OSI Solution Architecture Framework

Enterprise Service Center

April 2008
# Revision History

<table>
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<tr>
<th>REVISION/WORKSITE #</th>
<th>DATE OF RELEASE</th>
<th>OWNER</th>
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<tr>
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## Approvals

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Date</th>
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<tbody>
<tr>
<td>Crystal M. Cooper</td>
<td>Chief Information Officer, OSI</td>
<td>4/24/2008</td>
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1 INTRODUCTION

The Enterprise Architecture Office (EAO) within the Enterprise Services Center (ESC) was created to establish an Enterprise Architecture (EA) program that will provide a consistent architecture development approach and methodology for use within Office of Systems Integration (OSI). The EA program seeks to help Project Offices position themselves to produce solutions that maximize the value of project outcomes for the Sponsor and the customers they serve.

OSI’s primary mission is to help the sponsor achieve their business strategy by enabling successful project delivery. The Solution Architecture Framework (SAF) expands OSI’s support to these Project Offices by providing a set of EA best practices to be used during the Project, Procurement, and System Development Lifecycles. Project Office solution architects use the guidance and tools that the SAF provides to implement EA best practices and produce a project solution along with a standard set of architecture deliverables. These deliverables are blueprints that guide the project team’s development activities to insure delivery of a solution that meets the sponsor’s business needs and produces value to the enterprise (State, Agency, or Department) by delivering common solutions and standardized components that can be reused where possible.

This framework offers an end-to-end process to initiate, plan, and sustain a project’s procurement and development activities. Establishing this framework is not a one-time event but it must be continuously improved and maintained to insure the framework remains relevant and useful.

2 SOLUTION ARCHITECTURE FRAMEWORK (SAF)

A Solution Architecture Framework establishes a systematic approach for creating a roadmap to achieve a project’s mission and to attain a solution with optimal performance of its core business processes delivered within an efficient Information Technology (IT) environment. Solution Architecture development is driven by the business needs that require the delivery of services. The result is the creation of business views from different perspectives that generate information required by decision makers. A Solution Architecture defines the business-technology alignment and statewide service delivery, security, data sharing, and integration. Solution Architecture best practices help identify opportunities to lower costs, by effectively using existing State and project resources.

A Solution Architecture draws a subset of information from the sponsors and the State’s Enterprise Architecture Program to furnish information about the organization’s business, data, service (application), and technology to create a discrete solution for a project. Using these four areas, project solutions are created that:

1) Define the business services, functional requirements, and processes;
2) Identify the information (data) necessary to implement business services;
3) Establish the service (application) architecture required to provide business services and information;
4) Determine the technologies necessary to deliver the business services and information.

The framework offers processes, checklists, and templates to be used during lifecycle activities to generate a set of architectural deliverables. These deliverables guide development efforts and deliver a viable business solution to meet the sponsor’s stated requirements.

This framework leverages existing work performed by other groups and is compatible with existing architecture programs such as the California Enterprise Architecture Program (CEAP) and the Federal Enterprise Architecture Program (FEAP). The framework provides a set of principles to help make supportable and consistent decisions. The following Architecture Principals are used to consider potential investment and architectural decisions.
• Business Drives Information Technology
• Just Enough Architecture, Just in Time
• Common Business Solutions
• Data is an Enterprise Asset
• Secure Enterprise Information
• Compliance with Statewide Standards
• Compliance with Law

Use of the SAF generates a standardized and consistent set of architecture deliverables for each project that EAO will merge into an overall OSI EA repository. Repository information will provide a knowledge base that allows future projects the ability to reuse EA information and identify potential shared services. Additionally, those architecture deliverables are provided to project sponsors for use in their respective EA Programs.

3 VISION AND BENEFITS

Vision
To focus and improve EA support to further enable project decision making regarding business needs and IT service delivery in the context of a discrete service solution.

