysis for various reasons (e.g., change in direction, feasibility, budgetary issues, etc.). If an Agency/state entity wishes to withdraw a previously submitted or approved proposal from further consideration, check this field and submit the Stage 2 Alternatives Analysis to the Department of Technology. Contact your Department of Technology ITPOC Oversight Manager and Agency Information Officer (if applicable) to inform them of your intention to withdraw the proposal. The Department of Technology will send a written confirmation of withdrawal and communicate to all associated stakeholders. Once a proposal is withdrawn, the Agency/state entity will be required to submit a new Stage 2 Alternatives Analysis to continue with a proposal for the same or a similar request.

Updated Submission (Pre-Approval): Updated submission based on review and feedback from the Department of Technology, critical partners or other stakeholders prior to formal approval.

Updated Submission (Post Approval): If Stage 2 Alternatives Analysis has been previously approved by the Department of Technology and new information or updates are required, the submittal should be updated based on new information. For instance, as a proposal progresses through each stage of the Project Approval Lifecycle, further analysis is conducted, uncertainties are cleared, and data used for decision-making improves, in this case an update to the Stage 2 Alternatives Analysis may be required.

Sections Updated: If either Submission Type “Updated Submission (Pre-Approval)” or “Updated Submission (Post Approval)” is selected, then indicate the sections where updates have been made.

Summary of Changes: Provide a concise summary of changes made.

Note: *Highlight or otherwise indicate new or changed text within the modified section.*

Project Approval Executive Transmittal: Scan and attach the signed Project Approval Executive Transmittal for Stage 2 Alternatives Analyses; use the Transmittal Forms located in SIMM Section 19H.

Condition(s) from Previous Stage(s)

In order to provide status and information on the previous stage's approval conditions, the Agency/state entity will use the Gate 1 Scorecard and address each approval condition by providing a concise narrative on their plan to address each approval condition. The Agency/state entity response may include a variety of strategies to address the condition (e.g., condition to be addressed in Stage 3 Procurement Analysis, condition to leverage other department services is being pursued through an Interagency Agreement, condition to mitigate the lack of experienced project management staff is being addressed by leveraging Department of Technology's Statewide Project Management Office to assist with the project).

Use the Gate 1 Scorecard to obtain any approval conditions from the previous stage.

Condition #: Enter the assigned condition number(s) (e.g., 1.1, 1.2, 1.3).

Conditional Category: Select the conditional category (or type in as appropriate).

Condition Sub-category: Select the condition sub-category from the previous stage (or type in as appropriate).

Condition: Enter the condition from the previous stage.

Assessment: Select the assessment. If "Other," is selected, type the assessment.

Agency/State Entity Response: Provide a narrative of the Agency/state entity's response to the condition.

Status: Select the condition status. If "Other," is selected, type the status.

2.3 Baseline Processes and Systems

An understanding of current business processes (which may include manual processes) and supporting systems, also known as the current "as is" solution (if any), is needed to successfully perform an effective alternatives analysis.

2.3.1 Description

Provide a brief narrative description of the current baseline business processes and supporting systems that will be impacted by this proposal. This description will contain a general context for the baseline processes and systems that are to be further detailed in Section 2.3.4 Current Architecture Information. Additionally, document existing system costs, both information technology and program, using a completed Financial Analysis Worksheets (FAW). Refer to SIMM Section 19F Financial Analysis Worksheets Preparation Instructions for the details on how to complete the FAW. The completed FAW will be included as an attachment in Section 2.11 Financial Analysis Worksheets.

2.3.2 Business Process Workflow

Attach Business Process Workflow diagrams for all existing business processes related to this proposal. The Business Process Workflow consists of mapping a series of necessary business functions that depict an abstract graphical view of real work and personnel under different situations or timeframes. The workflow should include the events that initiate each process (i.e., the trigger event) and the results of those processes. The attachments must be in Portable Document Format (PDF). The workflow should include the following components:

- Business Process – Illustrate the active roles and the activity the role conducts during the business process. Include the parallel processes as well as sequential steps in a process that execute the successful completion of the business process.
- Trigger Events – One or more events that directly start a business process (e.g., receive a request, phone call, or a scheduled date).
- Results – One or more outcomes from the execution of a business process.

2.3.3 Current Architecture Information

The Agency/state entity business and technical teams will collaborate to complete the information contained within the Architecture Information. The business team will complete, or provide to the technical team, the business processes for the current solution. The technical team will complete, or provide to the business team, the technical-related items (e.g., application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces; data center location; and, security).

Document each business process and the supporting technology for the current solution. Only discuss business programs and supporting technology affected by the proposal as identified in Stage 1 Business Analysis, Section 1.7 Program Background and Context. If a business process is completely manual and does not currently have any supporting technology, only identify the business process and leave the other fields of the table blank. The Architecture Information should align with Section 2.3.2 Business Process Workflow. For each business process identified, provide the following:

Business Function/Process(es): Enter the business process name as referenced by the Agency/state entity. If many business processes are grouped under business functions (particularly for large systems), identify the respective business function.

Use the “Insert Business Function/Process” and enter the business process name if another business process uses the same application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces; data center location; and, security.

Use the “Insert Architecture Information” and complete another Architecture Information if the business process uses a different application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces; data center location; or, security.

Application, System, or Component: Enter the name of the application, system or component that supports the associated business process.

Use the “Insert Application, System or Component” for each application, system, or component and identify separately if multiple applications, systems or components support the business process.

COTS, MOTS or Custom: Select either “Commercial off-the-shelf (COTS),” “Modified off-the-shelf (MOTS)” or “Custom solution” to identify the type of application, system or component used. For a COTS or MOTS product, provide the name of the COTS or MOTS product utilized in the system. For a custom solution, enter the primary technology used to build the system (e.g., .NET, Java, etc.).

- COTS product – Typically, a ready-made computer hardware or software product for specific uses and available for sale to the general public. COTS products are designed to be installed without requiring custom development. For example, Microsoft Office is a COTS product that is a packaged software solution for businesses and individuals. The Federal Acquisition Regulation (FAR) defines the rules for COTS products.
- MOTS product – Typically, a COTS product with source code made available to the purchaser to allow for modifications. The product may be customized by the purchaser, by a vendor, or by another party to meet the requirements of the customer. Since MOTS product specifications are written by external sources, purchasers may not have control of future changes to the product.
 - Custom solution – Typically, computer software developed for a specific customer to accommodate the customer's particular requirements, preferences, and expectations.

Runtime Environment: Identify the runtime environment for the current system, as follows:

Specify if the current system uses Cloud Computing. If “Yes,” choose the applicable type and complete the remaining Runtime Environment fields as specified:

- If Software as a Service (SaaS) selected, do not complete further Runtime Environment fields.
- If Platform as a Service (PaaS) or Infrastructure as a Service (IaaS), do not complete the Hardware field but complete the remaining Runtime Environment fields.

Server/Device Function: Enter the function of each server/device that the current system leverages (e.g., Web service, database, network routers, workstations, tablets, etc.)

Hardware: Enter the hardware that the current system leverages (e.g., IBM pSeries, HP Blade Server, etc.).

Operating System: Enter the operating system that the current system leverages (e.g., Microsoft Windows, UNIX, z/OS, etc.).

System Software: Enter the system software that the current system leverages (e.g., Oracle WebLogic Server, Microsoft SQL Server, EMC Documentum, etc.).

System Interfaces: Enter the name(s) of system(s) that exchange data with the current system using interface files, web services, etc. Identify systems within scope of the proposed project that interface with each other. Also identify systems outside the scope of the proposed project that interface with the baseline systems. Provide a brief description of the purpose of each interface. If the system exchanges data with other entities, specify the name of the entity. Examples include but are not limited to the following:

- Federal partners
- Local city/county partners
- State agency entity partners
- Judicial branch
- Universities
- Researchers

Data Center Location: Select the location of the data center where the current system is hosted.

