Attachment G2 - Project Management Services and Deliverables

Part 1, Project Management Approach (PMA)

Part 2, Project Management Statement of Work (SOWs)

Part 3, Project Management Contract Deliverable Item List Descriptions

The following change orders have revised this Rider:

AMEND #	CHANGE ORDER NUMBER
1	CR-00038
2	CR-00022
3	None
4	CR-00076, CR-00082
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	CR-2-01157

3A: Project Management Approach (PMA DID)

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Volume 1, FINAL

Document Review and Change Summary			
Version Number	**Issue Date**	**Author(s)**	**Brief Summary of Changes from Prior Version**

Table of Contents

PART 1 – PROJECT MANAGEMENT APPROACH 6

3A.1 INTRODUCTION 6

3A.1.1 Purpose 6
3A.1.2 Document Overview 6
3A.1.3 Definitions 8

3A.2 REFERENCED DOCUMENTS 9

3A.2.1 Introduction 9
3A.2.2 Referenced Documents List 9

3A.3 OVERVIEW OF REQUIRED WORK 10

3A.3.1 Introduction 10
3A.3.2 Project Management Methodology and Approach 11
3A.3.3 Major Project Management Deliverables 16
3A.3.4 Project Management Objectives 18
3A.3.5 Approach to Integration Management 19
3A.3.6 Conclusion 21

3A.4 CHANGE REQUEST MANAGEMENT 22

3A.4.1 Introduction 22
3A.4.2 Key Terms 22
3A.4.3 Development of Change Request Management Process 23
3A.4.4 Change Request Management Process Overview 24
3A.4.5 Integration with Quality Management 25
3A.4.6 Status Reporting 25
3A.4.7 Conclusion 25

3A.5 PARTNERING 27

3A.5.1 Introduction 27
3A.5.2 Setting the Context for CCSAS Program Partnering 28
3A.5.3 Partnering Philosophy 30
3A.5.4 Collaboration 32
3A.5.5 Communications 35
3A.5.6 Conclusion 40

3A.6 CONTRACTOR TEAM MANAGEMENT 41

3A.6.1 Introduction 41
3A.6.2 Contractor Team Management Approach 41
3A.6.3 Conclusion 47

3A.7 COST/SCHEDULE MANAGEMENT 49

3A.7.1 Introduction 49
3A.7.2 Establishing the Planning Framework 49
3A.7.3 Project Planning and Control Approach 53
3A.7.4 Initial Planning Activities 55
3A.7.5 Collaborative Planning Process 57
3A.7.6 Monitoring and Controlling Progress 59
3A.7.7 Conclusion 63

3A.8 STAFFING MANAGEMENT 64

3A.8.1 Introduction 64
3A.8.2 Staffing Approach 64
3A.8.3 Staffing and Time Estimating 65
3A.8.4 Approach to Acquiring & Retaining Skilled Staff 66
3A.8.5 Approach to Training New Staff 67
3A.8.6 Approach to Identifying and Mitigating Related Risks 67
3A.8.7 Conclusion 68

3A.9 RISK MANAGEMENT 70

3A.9.1 Introduction 70
3A.9.2 Organization of Alliance Risk Management Program 71
3A.9.3 Overview of Alliance Risk Management Process 74
3A.9.4 Phases of Risk Management Process 76
3A.9.5 Approach to Risk Orientation and Training for Project Staff 81
3A.9.6 Conclusion 81

3A.10 QUALITY MANAGEMENT 83

3A.10.1 Introduction 83
3A.10.2 Approach to Quality Management 83
3A.10.3 Quality Management Organization 86
3A.10.4 Putting Principles into Practice 88
3A.10.5 Verifying Product Quality 89
3A.10.6 Relationship to Technical Quality Management 90
3A.10.7 Quality Metrics 91
3A.10.8 Conclusion 95

3A.11 ISSUE AND ACTION ITEM MANAGEMENT 96

3A.11.1 Introduction 96
3A.11.2 Approach to Issue Management 96
3A.11.4 Overview of Alliance Issue Management Process 102
3A.11.4.6 Drafting the Issue Response Package 106
3.A.11.5 Approach to Issue Orientation and Training for Project Staff 107
3A.11.6 Action Item Control 107
3A.11.7 Conclusion 108

PART 2 - PROJECT MANAGEMENT STATEMENT OF WORK 109

PART 3 – PROJECT MANAGEMENT CONTRACT DELIVERABLE ITEM LIST DESCRIPTIONS 116

PART 1 – Project Management Approach

3A.1 Introduction

The alliance is pleased to propose the following Project Management Approach that promotes and supports the optimal realization of the CCSAS CSE project's goals and objectives.

3A.1.1 Purpose

The purpose of this response is to detail how the alliance will fulfill the requirements for the Project Management Approach (PMA), Deliverable Item Description, Project Management Approach.

Project Management is the application of knowledge, skills, and tools to verify that the various elements of a project are properly coordinated and executed to achieve defined objectives. It involves making tradeoffs among competing objectives and alternatives in order to meet stakeholder needs and expectations. The project management approach we will employ is one that is based on IBM's World Wide Project Management Method (WWPMM), which has been used and refined over the past 25 years in many different human services, commercial, and technical environments throughout the United States and internationally. The alliance has reviewed each of your project management plans in detail, and has tailored our methodology to the unique requirements of the CCSAS CSE project.

The approach to project management described in the following sections is a series of steps designed to guide a team from project initiation to implementation and continuing maintenance. Our project management process is really a process of managing people within a project - not just one of completing forms and counting hours against completed tasks.

3A.1.2 Document Overview

This document describes the project management methodology that will be used for the CCSAS CSE project. The methodology we have selected is a customized version of the IBM World Wide Project Management Method (WWPMM), reviewed by other project management professionals from the alliance and blended with additional best practices from the other alliance partners.

3A.1.2.1 PMA Contents

Our PMA contains sections for the following topics related to our approach:

3A.1: Introduction
3A.2: Referenced Documents
3A.3: Overview of Required Work
3A.4: Project Scope Change Management
3A.5: Partnering
3A.6: Contractor Team Management
3A.7: Cost/Schedule Management
3A.8: Staffing Management
3A.9: Risk Management
3A.10: Quality Management
3A.11: Issue and Action Item Management
3A.12: Appendices

3A.1.3 Definitions

See Rider G, Attachment G-1, Part 4 Acronyms and Glossary

3A.2 Referenced Documents

3A.2.1 Introduction

The external documents listed below were used as reference material during the preparation of the PMA portion of this response. As appropriate to the individual reference, we have provided the number, title, revision, date, and source of these external documents referenced in the PMA.

3A.2.2 Referenced Documents List

IBM, World Wide Project Management Method, Release 1.2, 2001[1]

IEEE Standard 1058-1998, "Standard for Software Project Management Plans", Institute of Electrical and Electronics Engineers, Inc.

ISO 9000-3:1997, "Quality Management and Quality Assurance Standards --- Part 3: Guidelines for the Application of ISO 9001:1994 to the Development, Supply, Installation and Maintenance of Computer Software, 1997, International Organization for Standardization.

ISO 10006:1997, "Quality Management Systems-Guidelines to Quality in Project Management", 1997, International Organization for Standardization.

A Guide to the Project Management Body of Knowledge – 2000 Edition ("PMBOK Guide –2000 Edition"), Project Management Institute, Inc.

Capability Maturity Model for Software, Version 1.1, 1993, Software Engineering Institute Report (CMU/SEI-93-TR-04).

[1] The Worldwide Project Management Methodology is proprietary to IBM.

3A.3 Overview of Required Work

Our project management methodology is in harmony with the best practices described by IEEE and the Project Management Institute. It provides the framework for timely and accurate reporting of project status, as well as proactive management of quality and risks throughout the project.

3A.3.1 Introduction

Whether large or small, long or short in duration, complex or straightforward in organization or technical implications, all projects share common characteristics. There are several definitions of a project. For example:

- According to PMI: "A temporary endeavor undertaken to produce a unique product or service, within a specified scope. Operations (such as manufacturing) and projects differ primarily in that operations are ongoing and repetitive, while projects are temporary and unique."
- According to ISO 10006: "A unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirement, including the constraints of time, cost and resources."

Both of these definitions emphasize the uniqueness and temporary nature of projects. Projects are not "business as usual". The timeframes and rate of change differentiate projects from the day to day activities that support the mission of the business entity, and the unique, temporary nature of projects require special management techniques that build on those used for "business as usual", but are extended to support the more dynamic environment of projects.

Project management concepts are basic: planning, organizing, staffing, directing, coordinating, controlling, measuring, reporting, and evaluating. These concepts apply to large tasks as well as small tasks. The changes that the CCSAS project is undertaking require a great degree of expertise and the ability to understand complex human services and technical issues, such as data base approaches, networking, Internet access, distributed processing, and program integration. Equally important, they require project skills to effectively deal with multiple users having different and perhaps conflicting interests, goals, and priorities. This dictates that the project management approach we use must apply to managing the process of change that:

- Is innovative;
- May operate within critical time schedule constraints;

- Successfully impacts ongoing systems involving people, procedures, information and equipment;
- Economically provides improvements and meets the real needs of users;
- Addresses technical, economic, regulatory and political implications;
- Is flexible in order to deal with changing priorities and time frames; and
- Encompasses both the operational and technical environments.

Effective project management is essential to the development and implementation of a large-scale system like the CSE application. Even the best-planned project will fail if it is not properly managed. It is the responsibility of the State and the alliance's project management team to maintain a project that progresses on schedule, stays within the established scope and budget, and meets the project expectations and goals.

The alliance's dedicated, qualified, project management professionals using business processes, provide our clients with project management capabilities that are second to none.

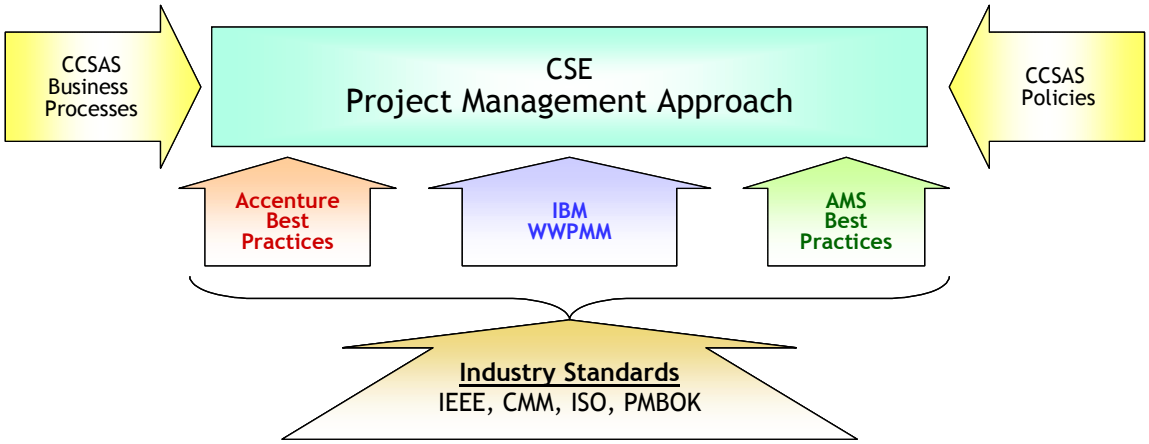
The alliance has long recognized the importance of project management when it comes to delivering successful projects to our clients. Over the past several years, the alliance partners have invested in equipping our many experienced project managers with the necessary methods, education and tools to successfully meet our clients' business needs. Integrated methods, business processes, and policies that are supported by a cadre of qualified project management professionals provide our clients with several key project benefits:

- Risk is managed more effectively because the project is properly defined, within the business environment, with primary risks clearly identified and managed.
- Productivity is increased by a clear definition of work roles and deliverables resulting in less unproductive time, faster startup through the reuse of intellectual assets, and less rework.
- Blended project teams can form quickly with common terminology for easier and clearer communication.
- Client satisfaction is increased because our clients have clearer visibility of the plan and actual performance against the project objectives throughout the whole project life cycle.

3A.3.2 Project Management Methodology and Approach

There is no definitive industry standard for project management. Nevertheless, the alliance's Project Management Approach is consistent with internationally accepted project management standards. For example, all elements of the Project Management Institute's Project Management Body of Knowledge (PMBoK) are fully addressed in the Project Management Approach. Additionally, the WWPMM is consistent with the IEEE project management guidelines.

The alliance manages projects by understanding and adapting to meet our clients' needs



and environment, primarily at the method and business process level. The result is a structured approach to managing projects as shown in Figure 3A.3-1.