Benefits
• Leverages existing documentation being developed to satisfy Federal, State, and Agency Architecture Requirements.
• Improves alignment of IT with the project sponsor’s missions, goals, and objectives.
• Improves statewide service delivery and business operations.
• Lowers costs and improves security, reliability and performance of the OSI customer’s IT infrastructure.
• Improves statewide data sharing and systems interoperability.
• Furnishes more effective use of State resources to effective delivery of services to the citizens of California.
• Helps reduce the occurrence of unnecessary duplication of business service solutions, infrastructure, and information silos.

4 SAF PRINCIPLES

Business Drives Information Technology

Rationale
IT direction will be driven by what the business needs to serve their customers. Business events represent the essential activities that define the boundaries of a good information technology environment. Without knowing the business, the IT infrastructure may be over or under built which can result in excessive technical complexity, cost and delays. This principle will foster an atmosphere where the information environment changes in response to the business needs, rather than having the business change in response to IT changes. Technology changes provide an opportunity to improve the business process and hence, change business needs.
Implications

- Minimize unintended effects on business due to IT changes
- Build what we need, not what we want
- Easier to identify technical impacts when business events change
- Must include the business and its perspective in the solutions development process

Just Enough Architecture, Just in Time

Rationale

This approach allows development of enterprise architecture where it is needed most instead of systematically developing architecture information in all areas of the enterprise (business, data, service (application), and technology). Just in time architecture efforts address urgent needs associated with an organization’s immediate business problems or near term action steps that implement strategic direction. Enterprise architecture is applied directly to a program initiative or project to define the current and future state for a defined business service area solution. The resultant set of enterprise architecture information is furnished to the organization for creating standards and incrementally generating the organization’s enterprise architecture.

Implications

- Insures enterprise architecture activities provide timely responses where they are needed most.
- Project EA deliverables are mapped to an organization’s EA program areas (business, data, service (application), and technology)
- EA is developed incrementally over time to create the enterprise view.

Common Business Solutions

Rationale

Development of common solutions used across the State is preferred over the development of similar or duplicative solutions that are created for a particular organization. Duplicative solutions are expensive and proliferates conflicting data.

Implications

- Organizations will not be allowed to develop solutions for their own use that are similar or duplicative of a statewide solution. In this way, expenditures of scarce resources to develop essentially the same capability in marginally different ways will be reduced.
- Applications components should be shared across organizational boundaries.
- May require changes to legislation and government code to guide separate Departments to act in a unified manner.
- A common technology and organization infrastructure will be needed to support common business solutions.
Data is an Enterprise Asset

Rationale

The OSI EAO and the Project Solution Architects must seek to improve data sharing capabilities and reduce costs of acquiring and managing data. To enable the work of government, agencies need to combine data across systems; agencies need to share data with other agencies; users need to access information and services from varied sources; and businesses and governments need to interface. Government work demands interoperability.

Implications

- Laws and statutes must be considered when sharing data across organizational boundaries.
- Data and information used to support statewide decision-making will be standardized to a much greater extent.
- Data standards and quality must be utilized across the enterprise.

Secure Enterprise Information

Rationale

Enterprise information must be secure from unauthorized access, modification, or destruction. Hacking, viruses, and terrorism increasingly threaten the State’s systems. OSI and Government have a responsibility to maintain the public’s trust in its systems from unauthorized access and to protect data integrity and confidentiality. Secure systems ensure the continuity of the State’s business. Systems and data must be secured with security best practices and with security assessments being conducted on a regular basis.

Implications

- Loss of public trust if not done correctly.
- Must identify, publish, and keep applicable policies current.
- Security must enable not impede business.
- It is extremely costly to repair systems that have been compromised.
- Security must be designed into systems from the beginning; it cannot be added later.
- Information must be safeguarded against inadvertent or unauthorized alteration, sabotage, disaster, or disclosure.

Compliance with Statewide Standards

Rationale

Compliance with standards will facilitate interoperability and consistency across solutions. Use of proven technology will simplify software design, reduce application development time, facilitate learning, improve systems maintenance and support, and promote information-sharing among organizations within the State, and thus reduce total cost of ownership.

Implications
• Use of statewide standards improves the value of a solution because it increases shareability.
• Standards will be followed unless there is a compelling business reason to implement a non-
  standard solution.
• Fewer products and configurations simply the information technology environment.

| Compliance with Law |

Rationale

Enterprise information management processes comply with all relevant laws, policies, and regulations. Statewide policy is to abide by laws, policies, and regulations. This will not preclude business process improvements that lead to changes in policies and regulations.