- **State Data Center:** A data center operated by the Department of Technology, Office of Technology Services (OTech).
- **Agency/State Entity Data Center:** A data center independently operated by an Agency/state entity.
- **Commercial Data Center:** A data center operated by a solution provider or vendor contracted by the Agency/state entity.
- **Other:** If not one of the above, type the location of the data center where the current system is hosted.

Security: Indicate the security and privacy characteristics of the current system.

Access: Indicate who is authorized to access the current system. Use the check boxes provided to select all that apply:

- **Public:** The current system is accessible to public parties with or without restricted access.
- **Internal State staff:** The current system is accessible to internal state staff with or without restricted access.
- **External State staff:** The system is accessible to state staff from other Agencies/state entities, with or without restricted access.
- **Other:** Specify who else is authorized to access the current system.

Type of Information: Identify the types of information that require protection. See the SAM Section 5305.5 for more information. Use the check boxes provided to select all that apply:

- **Personal:** Select if personally identifiable information (e.g., social security numbers, demographic information, etc.) is collected, processed and/or presented by the system.
- **Health:** Select if diagnosis, treatment, provider, insurance, or billing information is collected, processed and/or presented by the system.
- **Tax:** Select if IRS safeguards or state or local tax information policies (similar to the Federal IRS safeguards) are required to protect information contained in state or local tax submissions.
- **Financial:** Select if confidential or sensitive financial information is maintained (e.g., payment processing, salaries, budget, credit card numbers, contract amounts, etc.)
- **Legal:** Select if confidential or sensitive legal information is maintained (e.g., arrest records, court records, incarceration records, contracts, lawsuits, legal documents, etc.)
- **Confidential:** Select if other types of confidential or sensitive information are maintained by the system (e.g., business trade secrets, investigations, enforcement actions, etc.)
- **Other:** Specify the type of information that requires protection.

Protective Measures: Identify how the information is currently protected. Use the check boxes provided to select all that apply:

- **Technical Security:** Select if hardware and software security measures (e.g., firewalls, virus protection, intrusion detection/prevention, etc.) are used to protect the networks, servers, workstations, and other devices in the infrastructure.
- **Identity Authorization and Authentication:** Select if the current system requires restricted access to either state employees and/or to the public.
- **Physical Security:** Select if servers and network devices are secured with environmental security measures (e.g., door locks, surveillance equipment, etc.)
- **Backup and Recovery (Technology Recovery):** Select if data is backed up and stored offsite.
- **Other:** Specify how the information is currently protected.

Data Owner (Owner of information assets): Identify the individual and their organizational unit with the responsibility for making classification, categorization, and control decisions regarding information assets. See SAM Section 5305.5 for more information.

- **Name:** Enter the name of the Data Owner.
- **Title:** Enter the title of the Data Owner.
- **Business Program:** Enter the name of the Business Program with controlling ownership of the data.

Data Custodian (Custodian of information): Identify the individual and their organizational unit which is the caretaker for the proper use and protection of information assets on behalf of the information asset owner (e.g., a data center or information processing facility). See SAM Section 5305.5 for more information.

- Name: Enter the name of the Data Custodian.
- Title: Enter the Title of the Data Custodian.
- Business Program: Enter the name of the Business Program that is the custodian of the data.

2.3.4 Current Architecture Diagram

Attach a diagram (in PDF) that depicts the business processes and supporting systems identified in Section 2.3.3 Current Architecture Information to provide a visual understanding of the relationships between the business processes, information, applications, technology, and any system interfaces. Indicate the primary user groups and their interaction with business processes and systems.

2.3.5 Security Categorization Impact Table

Attach a diagram (in PDF) that categorizes and classifies the Agency/state entity's information assets (e.g., paper and electronic records, automated files, databases requiring appropriate protection from unauthorized use, access, disclosure, modification, loss, or deletion).

The categorization and classification of information assets is a prerequisite for determining the level of protection needed. Each information asset for which the Agency/state entity has ownership responsibility shall be inventoried and identified. The ISO will assist in the business and organizational security risk assessment of information assets. Use the following groups to categorize and classify the information assets:

- Public Information [not exempt from disclosure under Government Code (GC) Sections 6250-6265].
- Confidential Information (exempt from disclosure under GC Sections 6250-6265 or has disclosure restrictions in accordance with other applicable state or Federal laws)
- Sensitive Information (which requires special precautions to protect from unauthorized use, access, disclosure, modification, loss, or deletion).
- Personal Information (e.g., Social Security Number, driver's license/California identification card, financial account number, medical/health information, etc.)
- Description and useful value of the information asset.
- Owner of the information asset.
- Custodians of the information asset.
- Users of the information asset.
- Classification of information.
- FIPS Publication 199 categorization and level of protection (Low, Moderate, or High).
- Importance of information asset to the execution of the state entity's mission and program function.
- Potential consequences and impacts if confidentiality, integrity and availability of the information asset were compromised.

Refer to the Federal Information Processing Standards (FIPS) Publication 199 and SIMM 5305-A for additional information regarding the categorization and classification of information assets:

<http://csrc.nist.gov/publications/fips/fips199/FIPS-PUB-199-final.pdf>)

http://www.cio.ca.gov/Government/IT_Policy/SIMM/SIMM5305_A.PDF).

Security Categorization Impact Table Summary

Select “Low,” “Moderate,” or “High” for each security objective category (i.e., Confidentiality, Integrity, and Availability) from [FIPS Publication 199](#), *Standards for Security Categorization of Federal Information and Information Systems*. The summary security categorizations are further detailed below:

Security Categorization Impact Table Summary			
Security Objective	LOW	MODERATE	HIGH
<p><u>Confidentiality:</u> Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information.</p>	<p>The unauthorized disclosure of information could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.</p>	<p>The unauthorized disclosure of information could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.</p>	<p>The unauthorized disclosure of information could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.</p>
<p><u>Integrity:</u> Guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity.</p>	<p>The unauthorized modification or destruction of information could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.</p>	<p>The unauthorized modification or destruction of information could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.</p>	<p>The unauthorized modification or destruction of information could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.</p>
<p><u>Availability:</u> Ensuring timely and reliable access to and use of information.</p>	<p>The disruption of access to or use of information or an information system could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.</p>	<p>The disruption of access to or use of information or an information system could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.</p>	<p>The disruption of access to or use of information or an information system could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.</p>

When determining the security objective categorization, consider the impact if the information does not remain confidential, the measures required to maintain authenticity and guard against unauthorized modification or removal, and the disruption caused if the information is not maintained or updated.

2.4 Mid-Level Solution Requirements

Mid-Level Solution requirements describe the characteristics of a solution that will meet the business objectives identified in the Stage 1 Business Analysis, which form the business requirements for this proposal. Mid-Level Solution requirements specify the conditions, functionality, quality of service, and capabilities a solution must have in order to meet the need or solve the problem as described in the Stage 1 Business Analysis. For the purposes of the Project Approval Lifecycle, Mid-Level Solution Requirements are sub-classified into functional requirements, non-functional requirements and project/transition requirements. The Stage 2 Alternatives Analysis Mid-Level Solution requirements provide sufficient detail to compare alternatives, identify the needs to be addressed to overcome the current state or status quo, and satisfy the proposed project’s business objectives. These serve as a bridge between business objectives and the more detailed solution requirements that will be developed as part of the Stage 3 Procurement Analysis, as summarized below:

Requirements in Project Approval Lifecycle			
Stage 1 - Business Analysis	Stage 2 - Alternatives Analysis	Stage 3 - Procurement Analysis	Post Project Approval - Project Execution
Business Requirements – Goals and objectives identified.	High Level Functional Requirements to validate the size of the system.	Detailed Functional Requirements to ensure the system meets needs.	Fully Drilled-Down Functional Requirements - Information to test and subsequently maintain the system
Stakeholder needs captured.	High Level Non-Functional Requirements to validate alternatives.	Detailed Non-Functional Requirements to ensure the system meets needs.	Fully Drilled-Down Non-Functional Requirements - Information to test and subsequently maintain the system
	High Level Project/Transition Requirements to validate feasibility of cost and schedule.	High Level Project/Contract Requirements to ensure system is built on time and budget and meeting quality levels.	