Figure 3A.3-1 Creating the CCSAS CSE Project Management Approach *The project management approach includes or references elements from business processes and policies, and is built upon the foundation of alliance management best practices and industry standard*

One of the key strength's of the alliance's management approach is taking the best of all of our management experiences and tailoring the WWPMM to meet project needs. In the diagram above, the Project Management Approach for the CCSAS CSE project reflects the integration of methodology, business processes, and policies for this specific project. Project success is much more likely with high levels of integration across a common management framework.

Our Project Management Approach includes tools and processes that allow for consistent, efficient and effective project management. The methodology was designed based upon the principles set forth in the Project Management Institute's Project Management Body of Knowledge (PMBoK) and by combining the best practice procedures from hundreds of past projects. WWPMM allows our Project Managers to proactively monitor the project's progress, predict results, and evaluate risks. The goal of the WWPMM is to provide repeatable, quality solutions that will ultimately result in successful projects and satisfied clients. This approach offers a consistent, quality approach to managing successful projects and achieving high client satisfaction. Additionally, our breadth and depth of knowledge and experience results in reduced risk, high quality performance and ultimately, the success of the project.

This methodology has been developed so that it can be tailored to each unique project environment. Prior to contract award, our management staff will continue to tailor the methodology to align with the methodology currently in use at FTB and DCSS, aligning best practices and tools from both methodologies. The resulting concepts, tools, and techniques will be shared with every member of the CCSAS CSE project and will become a way of life for the project staff. This will provide the structure, focus, and discipline needed to successfully deliver a project of this size and complexity.

Project Management is the application of knowledge, skills, and tools to verify that the various elements of a project are properly coordinated. It involves making tradeoffs

among competing objectives and alternatives in order to meet the stakeholder's needs and expectations. The graphic in Figure 3A.3-2 depicts the primary project management functions that are essential to the development and implementation of a large-scale system like the CCSAS CSE project. Even the best-planned project will fail without effective ongoing execution and controls. It is the responsibility of the project management team to maintain a project that progresses on schedule, stays within the established scope, and meets the expectations of our stakeholders.

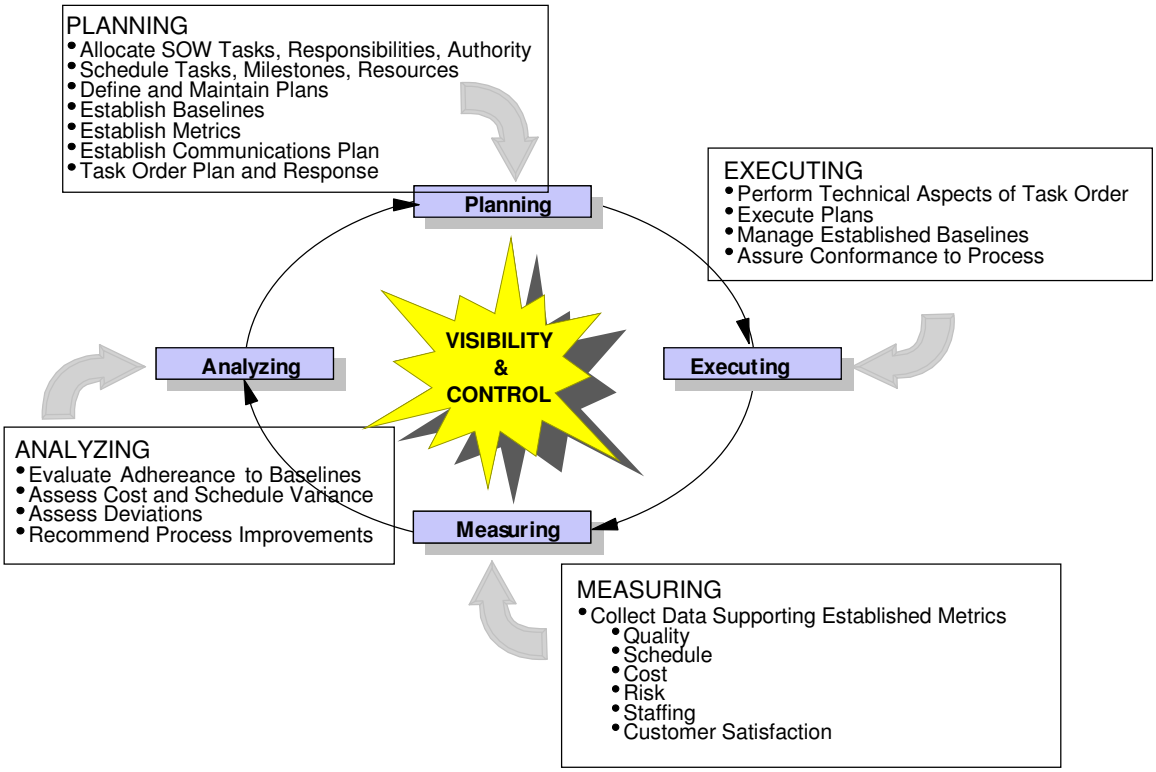


Figure 3A.3-2 Project Management Functions *The project management functions of planning, executing, measuring, and analyzing are essential to manage projects like the CSE project.*

Project management goes beyond managing day-to-day activities of the project team. In addition to ongoing monitoring and control, there are four management objectives that are paramount to project success:

- High-quality work: Deliver high quality end products, address business objectives, and meet end user requirements.
- On-time delivery: Complete deliverables on schedule.
- Effective communication: Maintain timely and accurate communication to project participants throughout the entire project.
- Aggressive and proactive management: Identify potential problems and risks before they develop, and initiate appropriate corrective actions and mitigation strategies.

Project management involves creating a well-defined baseline scope, monitoring and communicating the project's progress and status, facilitating timeliness and quality of deliverables, and identifying and resolving issues before the project's success is

affected. Our Project Team is experienced in managing all aspects of large-scale development and implementation projects. Many companies have small to medium-scale project management experience. The alliance has significant expertise in large-scale, complex, interdependent projects. Our extensive experience allows us to anticipate potential risks and take corrective action as soon as possible so that project scope and schedule are not affected. This is especially challenging for large-scale projects like the CCSAS CSE project.

3A.3.2.1 Introduction to the Project Management Method

The alliance's approach to managing projects includes four key tenets:

There are four key tenets to the Project Management Method:
• The project management system;
• Project organization and responsibilities;
• The project phases; and
• The project management processes.

These tenets, which permit continuous coordination between the alliance and our clients, provide the basic structure of the project and establish the roadmap for a successful journey to project completion. Each of these tenets is described in the subsections that follow.

3A.3.2.1.1 Project Management System

The project management system is the means by which an individual project is planned, managed and controlled. The project management system established for the CCSAS CSE project will support the following goals:

- the project objectives, and how these objectives are to be met, documented, and understood;
- that the specified policies of the sponsor and delivery organization are met;
- the way in which the project will operate is defined and communicated; and
- the people and other resources required to complete the project are committed.

The key elements in the project management system are:
• the plans describing the work to be performed and how the project will operate;
• the procedures which standardize key tasks so they are performed in a systematic and visible manner;
• the records which the project manager uses to control status and events;
• the project management activities that are used to plan, control and react to day to day situations; and
• project management resources and tools.

The project management system also recognizes the environment in which the work is set and the technical content of the project. In defining and running the project, the

project manager must work closely with the business processes operated by the alliance and by the State of California. These business processes come in two forms:

- the basic business processes, such as approval processes, the resource allocation processes, and the processes used to contract with suppliers; and
- the policies that apply to the project, such as levels of delegated authority and decision-making authority.

3A.3.2.1.2 Project Organization and Responsibilities

Because of the temporary nature of projects, defining and documenting the responsibilities of the various players is key to success. Focusing on organization and responsibilities verifies that:

- key management responsibilities are documented and understood by all stakeholders;
- the relationships between key stakeholders are established in a way which will maximize project success; and
- key stakeholders are given the authority to enable them to discharge their responsibilities in a way that will maximize success.

3A.3.2.1.3 Project Phases

Project phases are primarily related to the content of the work needed to complete the project. The project manager uses phases in order to:

- Verify that work products and deliverables are produced in a logical way;
- break the project down over time into manageable pieces;
- minimize risks;
- provide points at which plans and estimates can be revised and reset, based on completed work; and
- enable management approval to be confirmed or the project to be realigned based on completed work.

Project Launch Activities Are A Critical Success Factor

Many projects succeed or fail at the very beginning, before any technical work is done. The alliance will initiate specific project launch activities that will assist the management team in reducing the time for a successful start-up and increase the chances for a successful delivery. During this period, the Project Management Plan (CDL PM 001) will be revised and enhanced with the feedback from the CCSAS project staff. Many of the templates and procedures used in ongoing monitoring and control will be developed and communicated to the project staff. These templates include the Project Closeout Plan (CDL PM 002), the Post Implementation Evaluation Report (CDL PM 003), Meeting Agendas (CDL PM 004), Meeting Minutes (CDL PM 005), Monthly Status Report (CDL PM 006), Project Management Review Agendas (CDL PM 007), and Project Management Review Minutes (CDL PM 008).

The subsequent sections of our Project Management Approach and our Technical Management Approach assume that these Project Launch activities take place within the

first 30 to 60 days of the CCSAS CSE project. This will facilitate the adoption of project management best practices and tools as a part of the Project Management Plan. The details of the project phases are provided in the Technical Management and Business Solutions sections of this response.

3A.3.2.1.4 Project Management Process

The project management process is designed to focus on the following goals:

- each project is based on a good business justification;
- the project shape, scope and objectives are understood and documented before detailed plans are drawn up;
- a comprehensive project management system is defined and implemented before significant effort is expended on the project; and
- appropriate management approvals are granted at key checkpoints in the project.

The Project Management Plan (CDL PM 001) will document the project management processes to be used on the CCSAS CSE project and will comprise the project management system. It is the final outcome of the tailoring and customization of the alliance's project management approach to the needs of the CCSAS CSE project and accomplishment of its goals and objectives.

3A.3.3 Major Project Management Deliverables

As outlined in the SCP, there are fifteen required Project Management deliverables for the CCSAS CSE project. Outlined in the table below is the revised list of Project Management deliverables. Each of these is summarized in Attachment 3K.

CDL #	Project Management Deliverable Name
PM 001	Project Management Plan
PM 002	Project Closeout Plan
PM 003	Post Implementation Evaluation Report (PIER)
PM 004	Deleted
PM 005	Deleted
PM 006	Monthly Status Report – This CDL became a Work Product with CR00082
PM 007	Deleted
PM 008	Deleted
PM 009	Project Schedule – This CDL became a Work Product with CR-02-00124a
PM 010	Cost/Schedule Variance Report – This CDL became a Work Product with CR-02-00124a
PM 011	Work Breakdown Structure
PM 012	Risk Management Plan
PM 013	Quality Management Plan
PM 014	Quality Management Activity Report – This CDL

	became a Work Product with CR00082
PM 015	Deleted
PM 016	Issue Management Plan

3A.3.4 Project Management Objectives

The alliance selected these objectives because 1) they are compatible with our corporate cultures and the work that we do; 2) they are consistent with international standards and 3) they work.

We have four basic objectives in managing a project such as the CCSAS CSE project. We believe that these objectives are the foundation of any sound project management methodology and must be fully understood before control methods and procedures can be defined and implemented.

- High-quality work: Deliver high quality end products, address business objectives, and meet end user requirements.
- On-time delivery: Complete quality deliverables on schedule.
- Effective communication: Maintain timely and accurate communication to project participants throughout the entire project to promote collaboration.
- Aggressive and proactive management: Identify potential problems and risks before they develop, and initiate appropriate corrective actions and mitigation strategies.

High Quality Work

The alliance achieves high quality work by employing four principles in our approach to quality management:

- Define quality objectively;
- Do it right the first time;
- Eliminate defects early; and
- Use data to manage quality.

Details of our approach to quality management can be found in section 3A.10.

On-time Delivery

Effective and timely project planning and control are essential for a project of the scale and complexity of CCSAS CSE. Our project management team is dedicated to exercising the rigors of authority, responsibility, and accountability to achieve on-time delivery of quality deliverables. To achieve this objective, the alliance project management team brings a structured approach that is founded on rigorous task planning, careful scope management control processes, and the adherence to schedule management. Details of our approach can be found in section 3A.7.

Effective Communication

The overall CCSAS project has a broad and diverse community of stakeholders. As a result of the size and widespread impact of the CCSAS CSE project, effective communication is essential to project success. In order to develop and facilitate timely

and appropriate communications, a Communications Management Plan is required. The Communications Management Plan will be a part of the overall Project Management Plan.

Aggressive and Proactive Management

Strong, consistent, day-to-day proactive management is the foundation for a successful project. The alliance is committed to applying proven and sound project management techniques as outlined in the remaining sections of the Project Management Approach and Project Management Plan attachments. These techniques represent our best-of-breed methodologies and approaches from our firms and thousands of successful projects worldwide.