Implications

• The State must be mindful to comply with laws, regulations, and external policies regarding the
  collection, retention, and management of data.
• Changes in the law and changes in regulations may drive changes in our processes or
  applications.

5 PROGRAM CONSTRAINTS AND DEPENDENCIES

The Solution Architecture Framework (SAF) is limited in scope and is intended to support the solutions architect functioning in support of a defined project effort. This framework is dependent upon various lifecycles being implemented by OSI, industry standards, and Federal and State guidelines that relate to the Project Office’s activities. The SAF must be developed, implemented and maintained effectively in that context to be useful and provide value. This is accomplished by recognizing the constraints under which the SAF was developed and understanding the dependencies involved.

The following constraints are identified for developing, maintaining and using the SAF.

• SAF is intended for use with OSI projects and is not intended to be used in place of the sponsor's
  enterprise architecture program.
• The framework focuses on supporting a project and its related lifecycles.
• EA best practices define the activities and deliverables for the project’s solutions architect uses in
  support of a project effort.
• Solutions architecture deliverables define a discrete solution based on the project’s origination
  and planning documents, charter, and scope

Since the SAF is dependent upon various other supporting methodologies, industry standards, and best practices, updates maybe required whenever there are changes to the following:

• OSI Project Management Best Practices
• Project Management and Project Lifecycle as defined in the PMI’s PMBOK
• IEEE Procurement Lifecycle
• IEEE’s Software Development Lifecycle
• Industry Standards and Best Practices as pertains to EA
• Federal Government’s EA Program
• California Enterprise Architecture Program
6 SOLUTIONS ARCHITECTURE FRAMEWORK APPROACH

The Solution Architecture Framework (SAF) approach insures standardization of architecture deliverables in support of projects. This allows OSI to create an architectural foundation to merge OSI project architecture deliverables into multi-project models. The standardization establishes a means for inter-project architecture communication and integration. Although standardization of architecture is fairly common within a project effort, standardization rarely extends to an Enterprise. The SAF helps resolve documentation compatibility issues by using common terms and concepts to produce a standardized set of EA deliverables by which OSI or the project Sponsor’s organization can implement EA activities and align deliverables with respective architecture areas.

The Solution Architecture approach uses the sponsor’s business drivers and strategic plans within a project-centric approach to create a service solution and to produce standardized set of EA deliverables. These deliverables create a holistic view of the project’s solution (business, data, etc.) and provides inputs that the project sponsor’s organization can use as input to their enterprise architectures for business, data, service, and technology. The identification of specific documentation allows the project team to provide the development team with clearly defined documentation for designing, developing, testing, and deploying a service solution.

Figure 1: The Solution Architecture Framework
6.1 FRAMEWORK CONSIDERATIONS

The following considerations were identified to guide the creation of the OSI SAF:

- Create an EA Framework that allows OSI to integrate with other EA programs (Department, Agency, or State).
- Maintain alignment with the Federal and California EA programs.
- Position the OSI to offer an EA service as best practices and to provide EA information for reuse.
- Utilize principles as a way to make fully supportable and consistent IT investment decisions.
- Provide the ability to measure the value of EA.

6.2 ARCHITECTURE AREAS

Solution Architecture development consists of processes and procedures that provide a complete picture of changes to a business service. This business service is structured by dividing into four architectural areas representing a complete business solution.

The architecture areas represent the description of business processes and requirements, the data used to facilitate the business, how the business service satisfies the business process, and the technology required to implement the business process. The documents contained in each area are similar to the documentation created during the PLC.

The goal of any architecture is to produce a well planned “blueprint” that guides the development and implementation of a business solution from a current state of service delivery to a future state. A framework establishes the standards on how a “blueprint” is developed in order to produce deliverables that helps access, evaluate, plan for, and document changes to a business service. A common format simplifies the communication between architects, developers, and business teams, as well as provides the structure needed to expedite the process of integrating new project team members, with the final goal of reaching the solution. Standardization creates a foundation that provides the opportunity to merge the information into multi-project models commonly found in a traditional EA Program that is used by most Departments, Agencies, or the State.