2.4.1 Functional Requirements

Functional requirements provide a high-level description of how a system should function (e.g., capacity, speed, security, response time, etc.), essential system details for stakeholders, and a means to express and manage expectations. They describe capabilities the system must be able to perform in terms of actions or operations—specific information technology application actions or responses.

Approach for Functional Requirements:

Select the approach used (i.e., Function-based, Process-based, Use Case-based) to document the functional requirements; see SIMM Section 19G Requirements Methodology for additional information and examples of each approach.

Functional requirements may be expressed in one of following three approaches further detailed below. In all three approaches, the function needs to be broken down to identify the main business functions of the organization and the sub-business functions within each main function.

- **Function-based Approach:** Traditional approach used to document functional requirements and can be leveraged for most technology projects. The higher level business capabilities/functions are identified and defers any business process design to the project executive phase. Functional requirements are identified within each sub-business function. Development of functional requirements without defining efficient business processes can lead to long-term inefficiencies, change management and contractual challenges.
- **Process-based Approach:** Typically used for technology projects with high business process impact. Approach identifies higher level business capabilities and functions. Business processes within each sub-business function are described and functional requirements corresponding to each business process are identified. Provides for the ability to perform business process (re)design before project execution. Greater upfront work is required with reduced ability to take advantage of vendor experience and/or industry best practices in redefining business processes.
- **Use Case-based Approach:** Typically used for custom built technology projects. Approach identifies higher level business capabilities or functions. Current business process models examined to identify business process reengineering or improvement goals and stakeholder needs. Business process (re)design is performed prior to project execution allowing for better business strategy alignment. Further granularity is achieved by specifying use-cases for each business process (scenarios) are described in addition to the business process and functional requirements. Approach reduces ability to use commercial systems and possibly requiring heavy configurations and customizations.

Functional Requirement Detail – Function-based and Process-based

Objectives Reference – Enter the “Objective Number” from the Stage 1 Business Analysis Section 1.10 Business Problems or Opportunities and Objectives Table to reference each functional requirement to one of the objectives identified in the Stage 1 Business Analysis. This will show the linkage, or “traceability,” of the requirements back to the project objectives.

Use the “Insert Objective” to add additional objectives.

Main Business Capability/Function – Enter the name of the business function which this requirement will help address. For example: Eligibility and Enrollment.

Use the “Insert Business Capability/Function” to add additional business capabilities/functions to an objective.

Sub Business Capability/Function – Enter the sub business capability/function that is expected to occur as a result of a main business capability/function. For example: Determine eligibility.

Use the “Insert Business Sub-Capability/Sub-Function” to add multiple sub capabilities/functions to a Business Capability/Function.

Business Process (*For the process-based approach only*) – Enter a brief description of the business process. The description should identify the event that triggers the business process, the series of business process activities, and the data manipulated by the business process. For example: Process Claim – This business process receives the original or adjusted claim information and validates that the required information has been completed.

Use the “Insert Business Process” to add additional business processes to the sub business capability/function.

Functional Requirement – Enter the function that a system or system component must be able to perform to meet the objectives of this proposal.

Functional requirements describe the behavior and information the solution will manage. The requirement should identify “what” is required to meet the objective, not “how” the requirement will be implemented. The requirements should be expressed in business terms and should not include any technical references. For example: The solution shall provide the functionality to list available plans and benefit designs via the Web Portal.

Use the “Insert Functional Requirement” to add additional functional requirements to a Sub Business Capability/Function (if using the function-based approach) or to a Business Process (if using the process-based approach).

Priority: Identify the priority of each functional requirement, as follows:

- Mandatory – “Must have” requirements that are critical to the functionality of the solution.
- Desirable – “Nice to have” features – features that are not critical to the functionality of the solution.

Stakeholder: Specify a stakeholder or stakeholder group that benefits from the implementation of the requirement. This stakeholder will become the owner of the requirement to ensure that the requirement is implemented correctly in the system. The stakeholder identified should align with Stage 1 Business Analysis, Section 1.4 Business Sponsor and Key Stakeholders.

Functional Requirement Detail – Use Case-based

Use Case-based: If using the use case-based approach, develop and attach the use case specifications in Excel, PDF or another electronic format. The use case specification should describe the actors of the use case, preconditions, post conditions, triggers, main flow steps, and alternative flows and their steps. See the *Use Case-based Table Sample* below for specific fields and component definitions that must be included in the use case specifications.

Use the “Insert Use Case” to add additional Use Cases.

Use Case-based Table (Sample):

Use Case ID:	Enter a unique numeric identifier for the Use Case (e.g. UC-1.2.1)		
Use Case Name:	Enter a short name for the Use Case using an active verb phrase (e.g., Load file update).		
Created By:		Last Updated By:	
Date Created:		Last Revision Date:	
Actors:	[An actor may use, install, start, maintain, shut down, be another system, receive/provide information, or in any way interact with the system. Different actors may interact within the system to complete an activity or goal. Name the actor that will initiate this use case (primary) and any other actors who will interact within the use case (secondary). For example: Financial Management (primary).]		
Description:	[Provide a brief description of the reason for and outcome of this use case (e.g., Send disbursement instructions.)]		
Trigger:	[Identify the event that initiates the use case. This could be an external business event or system event that causes the use case to begin, or it could be the first step in the normal flow. For example: Updated instructions for disbursements.]		
Preconditions:	[List any activities that must take place, or any conditions that must be true, before the use case can be started. Number each pre-condition. For example: 1. Identify new disbursement instructions. 2. Develop new disbursement instructions. 3. New disbursements instructions reviewed.]		
Post conditions:	[Describe the state of the system at the conclusion of the use case execution. Include what must happen even if the actor's goal is not achieved and what happens when the actor's goal is achieved. Number each post-condition. For example: 1. New disbursement instructions distributed. 2. Update processes.]		
Normal Flow:	[Provide a detailed description of the actions and system responses that will take place during execution of the use case under normal, expected conditions. This dialog sequence will ultimately lead to accomplishing the goal stated in the use case name and description. For example: The system shall process disbursement status update.]		
Alternative Flows: [Alternative Flow 1 – Not in Network]	[Document legitimate branches from the main flow to handle special conditions (or extensions). For each alternative flow, reference the branching step number of the normal flow and the condition which must be true in order for this extension to be executed. For example: If undeliverable electronically, mail disbursement instructions to the physical address.]		
Exceptions:	[Describe any anticipated error conditions that could occur during execution of the use case, and define how the system is to respond to those conditions. For example: Audit for any disbursement instructions returned undeliverable and process manually.]		
Includes:	[List any other use cases that are included ("called") by this use case. Common functionality that appears in multiple use cases can be split out into a separate use case that is included by the ones that need that common functionality. For example: Email list containing disbursement users.]		
Frequency of Use:	[How often will this Use Case be executed. This information is primarily useful for designers. For example: Disbursement instructions updated monthly.]		
Special Requirements:	[Identify any additional requirements, such as nonfunctional requirements, for the use case that may need to be addressed during design or implementation. These may include performance requirements or other quality attributes. For example: Ability to maintain disbursement instructions.]		
Assumptions:	[List any assumptions that were made in the analysis that led to accepting this use case into the product description and writing the use case description. For example: The Financial Management group maintains the disbursement instructions.]		
Notes and Issues:	[List any additional comments about this use case or any remaining open issues or items to be determined that must be resolved.]		

2.4.2 Non-Functional Requirements

Non-functional Requirement: Enter each non-functional requirement essential to system operations.

Use the “Insert Non-functional Requirement” to add additional non-functional requirements.

Non-functional requirements provide criteria or qualities that can be used to evaluate the operation of a system (e.g., capacity, speed, privacy, security, usability, testability, maintainability, accessibility, availability, compliance, certification, response time, information architecture, presentation of the user interface, etc.) These requirements mainly represent the expectations and characteristics of the system and any constraints (e.g., governmental regulations) and do not directly relate to the behavior or functionality of the solution. The non-functional requirements describe environmental conditions which must remain effective or the qualities the systems must have.