3A.3.5 Approach to Integration Management

Projects the scale of CCSAS CSE need more than "Project Management 101". The integration across diverse teams, blended organizations (mix of alliance, subcontractor, and CCSAS staff), and geographically dispersed locations is essential to minimizing project risk while achieving project goals and objectives.

Common management processes support the integration of project scope change management, risk management, quality management and issue management. In Figure 3A.3-3, we depict the interrelationship between these project management processes.

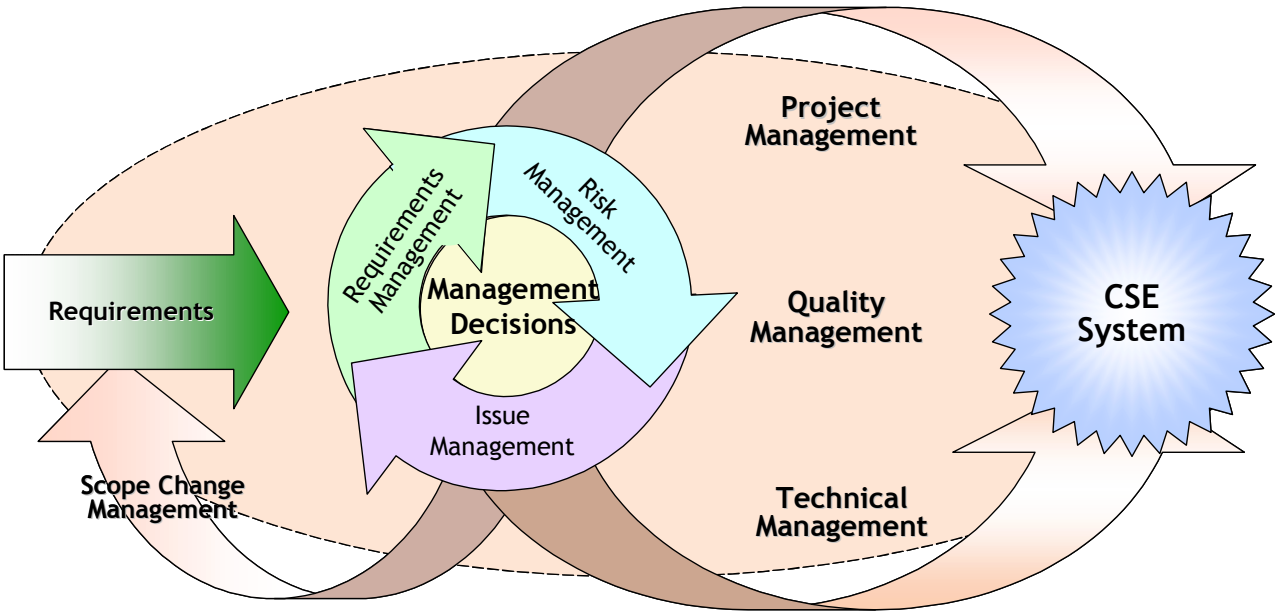


Figure 3A.3-3 CCSAS CSE Integrated Management – ***Integrated management processes in alignment with management decision making are critical to project success.***

- Requirements Management - Managing requirements is one of the most challenging and important parts of a large, complex project. The initial set of requirements must be clear, accurate, and documented. A formal process must be in place to evaluate and approve any proposed changes to those requirements. And tools and techniques must be in place to analyze the impact of a proposed change and manage the various versions of work products affected by a change.
- Scope change management - in the Work Breakdown Structure and Project Schedule, the necessary activities, tasks and dependencies are determined by the technical management approach. The alliance uses a rigorous scope change process to balance responsiveness to overall CCSAS needs and changing program conditions while protecting project quality, cost and schedule commitments.
- Issue and action management - provides a standardized method for dealing with issues and actions, focusing on reviewing them in the context of their effect on the entire project, not just on the immediate need. Unresolved action items may turn into issues. Proactive issue management can help prevent risks, and therefore prevent negative project outcomes and avoid greater costs in impact prevention and fire fighting. Our approach to issue management provides an integrated process focused on identifying, analyzing and responding to project issues from a multitude of sources. Proper issue management, especially prompt identification and resolution of issues, will be key to avoiding past mistakes.
- Risk management - the processes needed to identify, assess, document and manage risks must take into account those necessitated by the technical elements of the project. An integrated approach to both project and technical risk management facilitates coordination of risk mitigation strategies and contingency planning.
- Quality management – Quality activities are integrated throughout our project work and technical management approach. We use specific quality management activities to focus on improving project productivity and project quality, as well as measuring compliance with project objectives and progress toward them.

Each of the subsequent sections of this response outlines our approach to each of these areas and indicates how the linkages are made. Additional details are described in the initial version of the Project Management Plan.

The alliance will be using PMOffice™, a web-based integrated management tool suite for project management processes that facilitates the integration of the project management knowledge areas. PMOffice™ supports the following management goals:

- More effective communication, which reduces project risk;
- Faster and more effective project decisions with online viewing and escalation;
- Enhanced focus on project issue and actions with status tracking;
- Visibility to project progress and deliverables for acceptance;
- Effective knowledge transfer by providing implementation history and current status to new team members; and
- Capture of project documentation in one, centralized, easily accessible location.

Additional details regarding PMOffice™ can be found in our draft Project Management Plan. The State will have varying levels of access to PMOffice depending on the nature of the individual roles performed by State staff.

Control mechanisms for the integration of project scope change management, risk management, quality management and issue management include the establishment of the baseline metrics used to measure cost, schedule, risk and quality of the project. The following metrics are indicative of the types of metrics that will be established and captured in PMOffice™ as part of defining the WBS and Project Schedule:

- Percent of tasks started/completed on time;
- Late tasks;
- Estimates to complete;
- Milestone status, including a trend analysis of planned to actual dates;
- Earned Value, using hours for those tasks that are included in the fixed price effort;
- Earned Value, using dollars and hours for those tasks that are a result of scope change.

3A.3.6 Conclusion

We are fully committed to implementing the Project Management Method for the CCSAS CSE project. First, *risk is minimized* because there is more accurate planning, less ambiguity and controlled attention, monitoring and intervention to stay on plan and to control change. Second, *productivity is increased*. This is the result of having a clear definition of work roles and deliverables, lower unproductive time and less re-work, as well as having a consistent, highly-tuned through experience, worldwide approach. Finally, *client satisfaction is increased* because our clients have a clear expectation of the plan and actual performance of the project against the plan throughout the whole project life cycle, as well as an active role and responsibility in anticipating and resolving challenges, changes and outcomes.

3A.4 Change Request Management

Effective scope management and avoiding scope creep are the key differentiators between success and failure on a project. Change Request Management is the vehicle that adds clarity and structure to the planning and managing of changes.

3A.4.1 Introduction

Planning is the key to the success of any project. Understanding the agreed scope and defining the work at a sufficient level of detail so as to understand what needs to be done, when it needs to be done, and who needs to do it is the cornerstone to the development of an executable project plan. Without understanding the work to be done, the Contract Amount, the Project Schedule and other elements of the Baseline cannot be managed. Having said that, it is not expected that project plans will be static – change can and will happen over the life of the CCSAS CSE project. Control and management of this change is vital to the project's success and is the function of the Change Request Management process.

Managing modifications to configuration items due to correction of system defects is an important part of managing the project Baseline; however, the defect correction management process is outside the scope of this Change Request Management section. The System Configuration Management Plan (CDL TM 003) and the Problem Resolution Management Plan (CDL TM 010) describe the process for managing modifications due to defect corrections, referred to as defect clearance in Rider D.

3A.4.2 Key Terms

As used in this Change Request Management section, the following terms have the meanings described:

3A.4.2.1 "Baseline" means the following, as each may be amended from time to time during the term of the Contract through the Change Request Management process:

(a) the Contract Amount, defined in and payable as described in Rider D;
(b) the Specifications, defined in Rider G;
(c) the Equipment, described in Rider B
(d) the COTS Software described in Rider C;
(e) the Services described in Rider G, including the Project Management Services (including the applicable SOWs) and the Technical Management Services (including the applicable SOWs);
(f) Major Milestones contained in Section 6 of this Rider G until superceded by the Accepted Project Schedule, and then the Accepted Project Schedule;

(g) Knowledge Management Training, described in Rider H

3A.4.2.2 "Change Control Board" means the State decision-making body responsible for approving, deferring or rejecting Change Requests within its scope of authority as defined in the CCSAS Project Charter based on impact analyses prepared by the Technical Change Board. The Change Control Board is chaired by the State and consists of a State decision-maker and appropriate representatives from the State and Business Partner staff.

3A.4.2.3 "Technical Change Board" means the State and Business Partner decision-making body responsible for analyzing Change Requests, preparing impact analyses and technical alternatives, and approving, deferring or rejecting Change Requests within its scope of authority as defined in the Project Management Plan (CDL TM 001). The Technical Change Board is co-chaired by the State and Business Partner and consists of one State and one Business Partner decision-maker and appropriate representatives from the State and Business Partner staff.

3A.4.2.4 "Change" means any material modification, revision, addition, or deletion to the Baseline.

3A.4.2.5 "Change Request" means the formal written request submitted by the State or Business Partner to modify, revise, add to, or remove from the Baseline.

3A.4.2.6 "Change Order" means the formal written document between the State and the Business Partner, describing in detail the Change and other required elements. A Change Order can be either a "proposed Change Order" or a "Change Order". The "proposed Change Order is prepared by the Business Partner, and meets the requirements described in the Accepted Change Request Management Process; the Change Order is the final Change Order prepared by the State, incorporating the Business Partner's required portions, as supplemented by the State for the purpose of submitting the Change Order to the appropriate State and Business Partner officials for formal approval.

3A.4.2.7 "Change Log" means the mechanism used by the Change Control Board or the Technical Change Board to track the status and disposition of Change Requests and Change Orders.

3A.4.2.8 "Change Request Management process" means the formal process agreed to between the parties and reflected in the Accepted Project Management Plan (CDL PM 001)

3A.4.2.9 “Contract Amount” means the Base Contract Amount plus any approved changes to the Contract Amount.

3A.4.3 Development of Change Request Management Process

The Change Request Management process will provide a mechanism to efficiently manage and incorporate Changes to the Baseline, including the initial Baseline. The

Change Request Management process will balance responsiveness to overall CCSAS needs and changing program conditions while protecting project quality, cost and schedule commitments.

On or before the date specified for delivery in the Project Schedule, the Business Partner will deliver the proposed Project Management Plan (CDL PM 001) which will include, among other items described in the applicable CDL Item Description, the Change Request Management Process. Upon Acceptance, the Change Request Management Process described in the Project Management Plan (CDL PM 001) will supercede the applicable provisions of this PMA.

3A.4.4 Change Request Management Process Overview

This section presents an overview of the Change Request Management Process, and will be superceded by the more particular description to be included in the Project Management Plan (CDL PM 001). The Change Request Management process is launched when the State or Business Partner determines that a Change may be necessary and initiates a Change Request. The State and Business Partner will use the Business Partner provided PMOffice™ as the Change Request management tool. The Change Request information captured in the PMOffice™ tool will provide the basis for communicating proposed Changes, and will be used to maintain the Change Logs.

Typically, Change Requests are first received and processed through the Technical Change Board (TCB), although it is possible for Change Requests to be submitted directly to the Change Control Board (CCB). Change requests submitted directly to the CCB are known to impact the Contract Amount or the Project Schedule, for example Federal or State imposed funding cuts.

If a Change Request is submitted to the TCB, the TCB will conduct an initial impact assessment and determine whether the Change requires approval from the CCB. Entry criteria for the Change Request Management Process include State approval to conduct the initial impact assessment. If the Change exceeds the TCB scope of authority, the TCB will prepare a detailed, written analysis of the impact including an effort estimation, schedule impact, technical impact, and financial impact, within the agreed time frame. Changes submitted directly to the CCB will be referred to the TCB for a detailed impact analysis.

If the Change is within the TCB scope of authority (i.e. technical changes with no cost or schedule implications), the TCB will determine the impact to configuration items, including requirement Baselines. The State and Business Partner must mutually agree to the Change otherwise the Change is submitted to the CCB for disposition.

The TCB will refer the Change Request to the CCB, along with the impact analysis. The CCB will review the written response, and, if the Change is within the CCB's scope of authority as defined in the CCSAS Project Charter, the CCB will approve, reject or defer the Change Request. If the Change Request is approved, the CCB will prepare a Change Order. The Change Order represents the formal agreement between the State and the Business Partner to implement the Change. In accordance with the Project

Charter, those Changes requiring approval of the CCSAS Executive Steering Committee will be referred to that Committee.

Approved Change Orders are prioritized by the configuration management team, consisting of State and Business Partner staff. When prioritizing Changes, the configuration management organization works with group managers to assess the criticality of the Change. As an approved Change Request is implemented, system configuration management and version control processes will synchronize the resulting Changes in work products. For approved Change Orders, the configuration item modification is accepted and baselined by the Configuration Management Repository Custodian.