![Figure 2: Solution Architecture Areas](image_url)
6.3 REFERENCE MODELS

A reference model is used to organize information within each architectural area. As a new business process is analyzed, conceptualized, and developed, EA deliverables are created and collected to provide the most accurate picture of the transition between a business solutions current and future state. The EA deliverables are collected to populate a reference model for each architecture area. The reference model helps organize and describe the business process from these four architectural perspectives.

6.4 SOLUTION/ENTERPRISE ARCHITECTURE RELATIONSHIP

A Solution Architecture differs from an Enterprise Architecture in the scope being addressed by the organization. The EA covers all lines of business while a Solution Architecture focuses on a specific line of business that can cross multiple systems. A Solution Architecture builds an architecture that is specific to a project effort, decomposing EA development into measurable and manageable segments. The SAF positions OSI to implement an EA by using the segment approach. However, OSI’s mission requires the SAF to use the sponsors or the State’s top down EA approach. As the Solution Architecture is developed by each project team, the solution architecture becomes a segment of an Enterprise EA. This incremental build of each segment by project is merged into an OSI EA knowledge base which encompasses all OSI project service solutions. This knowledge base provides benefit to future project efforts, and establishes the opportunity to identifying shared services across OSI projects. The SAF approach focuses on projects, provides near-term value to OSI sponsors, and contributes to longer-term architecture program development.

Figure 3: Enterprise Architecture Segmented Development
6.5 ARCHITECTURE AND LIFE CYCLE INTEGRATION

The Solution Architecture approach must consider multiple lifecycles used for implementing projects. These lifecycles include the Project, Procurement, and Software Development Life Cycles (SDLC) as shown in figure 4 below. The Solution Architecture approach integrates with these lifecycles by identifying the EA work products and checklists needed across all project management and development phases. Integration of the Solution Architecture approach and related project life cycles provides well-defined deliverables along with the relevant exit criteria reviews. This provides the basis for defining architecture development requirements, roles, and a validation and verification process within individual projects.

![Figure 4: Solution Architecture Interfaces with the SDLC and PLC](image)
6.6 SAF ROLES AND RESPONSIBILITIES

The SAF identifies the roles and responsibilities that are required to provide and use the SAF. Figure 5 identifies the four areas of responsibility. Establishing and implementing these roles by the EAO and within each project team is a key element to successful SAF implementation.

The EAO is responsible for providing the SAF templates and checklists. The Project Solution Architect provides the content for these templates when developing the Solution Architecture and the Project Office’s IV&V function verifies that the existence of, and content for the project’s EA deliverables.

![Figure 5: SAF Areas of Responsibility](image)

**EA & Project Office Roles and Responsibility Matrix**

<table>
<thead>
<tr>
<th></th>
<th>Enterprise Architect</th>
<th>Project Solution Architect</th>
<th>IV&amp;V</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAF Templates</td>
<td>R,A</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>SAF Checklist</td>
<td>R,A</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Solution Architecture Development</td>
<td>C</td>
<td>R,A</td>
<td>I</td>
</tr>
<tr>
<td>Solution Architecture Verification</td>
<td>I</td>
<td>I</td>
<td>R,A</td>
</tr>
</tbody>
</table>

Key: C = Consulted    R= Responsible    A = Accountable    I = Informed

Table 1: EA and Project Responsibilities
7 THE OSI SOLUTION ARCHITECTURE DEVELOPMENT PROCESS

The following sections describe the components, inputs, and processes contained within the OSI SAF. The OSI SAF contains five main components needed for developing and maintaining a Solution Architecture.

**Toolkit:**
- **SAF Templates** - Templates, samples, and checklists that help a project’s Solution Architect develop a Solution Architecture
- **SAF Deliverable Timeline** – A timeline demonstrating the events that occur during a Solution Architecture development.