Priority: Select the priority (i.e., “Mandatory” or “Desirable”) of requirement type, as follows:

- Mandatory: “Must have” requirements critical to the functionality of the solution.
- Desirable: “Nice to have” requirements not critical to the functionality of the solution.

Stakeholder: Enter the stakeholder or stakeholder group that benefits from the implementation of the requirement.

This stakeholder will become the owner of the requirement to ensure that the requirement is implemented correctly in the system. The stakeholder identified should align with Stage 1 Business Analysis, Section 1.4 Business Sponsor and Key Stakeholders.

2.4.3 Project/Transition Requirements

Project/Transition Requirement: Enter each project/transition requirement.

Use the “Insert Project/Transition Requirement” to add additional project/transition requirements.

Project/transition requirements describe the capabilities a solution must have in order to facilitate the transition from the current state to a desired future state (e.g., compliance requirements, system development life cycle or system element implementation process requirements; data conversion/migration; production turnover/transition; user preparation/transition, training, skill gaps that must be addressed; customer preparation, communications; data interchange; organizational changes; infrastructure preparations; and, other changes needed to reach the desired future state). Project/transition requirements may be temporary in nature and/or may not be needed once the transition is complete.

Priority: Select the priority of each project/transition requirement, as follows:

- Mandatory: “Must have” requirement critical to the functionality of the solution.
- Desirable: “Nice to have” requirement not critical to the functionality of the solution.

Stakeholder: Enter a stakeholder or stakeholder group that benefits from the implementation of the requirement.

This stakeholder will become the owner of the requirement to ensure that the requirement is implemented correctly in the system. The stakeholder identified should align with Stage 1 Business Analysis, Section 1.4 Business Sponsor and Key Stakeholders.

2.5 Assumptions and Constraints

Assumptions/Constraints: Enter each assumption and constraint.

Use the “Insert Assumption/Constraint” to add additional assumptions/constraints.

To be able to identify the solution requirements, a certain number of assumptions and constraints are necessary. By definition, an assumption is something that is accepted as true or is certain to happen, without proof. Constraints place limits or conditions on the proposed project. Therefore, the list of assumptions and constraints should be reasonable and, if possible, be supported by quantifiable information. Assumptions and constraints should be realistic and accurate; otherwise, the overall credibility of the business case can be negatively affected.

Examples of assumptions include:

- Staff working hours occur on an 8:00am-5:00pm schedule.
- Dedicated staff will remain in their current roles.
- Dedicated staff will cross train one another.
- Replacement parts will be on site within four hours of notification.
- New hardware is functional.
- Normal availability of services and support.
- Project funding will be approved and remain available throughout the project lifecycle.

Examples of constraints include:

Project Factors

- Hard deadline
- Predetermined budget
- Subject matter expertise
- Contract provisions
- Privacy or security considerations
- Time-limited grant funds

External Factors

- Social factors
- Environmental issues or concerns
- Political reasons
- Economic factors
- Technological issues

Internal Factors

- Resources
- Expertise
- Business requirements
- Legal requirements
- Facilities

Description/Potential Impact: Describe the assumption/constraint and the potential impact on the proposed project if not addressed.

This narrative should identify how the assumption/constraint was identified. Include how any financial impacts were identified and determined.

2.6 Dependencies

Dependencies are elements in a project reliant on something else occurring before the function, service, interface, task, or action can begin or continue. Dependencies may involve another project (e.g., a program in a project is waiting on deliverables or staff from another project before it can continue) or be reliant on another area within a project (e.g., a team must complete a deliverable before another team can begin their task). Dependencies should be related to the business need or solution requirements and not a specific option.

Element: Enter the element with dependencies on another function, service, interface, task, or action before it may begin or continue.

Use the “Insert Element” to add additional dependent elements.

The element specifies the function, service, task, or action that is dependent on something else before it may begin or continue.

Description: Enter the description for the element.

The dependency’s element description should highlight the manner a particular initiative or entity (internal or external) associated with the proposed project relies on a specific enabling function, service, interface, task, or action to begin or continue.

2.7 Market Research

Agencies/state entities are required to perform market research to collect information and analyze the capabilities of vendors in the existing market. Market research determines whether the business needs identified in this proposal can be met by products or services available in the marketplace; whether commercial practices regarding customizing, or modifying products or tailoring services are available to meet the business needs or objectives of the proposal. Market research is also used to determine how many vendors, if any, can provide solutions to the business problem or opportunity of the proposal. This can shape the procurement strategy, which helps determine the type and content of the product description or statement of work, develops the support strategy, refines requirements, and identifies evaluation factors used for the solicitation. Market research should be aligned with the proposal’s business, technical and functional objectives, including cost estimates.

Various methods of market research can be used to collect information about markets, target markets and their needs, competitors, market trends, the customer satisfaction with products and services, etc. State Contracting Manual (SCM) Chapter 13, Market Research Guidelines provides guidance to Agencies/state entities on best practices for performing market research.

2.7.1 Market Research Methodologies/Timeframes

Methodologies Used to Perform Market Research: Select all methodologies used to perform market research for this proposal.

Refer to State Contracting Manual (SCM) Chapter 13, Market Research Guidelines for general descriptions of the methodologies listed:

- Request for Information (RFI)
- Internet Research
- Vendor Forums/Presentations
- Collaboration with other Agencies/state entities or governmental entities
- Trade shows
- Published literature
- Leveraged Agreements
- Other, specify methodology used in space provided

Time spent conducting market research: Select the cumulative timeframe that the Agency/state entity spent conducting market research, as follows:

- 1 Month
- 2 Months
- 3 Months
- 4 Months
- 5 Months
- 6 Months
- 7 Months
- 8 Months
- 9 Months
- 10 Months
- 11 Months
- 12 Months
- Over 1 Year

Date market research was started: Enter the date market research activities began.

Date all market research was completed: Enter the date all market research activities were completed.

2.7.2 Results of Market Research

Provide a concise narrative description of the approach used to perform market research. The narrative should include a brief description of the following:

- How results were analyzed?
- Who was involved in the analysis of results (technical staff, key stakeholders, business sponsors, etc.)?
- How results effected requirements development?
- How results effected procurement methodologies?
- Alignment of results with the recommended alternative.

2.8 Alternative Solutions

The Department of Technology expects Agencies/state entities to conduct a thorough analysis of all feasible alternatives that will meet the proposal's objectives and requirements.

It is rare for any IT project focused on business problems/opportunities, business objectives, and business requirements to have only one solution (other than "do nothing"). The "do nothing" alternative does not meet the requirement of an alternative analysis. Agencies/state entities must consider **at least two alternatives** in addition to the recommended alternative. Proposals submitted with only the recommended solution and no other alternatives considered will not be accepted without a detailed discussion describing the specific research undertaken to justify why no other possible alternative exists.

Note: *The subsections within Section 2.8.2 should be repeated for each alternative solution considered.*

2.8.1 Recommended Alternative Solution

The Recommended Alternative Solution is the one which best satisfies the previously defined objectives and requirements. The Agency/state entity completes the recommended alternative solution based on an analysis of the alternatives considered and a determination of the solution which best meets the needs of the Agency/state entity.

2.8.1.1 Name

Enter the name for the "Recommend Alternative" or "Considered Alternative."

2.8.1.2 Description

Enter a brief narrative that describes the alternative, including what the alternative is and why the alternative was considered.

Approach: Select each approach used to address the problems and meet the objectives and requirements, as follows:

- Increase staff – new or existing capabilities
- Modify the existing business process or create a new business process
- Reduce the services or level of services provided
- Utilize new or increased contracted services
- Enhance the existing IT system
- Create a new IT system
- Other, specify in space provided

2.8.1.3 Benefits Analysis

Benefits Analysis also known as "Cost Benefits Analysis" (CBA) is a systematic approach to estimating the strengths and weaknesses of alternatives that address the problems and meet the objectives and requirements for business. It is a technique used to determine options that provide the best approach for the adoption and practice in terms of benefits in resources, time, cost savings, etc.