The Business Partner will review the Changes to ensure that the Change has been implemented in all impacted items documented in the Change Order. If all impacted items have been appropriately updated, the Business Partner completes the Change Order by marking it closed. If any information is incomplete, the Business Partner will forward the missing information to the affected group.

3A.4.5 Integration with Quality Management

As described in section 3A.10 of the proposal, the Quality Management team is responsible for overseeing the Project Management and Quality Management processes and confirming that they are being followed as documented in the Project Management Plan (CDL PM 001) and the Quality Management Plan (CDL PM 013). The Quality Management team will conduct routine reviews to assess how well the project is following the Change Request Management and related processes, and then report on the results in the Quality Activity Report (CDL PM 014).

3A.4.6 Status Reporting

Baseline metrics for the CCSAS CSE project cost and schedule will be contained in, among other things, the Project Schedule. Section 3A.7 Cost/Schedule Management, of this PMA, identifies preparation of schedules and costs, which may, in the discretion of the TCB and the CCB, be used as a part of the impact analysis performed on each Change Request. The Business Partner will conduct an analysis of the frequency of Changes as part of the status reporting process.

3A.4.7 Conclusion

The CCSAS CSE project will inevitably need to deal with Changes. The Change Request Management process must be thoroughly integrated with the management approaches described in this PMA and the TMA.

The benefits derived from effective planning and execution of Change Request Management include the effective maintenance of schedule, cost, quality and product characteristics in balance with responsiveness to changing requirements, business values, resource availability and a better understanding of requirements. Overall, the benefit of effective Change Request Management is the successful delivery of the

project in a timely manner, at the lowest possible cost commensurate with the changing project landscape of resources, priorities and needs.

3A.5 Partnering

The larger the project, the greater the interdependencies and the more critical it is to manage collaboratively.

3A.5.1 Introduction

The partnering approach of the alliance is grounded in two core values: building and maintaining partnerships with our clients through the entire project life cycle and supporting that partnership with the management structures needed to sustain that collaborative relationship. The following management principles characterize the alliance partnering philosophy:

- **Focus on our Client's Goals and Objectives.** We understand the overriding objective of the State – to implement a 21st century child support enforcement program. The alliance team will help make that vision a reality.
- **Establish a Unified Team Based on Trust.** Based on our experience, it is critical that the alliance and the CCSAS project staff establish a close working relationship, characterized by effective and continuing coordination and open, trust-based communication.
- **Maintain Accountability.** The CCSAS project staff, and the alliance Project Executive, project managers, team leaders and staff are empowered and accountable. They are committed to a management approach that provides regular progress and project performance evaluations to CCSAS program leadership based on strict adherence to shared commitments and project goals.
- **Understand the Implementation Complexity.** The alliance project team has extensive experience in the development and implementation of child support solutions. This experience gives us an in-depth understanding of the technical and logistical difficulties associated with the development and implementation process and will enable us to apply lessons learned from other projects to the CCSAS CSE project.
- **Utilize Phased Implementation.** On a larger scale, a major effort such as the CCSAS
  CSE project necessitates segmenting the overall project into manageable projects that may be grouped into phases. This allows the alliance team and the CCSAS project staff to realize interim success while working towards the ultimate goal, and controls the impact of the program on the organization.
- **Use and Maintain Small, Blended Teams.** The alliance considers the most effective way to organize and implement a large project is through the use of multiple small, task-specific teams. The teams will integrate the necessary expertise from the alliance and the CCSAS project staff, as the project warrants.
- **Focus on Benefits.** In addition to traditional management principles, the alliance management team operates with an eye toward maximizing benefits. Such an emphasis will accelerate alliance-CCSAS decisions, and more quickly align project efforts.

We will build upon the relationships with the FTB and DCSS staff we have already formed, the knowledge and California-specific experiences we have gained from past projects, and the insight into the operational vision for CCSAS that the program staff and executives hold. This experience will enable us to begin complex tasks associated with the development and implementation effort without any unnecessary time spent on traditional project initiation activities. As a result, we offer the State the only team that can truly "hit the ground running", and immediately begin the complex tasks related to the CCSAS CSE management, development and implementation effort.

3A.5.2 Setting the Context for CCSAS Program Partnering

Many of the projects, activities and major stakeholders required to make the CCSAS CSE project successful lie outside the control of the alliance management team. As a result, to help make the overall CCSAS Program a success, the alliance needs to work closely with the Project Agent and the Executive Project Director to support the many external activities that may have an impact on the commitments made by the alliance project team. In order to be clear about the key roles and responsibilities across organizations, the alliance suggests the use of a Program Context Diagram.

The Program Context provides a "contract-neutral" view of how the inter-related projects and activities that comprise the CCSAS Program will have a direct impact on California's ability to achieve its business objectives. Our experience has shown that the Program Context provides an excellent framework to stimulate discussion about responsibilities, interdependencies, and the overall approach to integrated management. Specifically, the Program Context can be used to:

- Obtain concurrence among key stakeholders on the definition of the program boundaries
- Confirm Executive Steering Committee membership
- Confirm who should have deliverable sign-off responsibilities
- Determine or confirm who are the go/no-go decision makers for resolution of key issues
- Highlight the projects and activities that will employ common management processes, and those that are outside the direct control of the alliance management team (though still required for ultimate success)

The context diagram clearly identifies who has lead responsibility for each project and activity.

An initial version of the Program Context is presented in Figure 3A.5-1.

CCSAS Program Context

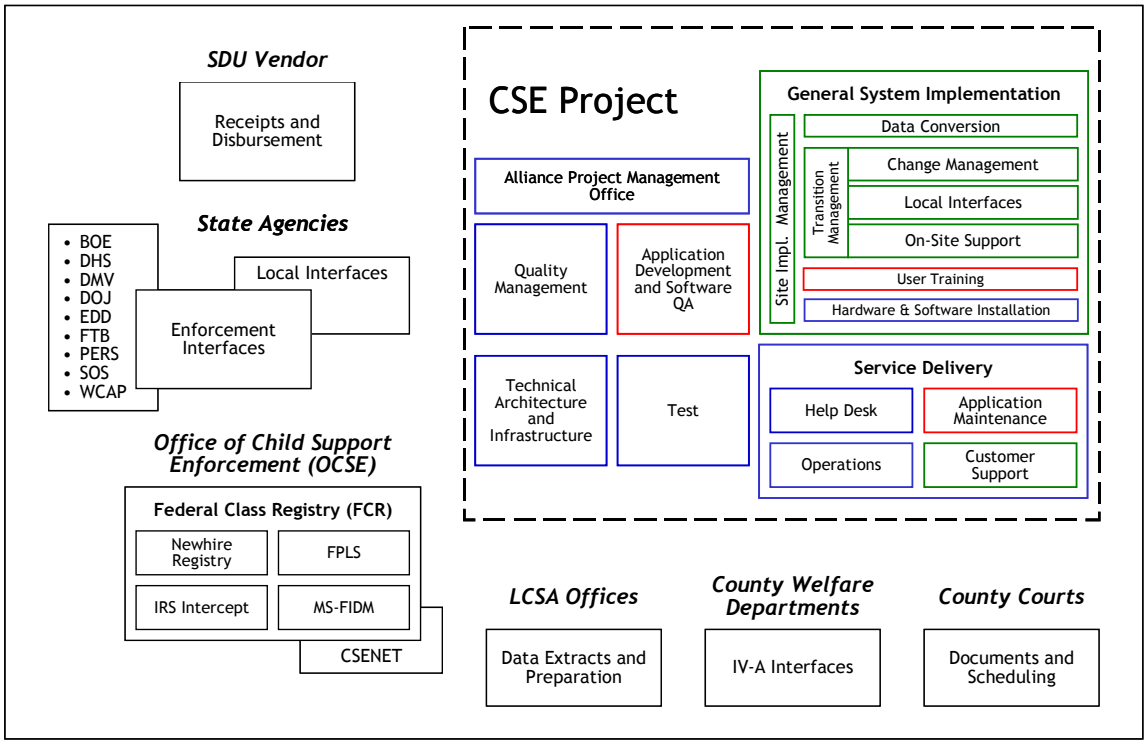


Figure 3A.5-1 CCSAS Program Context – *The CCSAS Program comprises the project work for which the stakeholders are responsible as well as other interdependent activities that may affect the success of the overall program.*

The CCSAS CSE project is comprised of the activities within the dotted box. There are dependencies with other organizations and/or projects, outside the dotted line, that fall within the scope of the overall CCSAS Program. For example, the CCSAS CSE project must conduct testing of the SDU interface with the SDU vendor and work with various agencies to test interfaces. The alliance will take these dependencies into account and involve key representatives from these projects in integrated planning activities. See section 3A.7.5 for a discussion of the collaborative planning process.

The Program Context will help the alliance team and the CCSAS project staff take into account those elements that impact the project schedule internally such as design, development and testing, but also helps account for external dependencies and success factors that can impact the overall progress and effectiveness of the CCSAS Program.

3A.5.3 Partnering Philosophy

> Do the right things…
>
> Do them right the first time.

Applying alliance partnership principles in day-to-day program management and control activities requires thoughtful planning, ongoing and extensive review of work performed, evaluation of many dimensions of progress, and immediate initiation of corrective action. These efforts are not "overhead", but rather are integral to achieving success in a large-scale systems development and implementation such as the CCSAS Program. By working closely with CCSAS stakeholders, the alliance intends to do the right things … and to do them right the first time.

The following functions and activities illustrate some specific joint management activities essential to achieving CCSAS program objectives on time and within budget:

- Providing a common vision and framework for the CCSAS program
- Planning and organizing the work to accomplish program goals and objectives at the project, activity and task level so that cross-group interdependencies are known and planned for
- Establishing and administering appropriate staff resources to bear on tasks and activities, and to provide essential daily guidance and leadership
- Instituting effective communication practices for sharing and disseminating program information
- Measuring and evaluating work products by establishing an internal and external review and approval process
- Instituting effective procedures to manage dependencies and issues, control difficult situations and mitigate potential risks
- Involving key resources in a timely fashion so that decisions are made with appropriate analysis and consideration
- Establishing an effective change control process to monitor program scope and modifications to system requirements
- Establishing a centralized work environment with the appropriate set of tools to maximize the efficiency of the program staff

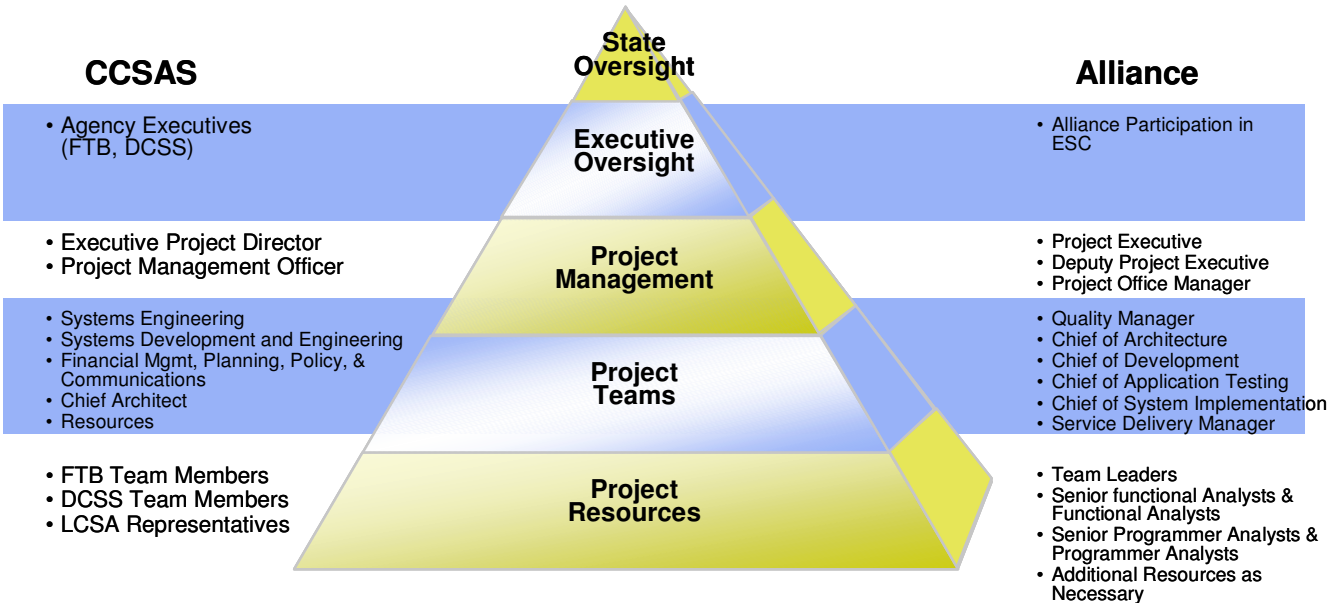
The subsections that follow describe some of the key steps that will result in creating and maintaining an effective working relationship between alliance and CCSAS teams.