**EAO Support Functions:**
- **Consulting** - A consulting function within the EAO to assist in the development of a project’s Solution Architecture.
- **Research and Education** - An architecture reference library to provide guidance and learning opportunities for Project Solution Architects.
- **Architecture Knowledge Base** - A repository for completed solution architecture artifacts for future architecture development.

7.1 TOOLKIT

A SAF toolkit establishes a set of standard templates and checklists that are used for developing and maintaining a project’s solution architecture. The SAF toolkit templates and checklists are provided separately as Appendix A: SAF Toolkit. The toolkit is developed by the EAO, and reviewed by the EA Working Group. Revisions to the toolkit will be controlled and affected by the EA Working Group.

The SAF toolkit not only provides a guide, but also a timeline for completing the EA documents. This timeline (see figure 6) allows a Solution Architect and Development Team to identify which documents are required during each phase of the procurement and software development life cycles. Checklists for EA deliverables needed for each phase give architecture teams well defined documentation requirements.

7.2 TEMPLATES

The following document templates have been identified and will be developed as part of the SAF toolkit.

- **Business Reference Model** – A description of the business area, lines of business, and business functions being performed and identifies proposed changes.
- **Business Relationship Model** – A description of the relationships (interfaces) within the proposed business solution with other business entities and describes proposed changes.
- **Conceptual Solution Architecture Model** – Provides a view of the proposed design of the business solution and how it will satisfy the new business requirements.
- **Logical Data Architecture Model** – Provides a non-technology specific view of the proposed changes to how data is collected, maintained, and distributed within the proposed business solution.
- **Logical Technical Architecture Model** – A non-technology specific view of the communication and security requirements of the proposed business solution.
- **Logical Service Architecture Model** – Provides a non-technology specific view of application components (services, interfaces, etc.) of a proposed solution.
- **Physical Data Architecture Model** – A physical description of the data and how the data is stored, accessed, and archived, as well as the ownership of the data.
- **Physical Technical Architecture Model** – A physical design of the network architecture that will be implemented.
• **Physical Service Architecture Model** – A physical design of how the application and services will be implemented.

### 7.2.1 Utilizing the Templates to Support a Project

The SAF toolkit identifies the templates and the timeframe the Solution Architect uses to create EA deliverables. Figure 6 shows which templates are required to support a project’s life cycle phases.

![Figure 6: Architecture Deliverable Timetable](image)

### 7.3 Enterprise Architecture Office Support Functions

The EAO provides three services to Project Offices to assist in the successful development of a project’s solution architecture.

#### 7.3.1 Architecture Consulting

The EAO provides consulting services to the Project Solution Architect regarding the procedures, templates, and checklists associated with the SAF. The EAO can review architectural documentation to insure the Solution Architect has met the intent of an EA deliverable.

#### 7.3.2 Architecture Research and Education

EOA conducts research to support development and evolution of the SAF framework and can respond to specific requests for EA and IT information. These requests are normally made to provide research in support of a Project Solution Architect or to support OSI’s strategic planning efforts. Research includes but is not limited to the information related to EA best practices, EA frameworks, solution architecture,
and business or technology trends (eGovernment, SOA, shared services, etc.). EAO provides a set of links to web sites where EA information, standards bodies, and industry best practices are found (i.e. FEAP, CEAP, OASIS, IEEE, W3C, ADA, NASCIO, etc.). The EAO also provides mentoring for Solution Architects to help educate them on use of the SAF and the SAF toolkit.

7.3.3 EA Knowledge Base

EAO maintains an EA knowledge base that contains EA deliverables developed by project solutions architects. Solution Architects submit EA deliverables to the EAO as they are completed for inclusion in OSI’s EA knowledge base. This knowledge base provides future projects with an information resource that includes examples of previous project EA deliverables that could be used in whole and in part to complete a SAF template.

This information from the EA knowledge base also provides pertinent information to OSI future EA program efforts, or the sponsors EA program. The EAO has the opportunity to use these EA artifacts to build enterprise models. Possible uses of this institutional knowledge for this purpose are to:

- Create merged models of the OSI Project architectures.
- Identify reusable objects or services across OSI Project application infrastructures.
- Provide holistic views of business processes.
- Create cross system data models.
- Identify redundant IT Infrastructure resources.
- Establish cross system dependencies in order to identify project risks.