Broadly, benefits analysis has two purposes:

1. To determine if it is a sound investment/decision (justification/feasibility).
2. To provide a basis for comparing alternatives. This involves a comparison of the total expected cost against the total expected benefits to determine whether the benefits outweigh the costs and by how much.

As part of the Stage 2 Alternatives Analysis, the benefits analysis information requested is not required to be at the level of granularity one might find in a complete and traditional cost benefits analysis; however, it is included to provide a comparison of advantages/benefits and disadvantages of one alternative in contrast to other alternatives being considered.

In the following Benefits/Advantages and Disadvantages sections provide a benefit analysis in terms of benefits/advantages versus disadvantages of the alternative being described. Describe cost and schedule difference between alternatives, e.g., alternative 1 has a 10 percent lower cost than alternative 2, and alternative 2 could be completed in one year less than alternative 3. Do not reword an advantage into a disadvantage.

Benefits/Advantages: List the advantages of the alternative in relation to the other alternatives considered.

An advantage may be that one alternative meets certain functional requirements better than another alternative, or to provide consistency with the Agency/state entity's overall strategy for information management.

Use the "Insert Benefit/Advantage" to add additional benefits/advantages.

Disadvantages: List the disadvantages of the alternative solution in relation to other alternatives considered.

A disadvantage may include the need for significant technical staff support, or the security implications of implementation in multiple locations. List any disadvantages that are not apparent from simply assessing the costs and benefits.

Use the "Insert Disadvantage" to add additional disadvantages.

Anticipated Time to Achieve Objectives After Project Go-Live

Objective Number: Enter the objective number for each objective identified in the Stage 1 Business Analysis.

Use the "Insert Objective Number" to add additional objective numbers.

Objective Timeframe: Select the anticipated timeframe to achieve each of the proposal's business objectives.

Anticipated Time to Achieve Financial Benefits After Project Go-Live

Financial Benefit: Select the anticipated timeframe from the proposed project go-live date to achieve a financial benefit (as applicable) within the provided financial benefit categories (i.e., increased revenues, cost savings, cost avoidance, cost recovery).

A financial benefit category may be left blank if there is no anticipated financial benefit to be achieved. Each financial benefit category should be identified as a business driver in the Stage 1 Business Analysis, Section 1.5, defined as follows:

- **Increased Revenues:** Any addition to cash or other current assets that does not increase any liability or reserve and does not represent the reduction or recovery of expenditure (e.g., reimbursements and/or abatements). Revenues are a type of receipt generally derived from taxes, licenses, fees, or investment earnings. Revenues are deposited into a fund for future appropriation and are not available for expenditure until appropriated (Uniform Codes Manual). SAM Section 6602 defines revenues as, “Any changes in the amounts of operating income received by state and local agencies as the result of an executive regulation...includes taxes, state and/or federal assistance, fees, licenses, and so forth.”
- **Cost Savings:** As defined by SAM Section 6602, “Both actual budget reductions and the ‘freeing up’ of staff and/or resources for reassignment to other areas of legitimate concern of the agency.”
- **Cost Avoidance:** Benefits that occur when future program needs are met at less cost than would otherwise have been required. Such program needs can include new program services, increased program service levels, or replacement of current systems.
- **Cost Recovery:** The Federal government portion for their share of expenditures for providing Medicaid services, administering the Medicaid program, and certain other human service programs recovered by the State.

2.8.1.4 Assumptions and Constraints

Provide a narrative on the assumptions and known constraints associated with the alternative being described. Include costing assumptions and any financial impacts that this alternative will have on other projects underway or contemplated by the Agency/state entity. The narrative should identify how the assumptions/constraints were identified and include how any financial impacts were identified and determined.

2.8.1.5 Implementation Approach

Use the checkboxes provided to specify the implementation approach information for the solution.

- Identify the type of existing IT system enhancement or new system proposed using the following options (select all that apply):
 - Enhance the current system
 - Develop a new custom solution
 - Purchase a Commercial-off-the-Shelf system (COTS)
 - Purchase or obtain a system from another government agency (Transfer)
 - Subscribe to a Software as a Service (SaaS) System
 - Other, specify in the space provided

- Identify cloud services to be leveraged using the following options (select all that apply):
 - Software as a Service (SaaS) provided by OTech
 - Software as a Service (SaaS) provided by commercial vendor
 - Platform as a Service (PaaS) provided by OTech
 - Platform as a Service (PaaS) provided by commercial vendor
 - Infrastructure as a Service (IaaS) provided by OTech
 - Infrastructure as a Service (IaaS) provided by commercial vendor
 - No cloud services will be leveraged by this alternative. Provide a description of why cloud services are not being leveraged. :

Refer to SAM Section 4983, which states in part, "...Agencies/state entities must evaluate Cloud Computing as an alternative for all reportable and non-reportable IT projects. Whenever feasible, agencies/state entities must utilize cloud services provided by the Office of Technology Services (OTech). If required services are not available through OTech, Agencies/state entities must utilize other commercially available Software as a Service (SaaS), Platform as a Service (PaaS), or Infrastructure as a Service (IaaS) cloud service models when feasible and cost effective..."

- Identify who will modify the existing system or create the new system using the following options (select all that apply):
 - Agency/state entity IT staff
 - A vendor will be contracted
 - Agency/state entity will perform a business/solutions-based procurement to have vendors propose a solution
 - Inter-agency agreement will be established with another governmental agency. Specify Agency name(s).
 - Other, specify in the space provided
- Identify the implementation strategy using the following options:
 - All requirements will be addressed in this proposed project in a single implementation
 - Requirements will be addressed in incremental implementations in this proposed project
 - Some requirements will be addressed in this proposed project. The remaining requirements will be addressed at a later date. Specify the year when the remaining requirements will be addressed in area provided.
- Identify if the technology implemented for the proposed project will be mission critical or public facing:
 - Check the box if the proposed project is considered mission critical and public facing. Chapter 404, Statutes of 2010 (AB 2408) specifies that mission critical and public facing applications be housed in a Tier III or equivalent data center.

2.8.1.6 Architecture Information

The Agency/state entity business and technical teams will collaborate to complete the information contained within the Architecture Information. The business team will complete, or provide to the technical team, the business processes for the proposed solution. The technical team will complete, or provide to the business team, the technical-related items (e.g., application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces; data center location; and, security) for the proposed solution. The Architecture Information should align with Section 2.3.2 Business Process Workflow.

Document the business processes and supporting technology of the alternative solution. For each business process identified in Stage 1 Business Analysis Section 1.7 Program Background and Context, provide the following:

Business Function/Process(es): Enter the business process name as referenced by the Agency/state entity. If many business processes are grouped under business functions (particularly for large systems), identify the respective business function.

Use the “Insert Business Function/Process” and enter the business process name if another business process uses the same application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces; data center location; and, security.

Use the “Insert Architecture Information” and complete another Architecture Information if the business process uses a different application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces; data center location; or, security.

Application, System, or Component: Enter the name of the application, system or component that supports the associated business process.

Use the “Insert Application, System or Component” for each application, system, or component and identify separately if multiple applications, systems or components support the business process.

COTS, MOTS or Custom: Select either “Commercial off-the-shelf (COTS),” “Modified off-the-shelf (MOTS)” or “Custom solution” to identify the type of application, system or component used. For a COTS or MOTS product, provide the name of the COTS or MOTS product utilized in the system. For a custom solution, enter the primary technology used to build the system (e.g., .NET, Java, etc.).

- COTS product – Typically, a ready-made computer hardware or software product for specific uses and available for sale to the general public. COTS products are designed to be installed without requiring custom development. For example, Microsoft Office is a COTS product that is a packaged software solution for businesses and individuals. The Federal Acquisition Regulation (FAR) defines the rules for COTS products.
- MOTS product – Typically, a COTS product with source code made available to the purchaser to allow for modifications. The product may be customized by the purchaser, by a vendor, or by another party to meet the requirements of the customer. Since MOTS product specifications are written by external sources, purchasers may not have control of future changes to the product.