3A.5.3.1 Building the Right Organization

One of the best ways to build a high performance project team is for the CCSAS and alliance teams to work together toward common deliverable goals. We firmly believe that to achieve maximum success, we must combine our child support enforcement program experience, systems development knowledge, and consulting expertise with the CCSAS project staff's understanding of their specific organizational environment and business problems. By working together, we develop the best approach for solving problems through the intelligent use of technology. We have found that integrated project teams

provide the foundation for building trust and promoting open, timely communication. In this way, team members support each other in day-to-day activities, make decisions quickly, and share knowledge readily. In this environment, there is no reason to take a "throw it over the wall" attitude – the involvement of CCSAS project staff is key to building knowledge and a sense of shared responsibilities.

The project team is structured to align closely with CCSAS' various levels of management and staffing, and is aligned to facilitate the coordination and the exchange of information. It is expected that each project manager within the alliance team will have a counterpart within the CCSAS organization. Our partnering approach will allow the CCSAS project staff to acquire ongoing knowledge of how the new system is built and managed. Figure 3A.5-2 demonstrates the alignment of roles between CCSAS and



the alliance organization.

Figure 3A.5-2 Alignment of CCSAS project staff and alliance staff. *At each level of the project, the alliance project aligns with the CCSAS organization.*

The Project Organization Chart and the Responsible, Approve, Consult and Inform (RACI) matrix, which appear in the Project Management Plan, define the lines of authority and approval for the project. We have planned for the direct involvement of CCSAS project staff in the CCSAS CSE project, and this participation is vital to the project in order to effectively address issues and risks, and to promote quality results. We have found the blended team approach outlined in the Project Management Plan to be optimal for supporting the day-to-day delivery, on-going management and issue resolution/decision making processes. As an important task when the project begins, we will work with CCSAS project staff to refine this structure, further define roles and responsibilities, and identify specific team members.

3A.5.3.2 Aligning Executive Expectations

The most successful strategic programs enjoy the commitment and continuing involvement of executive managers who serve to steer these complex efforts and to remove barriers to their success. The alliance management team will work with the CCSAS Executive Steering Committee (ESC) so that the CCSAS Program meets the expectations of its sponsors. We will also work with the ESC to gain the understanding and commitment from the key stakeholders within FTB, DCSS and the LCSAs that is necessary to accomplish positive change in the Child Support community.

To achieve these ends, we will support the Executive Steering Committee in providing continued, high-level attention to:

- Maintain alignment with goals and expectations
- Manage risk through executive intervention and decisions
- Provide essential resources and expertise

The critical success factor is, therefore, the ability of the Committee and its supporting management team to focus on the real issues and risks on a timely basis, to have a substantive and open discussion about what to do, and then to assign tasks to people who have the authority and capacity to take effective action.

3A.5.4 Collaboration

Our management approach is designed to build a smoothly functioning partnership with CCSAS management and staff in order to achieve the common goals and objectives of the CCSAS Program. We encourage open, frank discussion and strong working relationships between the various levels of our management team to resolve differences, including contractual differences. We will actively seek out opportunities to do team building while at the same time working on interim work products and key deliverables. For example, by having a joint management team conduct a session to review project deliverables, we will encourage individuals to buy into the deliverables and have a sense of ownership that they share as a group. Other types of team building sessions will be focused on role clarification (early on, during project launch activities) or on lessons learned (at appropriate checkpoints). The State has a key, critical responsibility to make prompt decisions and help remove obstacles to project success.

We have the processes in place that will make this work effectively such as the blending of alliance/CCSAS teams, and the complementary project offices with the right people, the right skills and the information management needs at the right time. The alliance realizes that effective program activities will result in blending the expertise of the alliance staff with that of the CCSAS project staff to accomplish the major tasks, maintain scheduled milestones, and produce quality deliverables. While the formal point of contact for the CCSAS Program will continue to be our Project Executive, we feel that the quality of the informal interaction and working relationships that will develop between alliance and CCSAS staff are essential to our mutual success.

To facilitate establishing a true working partnership between the CCSAS and alliance team members, we have found that several simple techniques are very effective. First, the project teams should be co-located if at all possible. If not, they should at least be in close physical proximity. Second, all project team participants and their activities should be integrated into the same standard project control and reporting mechanisms. Third, all project team participants should use common tools and communications processes. And finally, a high-level, integrated project plan should be used to focus cross-project attention on meeting the shared commitments that enable success.

3A.5.4.1 Decision Making and Escalation Procedures

The alliance will work with the CCSAS leadership to review and confirm who is empowered to make decisions at both the program and project levels. It is important to solidify decision making authority at the onset of the project so that ongoing decisions can be made in a timely fashion, and to discuss what are the procedures when two or more decision makers disagree. We will work with the CCSAS leadership team to establish general criteria for involving the various levels of management and oversight in program-level and project-level decisions. These decisions may be needed to resolve issues or risks, or to decide among trade-offs resulting from change requests or changes in scope.

A sample of the decision-making techniques used by alliance management includes:

- Summarizing key decision points, along with options and impacts to the overall project
- Soliciting input
- Building consensus
- Facilitating timely discussion on key project decisions
- Clearly demonstrating the consequences of not making a decision by a specific date
- Tracking the results of decisions made in the event the key players change over time
- Determining which decisions need to be escalated to the ESC

For more information on the specific escalation procedures for Risk Management and Issue Management, see sections 3A.9 and 3A.11 of the Project Management Approach.

3A.5.4.2 Establishing a Common Management Perspective

One objective of the alliance partnering approach is to establish a common management perspective among the alliance and CCSAS project teams: we can only succeed together. The alliance has observed that the State has taken a proactive and positive management approach to the CCSAS Program through the establishment of the CCSAS Project Management Office (PMO). The alliance is committed to working closely and effectively with the CCSAS PMO through its partnering approach. However, the alliance must also take responsibility to accomplish its contractual obligations within the CCSAS Program. As a result, the alliance plans to establish its own Project Management Office that will oversee and coordinate CSE project-level implementation.

To assist the alliance's Project Executive and the Deputy Project Executive with the detailed tracking, summarization, and analysis activities of CSE projects, we have included in our organization an alliance Project Management Office (PMO) that will include both professional and administrative personnel. The alliance PMO staff will compile program-level status reports, monitor project financials, manage staffing plans, issue logs and risk management plans. They will also assist the Project Executive in maintaining program-level planning components and help oversee that project managers and team leaders regularly update their detailed project plans. The source information for all of the program-level planning originates with the project managers and team leaders. The PMO primarily serves the alliance Project Executive in presenting the details to CCSAS stakeholders in meaningful form.

The alliance PMO will work closely with the CCSAS PMO on risk management, issue management, schedule management and scope control. In our procedures for risk and issue management, we include the CCSAS PMO as the escalation point. Additionally, the alliance PMO will support the CCSAS PMO's efforts to monitor and report on overall CCSAS Program status in the form of monthly status reports and participation in In-Process Reviews (described further in 3A.5.5.4).

In order to create a strong and successful partnership among the alliance and CCSAS teams, the alliance plans to work with the CCSAS project staff to define appropriate roles and responsibilities for each of the Project Management Offices.

3A.5.4.3 Managing Quality Aggressively

The CCSAS project will provide project management oversight through quality assurance (QA) and independent verification and validation (IV&V) vendors. The QA vendor will conduct operational oversight and compliance for the CCSAS Project Executive Director, while the IV&V vendor will provide executive oversight for the CCSAS stakeholders (State, county, Federal agencies, and business partners), acting as an agent for California Health and Human Services (CHHS). Both vendors will work with the alliance staff in audits, assessments, reviews, data collection and reporting, process improvement, issue identification and resolution, and in-process reviews. The quality objectives for the CCSAS project will only be met through the cooperative collaboration of the alliance, the QA vendor, and the IV&V vendor.

The alliance Quality Manager will work directly with the QA vendor in developing, implementing, and improving policies and processes that are consistent and compliant with State, federal, and industry "best practice" standards and guidelines. The alliance will depend on the QA vendor to provide a project-wide view of quality to improve processes and the quality of delivered products. The CCSAS project will also rely on the QA vendor to provide or direct training on quality, quality standards, and quality models and processes.

The IV&V vendor will provide an unbiased view of project status, issues, and risks to the CCSAS stakeholders. Both the alliance Quality Manager and the QA vendor will support the IV&V vendor to provide for audits that cover essential elements of project work, issues, status and progress, and risks. The alliance will support the IV&V vendor in identifying process improvement opportunities. The QA vendor will support the efforts of

the IV&V vendor to validate compliance with planned QA processes, policies, and standards. The IV&V vendor will thus validate that the CCSAS project meets stated quality goals.

The QA and IV&V vendors will aid the alliance in successfully completing planned work and achieving project quality goals by highlighting non-compliance issues and guiding process improvement. Both vendors will provide project management oversight to provide for the successful implementation of the CSE and SDU systems.

The alliance is committed to working with the Quality Assurance vendor and supporting the Independent Validation and Verification Vendor with which the State has contracted in order to deliver the highest quality products and services for the CCSAS Program.

3A.5.4.4 Participation of State Staff

Large, complex programs such as CCSAS necessarily call for significant involvement from the FTB and DCSS organizations in all areas (business, application, technical). We have found the greatest success on projects with dedicated client resources fulfilling key roles. These staff members will facilitate our understanding of CCSAS requirements, expedite decision-making, and assist in verifying that the solutions implemented are appropriate for DCSS. Also, this active participation in all roles will enable DCSS to assume full responsibility for the production system.

3A.5.5 Communications

Maintaining accurate, verifiable and timely communications among CCSAS project staff and alliance team members and management is critical to the alliance's partnering philosophy. Maintaining clear and open communication within the joint management team is a critical part of our partnering philosophy.

That entails both informal and formal lines of communication. Informal working lines of communication will be created and maintained within both the alliance and CCSAS project teams at the appropriate levels. At the same time, project reporting and control will be provided through formal communications (monthly progress reports, leadership briefings, etc.) to official lines of authority.

It is our intent that each person on the CCSAS CSE project will have the information necessary to perform his/her role. It is also very important to the alliance's partnering approach that CCSAS project staff feel that they are being kept up-to-date and that the exchange of information is two-way. Clear and open communication throughout the program contributes to its success. Our approach is to combine both written and oral communication within the project team, as well as outside the team, to encourage the early identification and resolution of issues.

Figure 3A.5-3 lists the methods the alliance will use to accomplish this exchange of information. These methods take two forms: written, such as regular status reports, and

electronic mail messages; and oral, such as regular status meetings or periodic project walkthroughs.

	Written	Oral
Formal	Project Plans Project Schedule Weekly Status Reports Monthly Status Reports Deliverable Progress Reports Quality Activity Reports Meeting Minutes Project Repository Issue Log Risk Register	ESC Briefings CCSAS Directors' Meeting LCSA Group Meeting In-Process Reviews Monthly Project Status Meetings Quarterly Project Management Reviews Design Reviews Training Sessions
Informal	Electronic Mail Project Memos	Team Meetings Team Leader Meetings Project-Wide Meetings Brown Bag Sessions

Figure 3A.5-3 Communication Methods. *Both formal and informal communications enable every member of the project team to have the information he/she needs to perform his/her role effectively***.**

The alliance will use more formal channels (for example, written status reports) to communicate with key CCSAS staff members who are not assigned to full-time roles on the project. More informal channels will be cultivated so that all project team members are knowledgeable about project status, issues, results of walkthroughs, etc. All members of the CCSAS CSE project, both alliance and CCSAS project staff, will have access to the Project Repository in PMOffice, which functions as a collaborative work environment.

The remainder of this section provides brief descriptions of some of these communication channels, specifically:

- Project Meetings
- Monthly Status Reports
- Deliverable Progress Reports
- In-Process Reviews
- Project Management Review Meetings

3A.5.5.1 Alliance Project Meetings

The alliance management team is comprised of the Project Executive, Deputy Project Executive, Quality Manager, Project Office Manager, Chief of Architecture, Chief of Development, Chief of Application Testing, Chief of System Implementation, and the Service Delivery Manager. This management team will meet at least weekly to review project-wide status. Other CCSAS and alliance team leaders may normally attend as well. The Project Executive will develop and follow a preset agenda for the weekly

meetings. The agenda will have specific provisions that allow the CCSAS team and the alliance team to discuss other issues that concern either party.