8 SOLUTION ARCHITECTURE QUALITY ASSURANCE

The accuracy and completeness of the information in a Solution Architecture is the key to architectural success. For that reason a verification and validation process is essential to verify that the information captured is complete and accurate.

The process provides quality assurance checks and balances throughout the Solution Architecture development process. This process helps maintain the quality of the documentation created during the course of the project. This review process verifies and validates that information on the SAF template is complete, and accurately represents the solution being developed and implemented, and reflects any changes that occurred between the projects procurement planning to SDLC implementation phase. A solution architecture approach is not effective without a mechanism for a third-party to validate the information provided and to verify that each Solution Architecture deliverable is a true and complete representation of the system developed.
8.1 Validation and Verification Process for New Development Projects

As each project phase is completed, the templates outlined in the OSI SAF must be completed by the Solution Architect. These EA deliverables must be reviewed by the project team for completeness before being sent to the project’s Independent Validation and Verification (IV&V) team. The Solution Architect or project team can request consultation from the OSI EAO for any assistance that might be needed to help prepare the Solution Architect for the IV&V process. Once the documentation is received by the IV&V team, it is reviewed for completeness and accuracy in order to identify any informational gaps. Approval of the documentation signifies the completion of the architectural deliverables for the Project.

Figure 7: Verification and Validation Cycle

<table>
<thead>
<tr>
<th>Step</th>
<th>Role</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solution Architect</td>
<td>Identifies Document Templates for the corresponding SDLC Phase</td>
</tr>
<tr>
<td>2</td>
<td>Solution Architect</td>
<td>Completes and Submits the Documents to IV &amp; V</td>
</tr>
<tr>
<td>3</td>
<td>IV &amp; V Team</td>
<td>Reviews documents for completeness</td>
</tr>
<tr>
<td>4</td>
<td>IV &amp; V team</td>
<td>Approval = Deliverable Complete Denial = Submit Gap Analysis to Solution Architect</td>
</tr>
<tr>
<td>5</td>
<td>Solution Architect</td>
<td>Submit completed framework to OSI Enterprise Architecture Office</td>
</tr>
</tbody>
</table>

Table 2: IV&V Task/Role Matrix

8.2 Validation and Verification Process for Maintenance & Operations

As part of the change control process, the documents outlined in the OSI SAF must be updated and in some cases developed to reflect system changes during the solution’s maintenance and operations phase. The intention is to maintain the solution architecture’s documentation, assess and reduce the risks associated with system or software changes, and identify opportunities for integration and reuse.
9 REFERENCES

The following references were used in the preparation of this document.


Appendix A - SAF TOOLKIT

The SAF toolkit will be published in a separate document.
## Appendix B - Acronyms and Glossary