- Custom solution – Typically, computer software developed for a specific customer to accommodate the customer's particular requirements, preferences, and expectations.

Runtime Environment: Identify the runtime environment for the alternative, as follows:

Specify if the alternative will use Cloud Computing. If “Yes,” choose the applicable type and complete the remaining Runtime Environment fields as specified:

- If Software as a Service (SaaS) selected, do not complete further Runtime Environment fields.
- If Platform as a Service (PaaS) or Infrastructure as a Service (IaaS), do not complete the Hardware field but complete the remaining Runtime Environment fields.

Server/Device Function: Enter the function of each server/device that the alternative system leverages (e.g., Web service, database, network routers, workstations, tablets, etc.)

Hardware: Enter the hardware that the alternative system leverages (e.g., IBM pSeries, HP Blade Server, etc.).

Operating System: Enter the operating system that the alternative system leverages (e.g., Microsoft Windows, UNIX, z/OS, etc.).

System Software: Enter the system software that the alternative system leverages (e.g., Oracle WebLogic Server, Microsoft SQL Server, EMC Documentum, etc.).

System Interfaces: Enter the name(s) of system(s) that will exchange data with the alternative system using interface files, web services, etc. Identify systems within scope of the proposed project that will interface with each other. Also identify systems outside the scope of the proposed project that interface with the baseline systems. Provide a brief description of the purpose of each interface. If the system will exchange data with other entities, specify the name of the entity. Examples include but are not limited to the following:

- Federal partners
- Local city/county partners
- State agency entity partners
- Judicial branch
- Universities
- Researchers

Data Center Location: Select the location of the data center where the alternative system is hosted.

- **State Data Center:** A data center operated by the Department of Technology, Office of Technology Services (OTech).
- **Agency/State Entity Data Center:** A data center independently operated by an Agency/state entity.
- **Commercial Data Center:** A data center operated by a solution provider or vendor contracted by the Agency/state entity.
- **Other:** If not one of the above, type the location of the data center where the current system is hosted.

Security: Indicate the security and privacy characteristics of the alternative system.

Access: Indicate who is authorized to access the alternative system. Use the check boxes provided to select all that apply:

- Public: The alternative system will be accessible to public parties with or without restricted access.
- Internal State staff: The alternative system will be accessible to internal state staff with or without restricted access.
- External State staff: The system will be accessible to state staff from other Agencies/state entities, with or without restricted access.
- Other: Specify who else is authorized to access the alternative system.

Type of Information: Identify the types of information that require protection. See the SAM Section 5305.5 for more information. Use the check boxes provided to select all that apply:

- Personal: Select if personally identifiable information (e.g., social security numbers, demographic information, etc.) will be collected, processed and/or presented by the alternative system.
- Health: Select if diagnosis, treatment, provider, insurance, or billing information will be collected, processed and/or presented by the alternative system.
- Tax: Select if IRS safeguards or state or local tax information policies (similar to the Federal IRS safeguards) are required to protect information contained in state or local tax submissions.
- Financial: Select if confidential or sensitive financial information will be maintained (e.g., payment processing, salaries, budget, credit card numbers, contract amounts, etc.)
- Legal: Select if confidential or sensitive legal information will be maintained (e.g., arrest records, court records, incarceration records, contracts, lawsuits, legal documents, etc.)
- Confidential: Select if other types of confidential or sensitive information will be maintained by the alternative system (e.g., business trade secrets, investigations, enforcement actions, etc.)
- Other: Specify the type of information that will require protection.

Protective Measures: Identify how the information will be protected. Use the check boxes provided to select all that apply:

- Technical Security: Select if hardware and software security measures (e.g., firewalls, virus protection, intrusion detection/prevention, etc.) will be used to protect the networks, servers, workstations, and other devices in the infrastructure.
- Identity Authorization and Authentication: Select if the alternative system will be required to restrict access to either state employees and/or to the public.
- Physical Security: Select if servers and network devices will be secured with environmental security measures (e.g., door locks, surveillance equipment, etc.)

- Backup and Recovery (Technology Recovery): Select if data will be backed up and stored offsite.
- Other: Specify how the information is will be protected.

Data Owner (Owner of information assets): Identify the individual and their organizational unit who will be responsible for making classification, categorization, and control decisions regarding information assets. See SAM Section 5305.5 for more information.

- Name: Enter the name of the Data Owner.
- Title: Enter the title of the Data Owner.
- Business Program: Enter the name of the Business Program who will have controlling ownership of the data.

Data Custodian (Custodian of information): Identify the individual and their organizational unit which will be the caretaker for the proper use and protection of information assets on behalf of the information asset owner (e.g., a data center or information processing facility). See SAM Section 5305.5 for more information.

- Name: Enter the name of the Data Custodian.
- Title: Enter the Title of the Data Custodian.
- Business Program: Enter the name of the Business Program that will be the custodian of the data.

2.8.2 Other Alternative Solutions

Use the “Insert Alternative Solution” for each alternative solution considered. Follow the instructions provided in Section 2.8.1.

2.9 Recommended Solution

The recommended solution section provides additional information on the Recommended Alternative Solution described in section 2.8.1. It also provides additional information on the course of action proposed in the proposal. This section should incorporate sufficient detail to allow decision-makers to confirm the feasibility of the recommended alternative in terms of:

1. Objectives and requirements
2. Overall program costs and benefits
3. Resources (time, funding, people, expertise)

2.9.1 Rationale for Selection

Provide a narrative to support the rationale for selecting the recommended approach/solution.

This information should be supported by the information collected during market research as described in Section 2.7 Market Research. Provide the following:

- Describe how the recommended alternative meets the identified requirements and objectives.
- Discuss the recommended alternative's business advantages over the other alternatives.
- Discuss the disadvantages of the recommended alternative and why those disadvantages did not eliminate the alternative.
- Consider the following factors:
 - Alignment with Agency/state entity and state strategies for business and information technology
 - Availability of Agency/state entity resources
 - Availability of contracting resources
 - Availability of COTS software
 - Availability of funding. This should align with the funding source identified in the Stage 1 Business Analysis Preliminary Assessment Section 1.3.2 Impact Assessment.

2.9.2 Technical/Initial CA-PMM Complexity Assessment

Using the recommended alternative, Agency/state entities will determine the proposal's Overall Complexity Zone. The Overall Complexity Zone will identify the remaining Stage 2 Alternatives Analysis sections which require Department of Technology review and approval. To determine the proposal's Overall Complexity Zone, a combined Technical Complexity and Business Complexity is used, in conjunction with the with the recommended alternative's estimated cost as a percentage of the Agency/state entity's delegated cost threshold (as determined by the Department of Technology per SAM Section 4819.37 and reflected in SIMM Section 015) .

The Business Complexity Score was previously determined as part of the Stage 2 Preliminary Assessment and agreed upon with the Department of Technology as part of the Gate 1 Collaborative Review. The Technology Complexity and Complexity Zone are determined as follows:

Complexity Assessment: Use the Complexity Assessment self-assessment tool (that was used to establish the Business Complexity score in the Stage 2 Preliminary Assessment) to complete the Technical Complexity based on the applicable information captured in the Stage 1 Business Analysis and the Stage 2 Alternatives Analysis. Ensure that the Business Complexity score previously determined is entered in the Complexity Assessment self-assessment tool.

Technical Complexity Score: Enter the Technical Complexity score in the space provided.

Complexity Zone: Select the Complexity Zone for this proposal.

- Zone I, select “Low Criticality/Risk”
- Zone II/III, select “Medium Criticality/Risk”
- Zone IV, select “High Criticality/Risk”

The complexity zone is a combination of the Business Complexity score and Technical Complexity score and will be used to determine the Overall Complexity Zone. This serves as the initial complexity zone for this proposed project.

Note: *The Complexity Zone is indicated by a red ball in the Complexity Diagram within the Complexity Assessment tool.*

Refer to the SIMM Section 17A of the CA-PMM for the Complexity Assessment self-assessment tool and additional instructions.