While this weekly meeting will present the current status of all tasks in progress, the primary focus of the meeting will be to discuss issues that may impact progress and to review plans to resolve those issues. Thus, a weekly status meeting agenda may include the following:

- Problems or defects encountered, and their disposition
- Deadlines scheduled during the reporting period that were met or missed
- Issues that have arisen during the period that need to be addressed before proceeding to the next activity
- Activities to be completed in the next week

Given the close working relationship that we anticipate building with senior CCSAS stakeholders, we envision these weekly sessions will focus primarily on reviewing task status, and resolving key issues. Based on our experience to date, we look forward to frank discussion and prompt resolution of issues, or problems.

3A.5.5.2 Deliverable Progress Reports

As part of the information contained in the weekly status report, each project manager lists the status of each contractual deliverable within their functional area to the alliance PMO, who will consolidate these into a weekly deliverable progress report. Progress for each deliverable is measured against activity start and end dates, resource expenditure, and percent complete. As appropriate, the alliance PMO will work with the management team to identify potential impediments to progress in the form of risk assessment and mitigation strategies. A sample deliverable progress report is presented in Figure 3A.5-4.

DELIVERABLE PROGRESS REPORT						
Report Date: 02/20/2001				Prepared by: PMO		
	Phase	**CDL**	**Deliverable Description**	**Date Submitted**	**Date Returned**	**Status**
		PM 001	Project Management Plan	01/15/2001		State Reviewing
		PM 009	Project Schedule	01/15/2001		State Reviewing
					01/20/2001	Alliance Revising
				01/22/2001		State Reviewing
		PM 012	Risk Management Plan	01/31/2001		State Reviewing
					02/15/2001	ACCEPTED
		PM 013	Quality Management Plan			In Progress
		PM 016	Issue Management Plan			In Progress
		TM 002	Software Development Plan	01/05/2001		State Reviewing
					01/15/2001	Alliance Revising
				01/25/2001		State Reviewing
					01/31/2002	Alliance Revising
				02/05/2001		State Reviewing
		TM 003	Configuration Management Plan			In Progress
		TM 009	Software Quality Plan			On hold
		TM 010	Problem Resolution Mgmt. Plan	01/05/2001		State Reviewing
					01/10/2001	ACCEPTED

Figure 3A.5-4 Deliverable Progress Report – *The status of each deliverable can be tracked along with the stages in its development and acceptance.*

The primary focus of this review is the completion of actual project deliverables on schedule and within the estimated level of effort. Thus, for those activities that are outstanding or late, corrective action plans are developed and implemented, and progress against these corrective action plans measured and reported. Risk assessments will be consolidated to identify common potential problem areas and to develop appropriate mitigation plans. For more information on risk management processes, see Section 3A.9.

3A.5.5.3 Monthly Progress Reporting

Each month, the alliance Project Executive will provide a written status report to the CCSAS Executive Project Director. It will be submitted no later than the fifth working day of the following month. The report will provide updated dependency charts and deliverable progress reports, along with softcopy project plans and summary level views of risks, change requests and issues, progress to date and staffing plans. In addition, the narrative portion of the report will include the following:

- Overall completion status of the project against the approved project work plan
- Plans for activities for the coming month
- Deliverable status, with percentage of completion (and time ahead or behind schedule) for particular tasks

- Status of the proposed budget against actual expenditures
- Problems encountered and proposed/actual solutions
- Proposed changes to the work plan
- Other items as agreed upon with CCSAS

3A.5.5.4 Participation in In-Process Reviews

The CCSAS project has defined a process for conducting In-Process Reviews (IPRs) on a monthly basis. In-Process Reviews are intended to be the vehicle to accomplish the following CCSAS project objectives:

- Measure the effectiveness of the project processes
- Support effective project communications
- Provide a forum to discuss the progress and health of the project
- Preview upcoming activities
- Review top project risks
- Report metrics on key processes
- Provide an opportunity for attendees and presenters to openly discuss their issues and concerns

The alliance Project Executive, Deputy Project Executive and Quality Manager will attend the IPRs and lead the discussion of their respective agenda topics as requested by the Executive Project Director. All alliance attendees will provide prompt follow-up and status on assigned action items and prepare briefings on special topics as requested.

For each IPR, the alliance PMO will work with the CCSAS PMO to provide the information needed to assess the health of the project schedule as well as the major accomplishments for the last 30 days, the past due activities (if any), and the thirty day "look ahead". The alliance PMO will also work with the alliance management team to determine which issues and risks need to be brought to the attention of this forum.

Additionally, the Quality Manager will work with the QA vendor and the IV&V vendor on the presentation on the quality status of the CCSAS project, and help decide which quality issues/concerns need to be brought to the attention of this forum. In addition, the Quality Manager will provide an assessment of the quality of project deliverables, QA metrics and trends, as well as the thirty-day "look ahead" for Quality activities.

3A.5.5.5 Project Management Review Meetings

Project Management Reviews will be held on a regular basis. At the beginning of the project, the alliance proposes to hold these reviews monthly, then hold them on a quarterly basis after the first two months of the project (unless circumstances dictate resuming the monthly review process). The participants for the Project Management Reviews will include the alliance management team, the CCSAS Executive Director, the Project Agent, senior alliance management advisors, and subject matter experts from both the alliance and the CCSAS project team. The process for project management

reviews will be documented in the Project Management Plan and fine-tuned as needed after the first few reviews.

One key objective of the project management review is to identify and assess risks to the success of the project, and to determine how to reduce the likelihood and severity of those risks. The project management review is conducted as a peer-to-peer discussion across a broad range of substantive topics, in which the project team draws insights from the reviewers. The alliance management team should already be aware of most significant risks as a result of our application of the Risk Management process. However, on the basis of their experience, the project reviewers often identify other risks than those that are brought forward for discussion at the project management review.

Another objective of the project management review is to improve the effectiveness of the overall management process by reviewing task status and performance against both quality and productivity targets. Unburdened by the day-to-day details of managing the project, the reviewers often identify approaches that may have been overlooked. In addition, the normal question and answer process creates new and better ideas for addressing a particular functional, technical or management issue.

Project management reviews frequently produce benefits merely by following the process for this type of review. These reviews allow project issues to be addressed from the most comprehensive perspective, through the prior experience of several senior managers from the alliance partners.

3A.5.6 Conclusion

The alliance's accumulated large-scale project experience points to the need to engage client executives and senior stakeholders, as well as those of the alliance partners, so that we all perform an effective role in delivering a successful outcome. "Engaging" project staff means managing all of the communication vehicles so that they promote the frank and open sharing of information and knowledge, so that all team members (both CCSAS project staff and alliance staff) can make their maximum contribution to achieving California's vision for the CCSAS Program.

While there are challenges to creating and fostering an integrated team, every person on the alliance team, from our executives and project leadership throughout the project staff, is fully committed to achieving the common goals and objectives for the CCSAS Program. We firmly believe that by integrating the CCSAS and alliance teams, the management tools, and the quality standards, these challenges can be overcome, resulting in a high-performing, integrated team that is able to deliver the CCSAS CSE project on time and on budget.

As experienced large-scale project management experts, the alliance knows how to tailor and focus information for different purposes and audiences so that the right people have the right information for action.

3A.6 Contractor Team Management

The alliance brings a team of knowledgeable, experienced personnel to the CCSAS CSE project, and our team composition draws on the vast experience of all the alliance members. The proposed Project Management Method provides a consistent framework to manage these blended teams.

3A.6.1 Introduction

The alliance has understood from the start that individual players cannot satisfy all the needs of this complex systems integration project. Therefore, we have created a partnership of premier organizations to bring the best-qualified team to the CCSAS CSE project. In addition to the alliance partnership of IBM, AMS, and Accenture, there are a number of other subcontractors providing services to the CCSAS CSE project for the alliance. This results in a myriad of relationships that the alliance Project Executive will be responsible for managing. The skills and experience brought to this role will enable the alliance Project Executive to establish solid working relationships with all these entities, resulting in a quality solution that meets the goals set for the CCSAS CSE project. In order to promote team integration and function as a fully blended team, all of the staff working on the CCSAS CSE project, whether alliance, subcontractor or CCSAS project staff, will follow the same management processes and use the same set of tools. This section describes our proven approach for managing the relationships within the alliance and with our subcontractors, which has been refined through many large-scale projects.

3A.6.2 Contractor Team Management Approach

3A.6.2.1 Assigning Work Products

Section 3A.7 Cost/Schedule Management gives a detailed explanation of the comprehensive methodology we developed to establish the planning framework for the CCSAS CSE project. In addition to defining the Roadmap and Dependency Chart for executive-level, cross-project perspectives, that section also addresses the Project Schedule (CDL PM 009), which contains the planned start and finish dates for, and the dependencies between, all deliverables for which the project team is responsible.

Each of the functional area managers and team leads will be responsible for maintaining a detailed project schedule for their area. These detailed project schedules, which together comprise the Project Schedule, show how the work of a project organizational

unit is broken down into work items, each of which is assigned to a named individual resource or a small team of resources. Each work item can have associated details such as estimated hours, start/end dates, task-level dependencies, estimates to complete, and other variables as identified by the management team. As a part of these schedules, cross-project dependencies will be identified as milestones and linked to the appropriate activities.

While the purpose of the Project Schedule is to provide a high level view of the project phases, the purpose of the detailed project schedules is to:

- Provide each team area manager with a mechanism to plan for the detailed tasks required for each activity on the Work Breakdown Structure
- Provide each member of the project team with a list of work items they have to achieve within a period of time, along with the planned start/end dates and estimated effort for that work item
- Enable the team leaders to track the progress of each team member on the set of work items that has been assigned to them

The functional area manager, together with their team leads, will assign work packages by reviewing the detailed project schedule to determine groups of work items by work package. Proposed assignments are then made for each team member. The functional area manager and team leads will validate that the proposed assignments are consistent with the availability of the team member and fits within his/her current and projected workload. During this process, they will review the planned dates to determine if the dates are achievable. If they are not, the issue management process (see Section 3A.11) will be followed to raise this as an issue. Once this is completed, the work package will be assigned to the team member.

The team member will work with the functional area manager or team lead to confirm any assumptions, review the estimates to determine if they are appropriate for their level of skill, review the completion criteria, and provide their commitment to the assignment. The team member will be responsible for providing a weekly status report and PMOffice™ electronic timesheet detailing progress against the assignment.

Electronic collection of weekly status reports and timesheets, based on the detailed project schedule, will promote timely and accurate reporting to the alliance PMO. These individual status reports roll up to various levels within the organizational units, which in turn feed the overall Monthly Status Report (CDL PM 006).

The individual PMOffice™ timesheets will capture the actual task information required to provide schedule and cost tracking in the Project Schedule (CDL PM 009) and the Cost/Schedule Variance Report (CDL PM 010).

3A.6.2.2 Managing Contractor Teams

We have formed an alliance for the CCSAS CSE project for a number of reasons. Our subcontractor partners each bring to this effort an extensive amount of knowledge and experience in their core competency. The use of experienced subcontractors acts as a vehicle to further deliver best practices, strategies, and approaches. Subcontracting

firms can help to keep a bid competitively priced and they often have highly specialized skills or niche-technologies that enhance the overall solution.

In any contract that requires the services of a subcontractor, the process for managing the contract with the subcontractor is critical to the delivery of quality products and services to the client. Organization, planning, and control are essential to confirming that the subcontractor understands the work to be accomplished and the timeframe allocated.

These activities involve the management of third party vendors to validate that they are on plan and providing committed deliverables. It also involves the management of suppliers to confirm that commitments are being met. Finally, this activity includes the management of subcontractors to verify that adequate project plans are in place to enable delivery of their commitments within the overall project plan.

The management of subcontracted personnel begins with a clearly written, detailed account of the work that is to be performed by the subcontracting firm. Not only is the work and its completion criteria clearly documented, but the method by which the work will be accomplished is also laid out. In addition, quality standards, payment terms and any special terms and conditions unique to the particular engagement will also be detailed. This documentation comprises the subcontractor Statement of Work (SOW).

As the prime contractor, IBM assigns, monitors, and controls our subcontractors using techniques developed and refined throughout our history of managing many large, complex projects. Key elements of this process are:

- Ultimate responsibility for subcontract management rests with the alliance Project Executive, who acts as the single point of contract control with the subcontracted firm
- A Statement of Work is developed to serve as the principal planning and control document for the duration of the subcontract
- The alliance Project Executive provides a single point of management accountability for the subcontractor's cost, schedule, and technical performance
- The alliance Project Office Manager is the focal point for administrative control and the day-to-day liaison for subcontractor management

We measure the success of our subcontractor relationships by answering the following questions:

- Were we able to work with our subcontractors in an environment that did not focus on what staff members were employed by what organizations? But rather, did we achieve a "One Goal, One Team" culture on the project while working with this firm?
- Was the subcontracted work completed on time and with the specified quality, and did the customer accept it?