<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
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<tbody>
<tr>
<td>BRM</td>
<td>Business Reference Model</td>
</tr>
<tr>
<td>CEAP</td>
<td>California Enterprise Architecture Program</td>
</tr>
<tr>
<td>DRM</td>
<td>Data Reference Model</td>
</tr>
<tr>
<td>EA</td>
<td>Enterprise Architecture</td>
</tr>
<tr>
<td>FEAF</td>
<td>Federal Enterprise Architecture Framework</td>
</tr>
<tr>
<td>FEAP</td>
<td>Federal Enterprise Architecture Program</td>
</tr>
<tr>
<td>NASCIO</td>
<td>National Association of State Chief Information Officers</td>
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<tr>
<td>IV&amp;V</td>
<td>Independent Validation and Verification</td>
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<td>OSI</td>
<td>Office of Systems Integration</td>
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<tr>
<td>PLC</td>
<td>Project Life Cycle</td>
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<tr>
<td>SAF</td>
<td>Solution Architecture Framework</td>
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<td>SDLC</td>
<td>Systems Development Life Cycle</td>
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<tr>
<td>SRM</td>
<td>Service Reference Model</td>
</tr>
<tr>
<td>SME</td>
<td>Subject Matter Experts</td>
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<tr>
<td>TRM</td>
<td>Technical Reference Model</td>
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<tr>
<td><strong>Glossary</strong></td>
<td></td>
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<tr>
<td>---------------------------------</td>
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<tr>
<td><strong>Architecture Framework</strong></td>
<td>A combination of structured processes, templates, and governance that facilitate the documentation of an architecture in a systematic manner.</td>
</tr>
<tr>
<td><strong>Artifact</strong></td>
<td>The whole of the individual pieces of data captured on a template. Each populated architecture document is considered an artifact. Each Architecture Blueprint contains multiple artifacts. Artifacts constitute any object, or work product that is developed as a component of the enterprise architecture. Artifacts include trends, principles, mission, goals, objectives, strategies, capabilities, processes, process steps, entities, attributes, relationships, subject areas, application components, applications, databases, etc.</td>
</tr>
<tr>
<td><strong>Best Practices</strong></td>
<td>Trends and approaches that are successful at providing services and information over time.</td>
</tr>
<tr>
<td><strong>Blueprint</strong></td>
<td>The dynamic content of a given architecture that is captured utilizing standardized, structured processes and templates.</td>
</tr>
<tr>
<td><strong>Business Solution</strong></td>
<td>The processes and procedures that resolve a business challenge. A business solution extends beyond an application or technology solution to give a full view of changes to a business process and organization.</td>
</tr>
<tr>
<td><strong>Business Reference Model</strong></td>
<td>&quot;The Business Reference Model is a function-driven framework for describing the business operations of the California State Government independent of the agencies that perform them.&quot;</td>
</tr>
<tr>
<td><strong>Enterprise</strong></td>
<td>Represents an organization in total, including all subordinate entities, encompassing corporations, small businesses, non-profit institutions, government bodies, as well as other kinds of organizations.</td>
</tr>
<tr>
<td><strong>Enterprise Architecture</strong></td>
<td>Enterprise architecture defines an enterprise-wide, integrated set of components that incorporates strategic business thinking, information assets, and the technical infrastructure of an enterprise to promote information sharing across agency and organizational boundaries. The Enterprise Architecture is supported by Architecture Governance and the allied architectures of, Business, Information, Technology and Solution Architectures</td>
</tr>
<tr>
<td><strong>Framework</strong></td>
<td>The combination of the templates and structured processes that facilitate the documentation of the architecture in a systematic and disciplined manner.</td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>A technique with a set stages of distinct, structured rules of application and a set of heuristics for judging when the various stages are complete. A methodology incorporates a management process in addition to the technical process in the determination of a workable solution.</td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>The graphical representation or simulation of a process, relationship or information, along with a narrative that supports the diagram/s.</td>
</tr>
<tr>
<td><strong>Principle</strong></td>
<td>A statement of preferred direction or practice. Principles constitute the rules, constraints and behaviors that a bureau, agency or organization will abide by in its daily activities over a long period. Business practices and approaches that the organization chooses to institutionalize to better all provided services and information.</td>
</tr>
<tr>
<td><strong>Repository</strong></td>
<td>An information system used to store and access architectural information, relationships among the information elements, and work products.</td>
</tr>
<tr>
<td><strong>Solution Architect</strong></td>
<td>An individual responsible for developing solution architecture frameworks and solution set designs. The Solution Architect's primary role is to translate what is required to run the business (from the Business and Information Architecture gaps and migration strategies) into actual design specifications and models that can be supported and fulfilled by components within the Technology Architecture.</td>
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### Glossary cont..

| **Solution Architecture** | An architecture within EA that guides the solution architect in the design of a particulate solution set. For each solution set, Solution Architecture assists in:
| | • The identification of business requirements
| | • The determination of the design specifications necessary to deliver the business requirements
| | • The development of the solution set design. Integrating designs based on details with the Business, Information and Technology blueprints |
| **Solution Architecture Model** | The graphical representation of concepts to portray a desired future state of a business solution, as well as an undesirable current state, which is used for communicating, analyzing, testing, simulating, or exploring options. |
| **Tool-Kit** | A guide to develop and define a Solution Architecture. It includes process models and templates with examples. |