Note: *Following the submission of the Stage 2 Alternatives Analysis, the Department of Technology will perform its own assessment of the proposal using the SIMM Section 17A CA-PMM Complexity Assessment tool. The results will be evaluated by the Department of Technology in order to communicate any additional content requirements related to either additional deliverable content and/or risk mitigation strategies to be utilized during the next stage of deliverable development. The Stage 2 Alternatives Analysis, including the Complexity Assessment Score and Complexity Zone, will be discussed at the Gate 2 Collaborative Review.*

Scalability Table (Remaining Sections)

The scalability is determined by the Overall Complexity Zone category (i.e., Low, Medium, High), in conjunction with the recommended alternative's estimated cost as a percentage of the Agency/state entity's delegated cost threshold. Using the combined result, determine the sections (indicated by a solid circle) in the Scalability Table below that must be submitted to the Department of Technology for review and approval (see example below). The remaining sections are delegated to the Agency/state entity Director for review and approval.

Example: An Agency/state entity with a delegated cost threshold of \$1 Million has selected an alternative with an estimated cost that is **greater than** 120% (or \$200,000) over their delegated cost threshold and an overall Complexity Zone of medium. The Agency/state entity must submit a Stage 2 Alternatives Analysis with the same content as a high Complexity Zone (last column) proposal to the Department of Technology for review and approval.

If the Agency/state entity selected an alternative with an estimated cost that is **less than** 120% of their delegated cost threshold and an overall Complexity Zone of Medium, the Agency/state entity must submit a Stage 2 Alternatives Analysis with the same content as a Medium Complexity Zone (middle column) proposal to the Department of Technology for review and approval.

S2AA Sections	Overall Complexity (Business and Technical)		
	Low	Medium =< 120% DCT	Medium >120% DCT & High
2.9.3 Procurement and Staffing Strategy	○	○	○
2.9.4 Enterprise Architecture Alignment	○	○	○
2.9.5 Project Phases		○	○
2.9.6 High Level Proposed Project Schedule	○	○	○
2.9.7 Cost Summary	○	○	○
2.10 Staffing Plan			
2.10.1 Administrative			○
2.10.2 Business Program			○
2.10.3 Information Technology (IT)			○
2.10.4 Testing			○
2.10.5 Data Conversion/Migration			○
2.10.6 Training and Organizational Change Management			○
2.10.7 Resource Capacity/Skills/Knowledge			○
2.10.8 Project Management	○	○	○
2.10.9 Organization Charts		○	○
2.11 Financial Analysis Worksheets	○	○	○

Note: The Department of Technology reserves the right to request, at any time, a copy of the fully completed Stage 2 Alternatives Analysis.

2.9.3 Procurement and Staffing Strategy

Detail the planned procurement and staffing strategy for this proposal in the Procurement and Staffing Strategy information. This information will be used by the Department of Technology Statewide Technology Procurement Division (STPD) to help facilitate procurement activities and ensure alignment with current procurement guidelines. The information will also be used by the Department of Technology ITPOC Oversight Manager to ensure proper project staffing considerations for remaining project approval lifecycle activities through project implementation.

Activity: Select the applicable project-related activities. **Note:** *Separate detailed information is required for each activity.*

Use the “Insert Activity” to add additional activities.

The activities listed may occur after Stage 2 Alternatives Analysis approval and throughout project execution phases:

- Procurement Consulting for Development of Solicitation
- Requirements Elicitation
- Cost Estimating
- Business Analysis
- Technical Analysis
- Project Management
- Independent Verification and Validation (IV&V)
- Project Oversight
- Organizational Change Management
- Testing
- Training
- Integration/Development
- Data Conversion/Migration
- Contract Management
- Enterprise Architecture
- Quality Assurance
- Technical Installation of Hardware
- Technical Installation of Software
- Maintenance
- Operations
- Other – If “Other,” type the activity

Responsible: For each project-related activity identified, check the applicable state staff or contractors or other responsible party who will perform the activity (check that apply). If “Other” is selected, type in the responsible party.

The project-related procurement and staffing activity may be performed by Agency/state entity staff, Department of Technology Statewide Technology Procurement Division (STPD) staff, Department of Technology Information Technology Project Oversight and Consulting Division (ITPOC) staff, Department of Technology Statewide Project Management Office (SPMO) staff, Department of General Services (DGS) staff, contractors, or other staff not listed. If “Other,” type the staff that will perform the activity.

When Needed: Check the stage or stages (as applicable) of the Project Approval Lifecycle when services will be needed, as follows:

- Stage 3 Procurement Analysis (during procurement development)
- Stage 4 Solution Analysis (vendor selection and project planning)
- After project is approved through Stage 4 Solution Analysis

Cost Estimate Verification: Check all the applicable methods used to estimate the cost associated with the activity:

- Market research conducted (MR)
- Cost estimate provided (CE)
- Department of Technology CE
- DGS CE
- Request for Information conducted (RFI)
- Comparable vendor services have been used on previous contracts (CV)
- Leveraged Procurement Agreements (LPA)

The costs will be detailed in the Financial Analysis Worksheets. **Note:** For cost estimates related to Department of Technology staff (i.e., STPD, ITPOC, SPMO), contact your ITPOC Division Oversight Manager for additional information. For cost estimates related to DGS staff, contact DGS.

Complete the “Procurement Vehicle” and “Contract Type” only if “Contractor” was selected in the “Responsible” column to perform the project-related activities.

Procurement Vehicle: Select the type of procurement process that will be used to procure contract services. See the State Contracting Manual (SCM Volume 3 Chapter 13) for descriptions of these processes.

- Formal Solicitation (IFB/RFP)
- Request for Offer/Master Schedule Agreement (RFO/MSA)
- Request for Offer/California Multiple Award Schedule (RFO/CMAS)
- Request For Offer/Software Licensing Program (SLP)
- Request For Offer/Western States Contracting Alliance (WSCA-NASPO)
- Request For Offer/Information Technology Consulting Services (ITMSA)
- Request For Offer/State Price Schedule (SPS)
- Request For Offer/Statewide Contracts (SCC)
- Non-Competitive Bid (NCB)
- Request for Quote (RFQ)
- Small Business/DVBE Option
- Pre-qualified Master Agreement Contractor (PMAC)

- Other – If “Other,” specify in space provided
- None

Contract Types: Select the anticipated method used to pay the contractor. See the State Contracting Manual (SCM) for descriptions of these methods.

- Fixed Price (FP)
- Time and Materials (T&M)
- Percentage of Benefit (POB)
- Savings Based
- Other – If “Other,” specify in space provided

2.9.4 Enterprise Architecture Alignment

Provide a brief description of how this proposal will move the Agency/state entity closer to reaching the Agency/state entity’s target enterprise architecture.

Information Technology Capability Table: Select the existing or new enterprise information technology capabilities that may be needed to meet the business objectives of this proposed project. No selection required if an information technology capability is not applicable to the proposal.

2.9.5 Project Phases

Agencies/state entities should plan IT proposed projects to be implemented in independent phases, especially those that are expected to take longer than one year to develop and implement. When planning for phased project implementation, specific phases should meet the following criteria:

- A phase is an economically and programmatically separable segment and should have an independent and substantial programmatic use even if no additional components are acquired.
- Funding may be identified and/or approved separately for each phase or for the entire project.
- Each phase, being separate and distinct, should provide value as a standalone project so that if a supplier relationship is terminated after a phase, the work completed is still of value.
- A supplier will be paid when, and if, the phase deliverable is completed, tested and accepted.
- Subsequent phases may be redesigned depending on the results of early phases.

Description: Provide a narrative of the Agency/state entity’s overall plan for the proposal phases, which includes the duration of critical tasks, major milestones, and major tasks (e.g., software modification, data conversion, installation, training for end users, training for technical staff, etc.)

Phase: Describe the project phases planned for this proposal and what each phase will deliver; or justify why phasing is not appropriate

Use the “Insert Phase” to add additional phases.

Phases should consist of the smallest set of tasks, resources and risks, and utilize the shortest implementation schedules that will deliver useful and measurable business results. Whenever possible, the initial project phase will be confined to delivering the essential core functionality that will provide the greatest portion of the benefits of the proposed system.