Our management practices, our philosophy, our reputation for delivering to our customers, make us a much sought after partner by large and small firms alike. We maintain a profile of the subcontracted firms we have worked with on other engagements, and we continually add new and proven partners to that list. We also

remove from our resource database those firms who are unable to share our commitment to excellent customer service.

3A.6.2.3 Reporting Practices

Reporting relationships are demonstrated in the project organization charts and in the roles and responsibility descriptions. These can be found in the initial version of the Project Management Plan. At a high level, the alliance Project Executive and Deputy Project Executive will interface directly with the CCSAS Executive Project Director and State management team. Where practical and appropriate, alliance team area managers will interface directly with the CCSAS project team.

Figure 3A.6-1 demonstrates how information flows up from, down to, and between various organizational units.

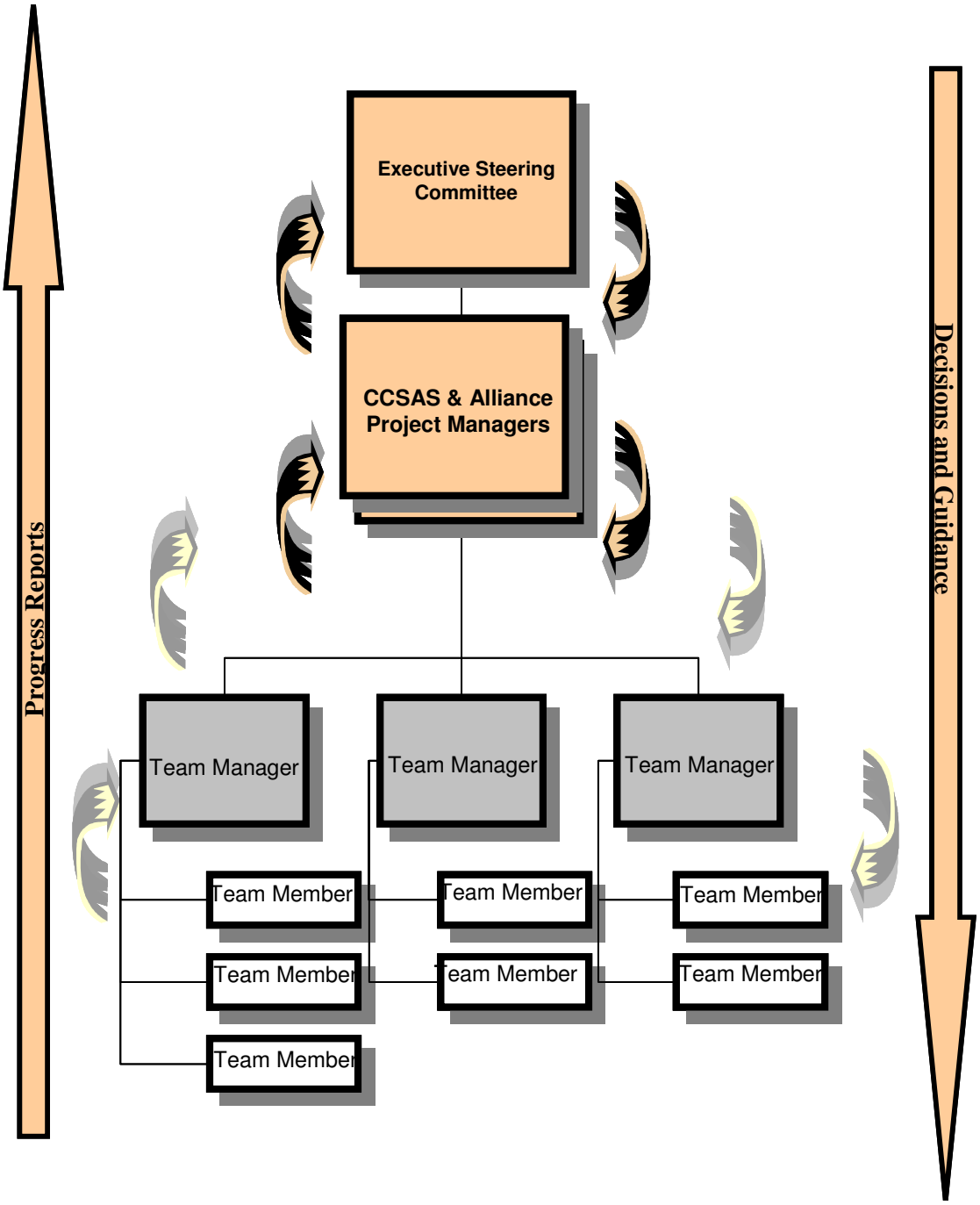


Figure 3A.6-1 Project Information Flow – *Progress reports flow upward and consolidate through the organization, whereas decisions and guidance flow down through the levels of management.*

3A.6.2.3.1 Tracking

Concise and accurate reporting begins at the team level with individual team members. Collecting and reporting information on a weekly basis provides the management team

with current task, subtask, and activity level information to facilitate rapid response to potential problems and issues.

A consistent tracking process monitors the project's status. Each member of the alliance team submits a weekly PMOffice™ timesheet that shows actual start and completion dates, hours expended that week, and a current estimate to complete each task. The alliance project management team reviews the updated project "actual vs. plan" report for trouble spots. The tracking process provides an early warning of potential schedule or resource problems. It also provides an opportunity for the management team to take action to minimize any negative impact to the overall project scope or schedule.

3A.6.2.3.2 Status Reporting

Project status reporting keeps both CSE and CCSAS management informed and eliminates surprises. Accurate estimates and precise reporting of progress are critical to the success of the CCSAS CSE project. Proper project monitoring prevents costly deviations from scope and schedule, and is important in the planning of future activities.

The alliance project team's status reporting process focuses on providing accurate and timely information on the progress of each activity. The status reports clearly identify issues and recommend resolutions. The approach to project status reporting incorporates information from every activity and every team member. It is a process that uses internal and external status review meetings, comprehensive reports, and the PMOffice™ tool to demonstrate that information relevant to the project is collected, analyzed, and communicated so the right people have the right information at the right time. The alliance's status reporting approach is based on the premise that the team members performing the work are the best source of information regarding the progress and estimate to complete for each activity.

3A.6.2.3.3 Alliance Management Meetings

Routine weekly meetings for the alliance management team, described in Section 3A.5.5.1, will promote the timely and quality delivery of the project. The purpose of these meetings is to have each team area manager present to the alliance Project Executive a summary of their team's progress, an update on project issues, and identification of task and activity level status. This weekly meeting provides the alliance Project Executive the monitoring and control visibility to all teams and activities so that there is an early warning of potential problems that could impact technical or schedule performance. The discipline of having timely, comprehensive, objective reviews at which project issues are treated decisively will contribute to the success of the CCSAS CSE project.

3A.6.2.4 Applying Consistency

3A.6.2.4.2 Controls

Standards and specifications will define the level of quality to be achieved. Controls will be applied and reviews conducted by the Quality Manager to determine compliance with the established standards and specifications. Deviations will be noted and addressed. The Quality Management organization, described in Section 3A.10, is tasked with confirming that project process reviews and project deliverable reviews occur. This organization will help verify that consistent methods and tools are being applied throughout all teams. More importantly, Quality Management will provide oversight and monitor that the defined processes are followed.

The Application Development Manager will monitor the design and programming units of work. Team Leads will track the status of each unit of work until the alliance management team has formally signed it off as being accurate and complete. The Chief of Application Testing will review test results to confirm that each test was adequately performed and that the results have been thoroughly checked.

The alliance Project Executive will discuss project status and issues on a regular basis with the managing partner from each of the subcontractors. On an individual basis, project team members may raise issues in their weekly status reports or in direct conversation with the alliance Project Executive. Issues will be categorized and tracked as described in Section 3A.11 Issue and Action Item Management. Issue resolution will start with individual team members, escalate up through the alliance management team as appropriate, and then involve the CCSAS Executive Project Director as needed.

3A.6.2.4.3 Compliance with Project Performance Objectives

During project orientation, expectations are set and team members discuss what role each of them plays in meeting specific performance objectives. The entire team is kept aware of how well we are meeting these objectives as we go along. Team meetings and subcontractor meetings provide an opportunity to exchange feedback on performance.

Performance problems are addressed early and compliance with corrective action plans is expected. Failure to comply may result in removal from the project. If persistent poor performance is evident, the alliance Project Executive will request action from the home organization (either subcontractor organization or the State).

3A.6.3 Conclusion

Our overall partnering approach, detailed in Section 2.2.1, highlights some of the methods used by the alliance for governance during the preparation of this proposal. The time spent working together on the proposal has forged a strong commitment from each of the partners toward the successful execution of the CCSAS CSE project, and has greatly reduced the risk that the partners will not work well together on project delivery. Nevertheless, a contractor team management approach is needed to facilitate and monitor the execution of the CCSAS CSE Integrated Project Plan.

Successfully managing a large complex team requires careful planning and tracking through multiple organizational levels. The use of detailed project schedules to assign work, subcontractor Statements of Work to define and regulate quality and services, recurring reporting practices to track work, issues, and decisions, and the Project Management Plan and Quality Management controls to govern the methods, standards, and tools used to accomplish the work will all help in directing a high performing team to accomplish the goals of the CCSAS CSE project.

3A.7 Cost/Schedule Management

> ***Projects are mission critical, and delivering quality projects on time is non-negotiable.***
>
> ***Information Week, 4 October 2000***

3A.7.1 Introduction

Effective and timely project planning and control are essential for a project of the scale and complexity of the CCSAS CSE project. Exercising the rigors of authority, responsibility and accountability can only be successful if an overall framework for project execution is clearly defined, well-understood and consistently applied across management at all levels. The alliance will institute just such a common planning framework for the successful implementation of the CCSAS CSE project, building on our experience managing large-scale, complex projects. The alliance's experience leads us to believe that management on this scale is not simply "project management 101". More discipline and more planning integration is needed to coordinate all of the efforts necessary to make CSE and CCSAS a success.

To achieve this objective, the alliance brings a structured approach that is founded on rigorous task planning, careful control of scope and adherence to schedule. Without these core disciplines, project "stretch", scope creep and resource constraints could work to unravel the State's goals for the CCSAS Program and the objectives expressed at the outset of the project.

3A.7.2 Establishing the Planning Framework

The alliance has developed a comprehensive methodology for Integrated Planning based on experience gained from planning and managing complex, interdependent projects. An Integrated Plan looks beyond the boundaries of any single project, providing an executive-level, cross-project perspective that focuses explicitly on risk and dependency management. Figure 3A.7-1 summarizes the components of an Integrated Plan:

- Engagement Context
- Organization Plan
- Roadmap
- Dependency Management Plan
- Detailed Project Plans

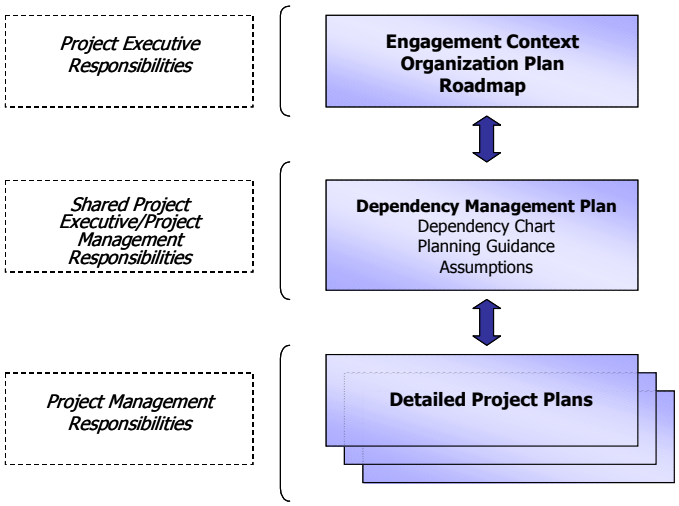


Figure 3A.7-1 Integrated Plan Components – *The integrated plan components act as the glue between the different levels of management, aligning expectations and responsibilities.*

As figure 3A.7-1 illustrates, the Integrated Plan balances the detailed, bottom-up planning and management perspective of individual project managers with a top-down planning and management perspective of the alliance Project Executive. The top-down view of the Integrated Plan represents the shared project objectives for CSE and the major cross-project commitments. The CSE Integrated Plan will build upon the alliance's strong foundation of proven project management techniques, then apply integrated planning techniques that have proven invaluable on other very large-scale projects.

The Dependency Management Plan is a central element of the integrated planning process. It represents the bridge between the detailed planning and control mechanisms maintained for each project and the cross-project views used by the alliance Project Executive and executive stakeholders to monitor progress and identify risks across multiple, inter-related projects.

The following sections describe those components of the integrated planning process that relate to project monitoring and control. Other elements of the process are discussed in Section 3A.7.6.