Phase Deliverables: Describe the core functionality or deliverable that will result in the completion of the phase.

Use the “Insert Phase Deliverable” to add additional deliverables to a phase.

2.9.6 High Level Proposed Project Schedule

Identify high-level tasks for the project. Each project is different and requires a unique set of tasks.

Proposed Project Start Date: Select the proposed project start date.

The proposed project start date should reflect the beginning of proposed project activities; the first date that proposed project activities are estimated to begin. This should exclude any activities related to the Project Approval Lifecycle.

Proposed Project End Date: Select the proposed project end date.

The proposed project end date should reflect the conclusion of project activities; the last date that proposed project activities are estimated to be completed. This should exclude any activities related to the Post Implementation Evaluation Report (PIER).

Activity Name: Enter the activity name.

Use the “Insert Activity Name” to add additional activities.

The proposed project activities identified in this table should represent the highest level of proposed project-related activities that will result in the completion of major project deliverables as shown in the following example. Each proposed project is different and may require a unique set of activities. As appropriate, indicate that the Agency/state entity has planned for activities such as procurement, design, development and/or software modification, testing, data conversion, installation, training for end users, training for technical staff, deployment, etc. If planning on leveraging an agile development approach, specify the activities accordingly.

Start Date: Provide an estimated start date for each activity/task identified.

End Date: Provide an estimated end date for each activity/task identified.

Waterfall Example:

Activity Name	Start Date	End Date
Procurement		
Requirements		
Design		
Development		
Testing		
Training		
Deployment		
Conversion		
Go Live		

Agile Example:

Task Name	Start Date	End Date
Procurement		
Planning		
Sprint 1		
Requirements		
Design		
Development		
Testing		
Sprint 2		
Requirements		
Design		
Development		
Testing		
Training		
Deployment		
Go Live		

2.9.7 Cost Summary

Utilizing the Financial Analysis Worksheets, provide the following cost related information from the Summary tab. See SIMM 19F Financial Analysis Worksheet Preparation Instructions on how to complete the FAWs.

Total Project Cost: Enter the project cost for this proposal. This can be found in the FAW’s Summary tab, the value intersects the “Total Cost” row and the “Project Total” Column.

Average Proposed Operations Cost: Enter the average proposed operations costs for this proposal. This can be found in the FAW’s Summary tab; the value intersects the “Total Cost” row and the “Average Proposed Operations Costs” Column.

2.10 Staffing Plan

Staff planning is the process of identifying how and when labor needs will be met to ensure that the proposed project has sufficient staff with the appropriate skill sets and experience. Staff planning will identify and document project roles, responsibilities and reporting relationships and result in the creation of a Staff Management Plan (PMBOK®) or Human Resource Management Plan (CA-PMM). In 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. These narratives should address both the resource needs to perform the work required in Stages 3 and 4 of the Project Approval Lifecycle, including subject matter experts identified, and the impact the project will have on existing operations and mitigation strategies throughout the life of the project. This narrative should also identify how the Agency/state entity will supply sufficient numbers of knowledgeable internal resources for projects that are anticipated to have a strong dependency on vendors.

2.10.1 Administrative

Describe the capacity and capability of administrative resources needed to maintain ongoing operations of the Agency/state entity in conjunction with proposed project workload. This narrative should include the experience level of procurement, contract management and budget staff.

2.10.2 Business Program

Describe the capacity and capability of existing business program resources needed to maintain the business operations of the Agency/state entity's business programs that will be impacted by this proposal. This narrative should identify how the Agency/state entity will maintain ongoing program operations in conjunction with proposed project workload. If changes to business processes were identified in Section 1.11 Business and Stakeholder Capacity of Stage 1 Business Analysis, the narrative should also identify business program resources needed to perform business process reengineering activities.

2.10.3 Information Technology (IT)

Describe the capacity and capability of existing IT resources to both support this proposal and maintain existing responsibilities. This narrative should identify how the Agency/state entity will maintain ongoing operations while the proposed project or any other initiative is underway.

2.10.4 Testing

Describe the capacity and capability of the Agency/state entity's testing program and resources that will support all stages of testing (system, integration, security, performance, regression, user, etc.). This narrative should identify the dedicated resources to be assigned to support testing and adequately describe the skills and experience of these resources.

2.10.5 Data Conversion/Migration

If this proposal will require data conversion/migration activities, provide a brief description of the Agency/state entity's plan for data conversion/migration. Describe the capacity and capability of the Agency/state entity's resources that will support this effort.

2.10.6 Training and Organizational Change Management

Describe the capacity and capability of training and organizational change management needed to support this proposal. This narrative should identify any business disruption and customer impacts which are anticipated to result with this proposal and include a description of the resources, processes, and methodologies in place to provide training and organizational change management services to mitigate any disruption.

2.10.7 Resource Capacity/Skills/Knowledge

Describe the capacity, skill, and knowledge of the resources needed to perform the work required in Stage 3 Procurement Analysis. Describe what resources are being considered for this work. Stage 3 Procurement Analysis will require business program knowledge, technical knowledge, and procurement knowledge to effectively develop requirements, evaluation criteria, and contract deliverables.

2.10.8 Project Management

The Organizational Project Management Maturity (OPMM) Assessment aids in assessing the maturity of an organization as a whole and their ability to carry out projects. This model will evaluate such elements as:

- Organizational commitment to a well-defined, mature project management process
- Existence of predicated management commitment, functions, and systems
- Competence of participants in any project management endeavor
- Organizational project management environment (e.g., tools, infrastructure) and how well these are integrated
- Measurement metrics in the organization and how well they are used and any applicable past performance
- Organization's continuous improvement process

This assessment is to be completed by the Agency/state entity as part of the Stage 2 Alternatives Analysis and verified by the Department of Technology during the Gate 2 collaborative review meeting.

Complete the OPMM Assessment (located in SIMM Section 17 D.5 of the CA-PMM) to determine the Agency/state entity's Maturity Score. (Refer to SIMM Section 17 D.6 for OPMM Assessment preparation instructions). **Note:** *Only complete the questions identified as Stage 2 in the "Required Stage" column.*

Organizational Project Management Maturity Score: Enter the score. Attach an electronic copy of the OPMM Assessment.

2.10.9 Organization Charts

Attach organization charts (in Visio or PDF) to show the Agency/state entity and proposed project reporting relationships for all parties involved in the project. To better assess this project's impact on the Agency/state entity, the following charts/information is required:

1. Proposed Project Organization Chart
 - a. Project Team, including number and classification of team members. Organization chart should depict all of the state and vendor staff (if known prior to Stage 3 Procurement Analysis) involved at any time in the project lifecycle. State staff identified on the organization chart should align with the new and existing staff identified in the Financial Analysis Worksheets (FAWs).
 - i. Agency/state entity project management staff, including the Project Manager and Project Management Office (PMO) support staff.
 - ii. Agency/state entity business staff that will participate in the project, such as the Program Manager, program analysts, and subject matter experts.
 - iii. Agency/state entity information technology staff, including architects, systems analysts, software developers, quality assurance analysts, and requirements analysts.
 - iv. Vendor staff (if contracted or planned to contract) as identified in Section 2.9.3 Procurement and Staffing Strategy.
 - b. Business Sponsors and Key Stakeholders identified in Stage 1 Business Analysis.
2. Impacted Program(s) Organization Chart
3. Information Technology Organization Chart
4. Agency/state Entity Organization Chart

2.11 Financial Analysis Worksheets

Attach the Financial Analysis Worksheets (FAW) for this proposal. The FAW should document the cost and resource assumptions the Agency/state entity made during the Project Approval Lifecycle. The FAW provide a standard format for documenting the projected costs and financial benefits of the current method of operation and the proposed alternative. The worksheets are used to perform cost analyses of the full range of alternatives under consideration. See SIMM 19F Financial Analysis Worksheets Preparation Instructions for direction on how to complete the FAW for the Stage 2 Alternatives Analysis.