3A.7.2.1 Roadmap

The project managers will develop and maintain detailed project plans that identify the tasks to be completed for each element of the project. While this type of plan is essential for effective project management, it is, by its very nature, quite detailed and does not clearly present a macro-level, big picture view of the entire project. The Roadmap is intended to provide this big-picture view. The Roadmap is a one-page, Gantt-like summary chart that provides a clear overview of the timeframes and milestones for major projects and associated activities over the lifecycle of the CCSAS CSE project. The alliance Project Executive will use the Roadmap to:

- Provide CCSAS executives and key stakeholders (as well as team members) an overview of key activities and milestones throughout the project
- Graphically illustrate the degree of overlap in key activities
- Uncover any differences in stakeholder expectations and reinforce common planning terminology
- Provide a framework for aligning project work plans with expected timeframes and key milestones

An initial Roadmap for Success has been prepared as part of the proposal effort. During Project Launch, the alliance will work with the State to refine the Roadmap so that it may be used as an ongoing communication vehicle for tracking progress.

3A.7.2.2 Dependency Chart

The Dependency Chart is a one-page overview of the major activities that highlights the key dependencies and their sequence. It illustrates how key elements highlighted in the Roadmap will be achieved and who is responsible. The objective of the Dependency Chart is to create a mechanism for communicating and focusing on the big picture at the executive level. A sample Dependency Chart is illustrated in Figure 3A.7-2.

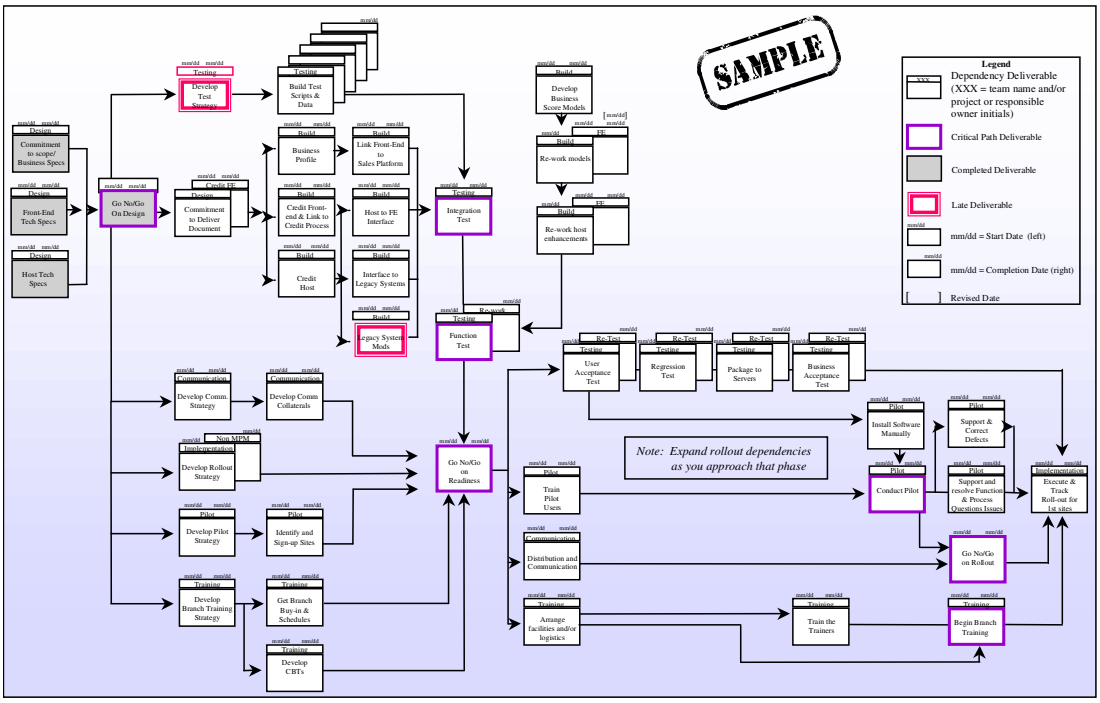


Figure 3A.7-2 Sample Dependency Chart *The Dependency Chart acts as the primary mechanism for monitoring progress across the projects that comprise the overall CCSAS Program.*

The Dependency Chart can:

- Provide a neutral and consistent way of highlighting status and risk areas across involved parties, including the alliance, DCSS, FTB, LCSA and subcontractors
- Help executives make informed decisions and tradeoffs when problems occur
- Align expectations among those who will depend on one another to achieve success
- Visualize the impact, in terms of time and risk, of project schedule changes
- Remind managers of the individual projects that while individual success is necessary, it is not sufficient for overall CCSAS program success
- Graphically emphasize that success is ultimately defined as helping the State achieve its objectives for the CCSAS program

It is important to note that the Dependency Chart is not simply a roll-up of detailed task plans. Rather, the Dependency Chart provides a structured basis for more detailed planning. By highlighting cross-project dependencies, it helps individual project managers focus on the larger picture and provides consistency in terms of timing, among detailed plans across the multiple projects. Because the Dependency Chart is designed to identify the key activities and milestones on which the success of the entire program depends, the management team must use their experience and discretion to determine which key areas to highlight on the Dependency Chart. The power of the Dependency Chart is that it can transform the countless project details into knowledge for action, providing a clear mechanism to monitor overall progress and identify major risks.

Based on our experience using Dependency Charts on large-scale, complex projects for other clients, we strongly recommend that the State adopt this technique for integrated management for CCSAS. Once created, the Dependency Chart can become the primary mechanism for monitoring progress across the multiple projects that compose the overall CCSAS Program. By using the chart to highlight late, at-risk and completed dependencies, it can serve as the focal point for discussion, helping to highlight obstacles to progress that require immediate attention and resolution.

3A.7.2.3 Planning Guidance

Integrated planning is a complex activity and many of its concepts may be new to project managers participating in a large-scale, complex project such as the CCSAS CSE project. The alliance Project Executive must provide planning guidance to help project managers understand their role in the process. This guidance defines what information is required, in what format, and for what purposes. Guidance is required to:

- Clarify exactly what the alliance Project Executive expects from project managers in terms of reporting progress, status and risks
- Clarify expected planning activities and timeframes
- Clarify expectations about project-level work plans
- Encourage buy-in and support of common, program-wide objectives

Integrated planning does not replace traditional project management. Effective project management is still essential for each project's success, and thus for overall program-level success. A project-level work plan is the best vehicle for communicating within an individual project team, and for assigning and managing day-to-day work. The alliance Project Executive will work with the team leads to determine the appropriate level of detail for the individual project schedules. These project schedules are usually detailed for the short-term planning horizon (for example, the next three to six months) and at a much higher level for later phases. When the project manager prepares his/her work plan within the context of the integrated plan, the roadmap and dependency chart act as the common framework into which individual project tasks and milestones fall into place. Throughout the project, the project-level work plans must be kept in alignment with the overall Project Schedule, the Roadmap and the Dependency Chart. Any potential change to the Roadmap or the Dependency Chart will be brought to the attention of the alliance management team and the CCSAS project staff for mutual agreement.

3A.7.3 Project Planning and Control Approach

The alliance is using a multi-step approach to project planning and control. This approach, illustrated in Figure 3A.7-3, begins with the proposal planning process, leading to the work breakdown structure (WBS) and initial project schedule in this proposal. It will continue during the period following proposal submission and contract award with detailed, collaborative project planning activities, involving the alliance and CCSAS project leadership. During this collaborative planning process, the alliance management team will further refine the WBS in PMOffice™ to specify the tasks and activities at which cost and schedule will be measured. Ultimately, this approach continues during the course of the project so that milestones, schedules and deliverable commitments are successfully met.

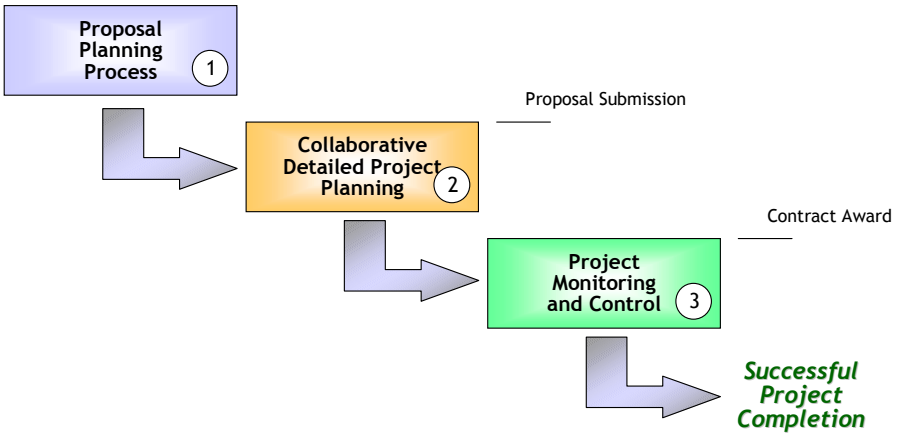


Figure 3A.7-3 Project Planning and Control Process – *The planning process takes place in three phases, each refining the results of the previous.*

Without this effective planning and control methodology, CSE development and implementation activities would begin at a disadvantage because of poorly defined requirements and an unclear vision of what needs to be accomplished. The probability of successful completion is greatly improved by going through the proposed project planning process and creating an Integrated Plan, supported by well-coordinated individual project plans.

3A.7.4 Initial Planning Activities

Initial planning activities have been conducted during the development of the alliance proposal. Figure 3A.7-4 illustrates the principal activities during this phase of planning.

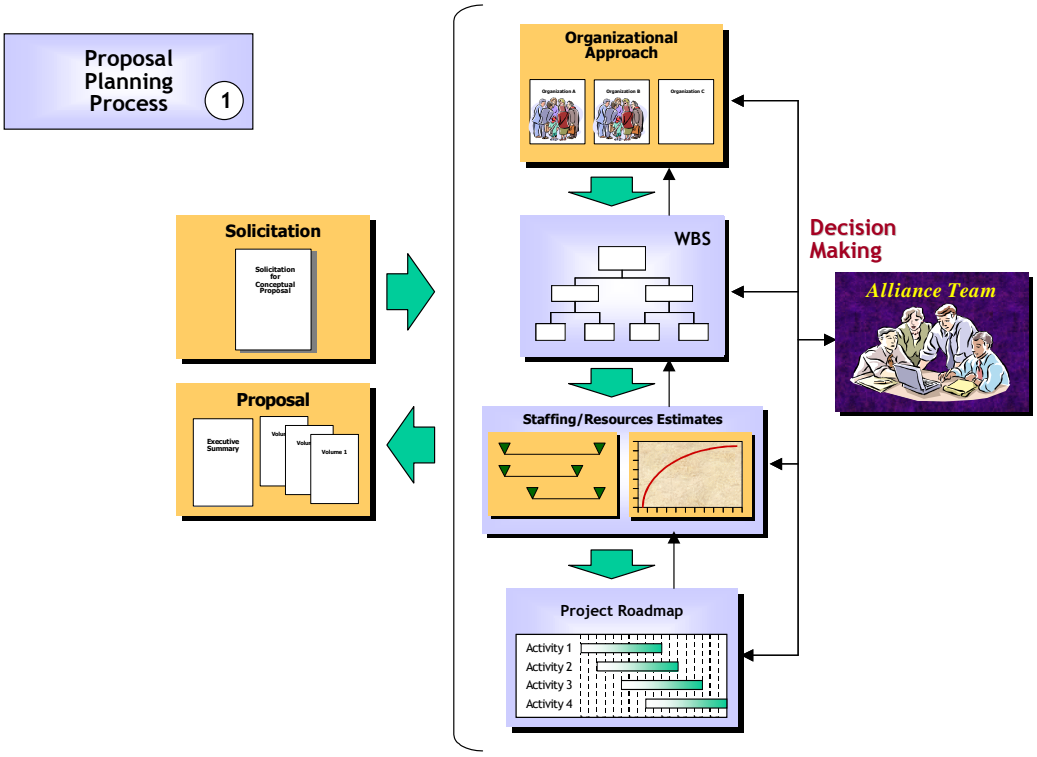


Figure 3A.7-4 Proposal Planning Process – *Represents a high-level view of the planning activities during proposal development.*

Key elements of this Proposal Planning Process are described in the subsections that follow.

3A.7.4.1 Creating the Work Breakdown Structure (WBS)

A properly constructed WBS mitigates the risk of uncertainty for planning since it answers the question "What does the alliance team need to do to meet the goals and objectives of CCSAS CSE?"

Using the initial requirements and the list of contractual deliverables provided in the SCP, members of the proposal team developed a comprehensive list of the tasks and activities needed to produce the completed system. The tasks and activities were grouped into the functional areas identified in the Organization Plan – project management, quality management, technology architecture, application development, testing, implementation, and maintenance and operations.

Within each functional area, the tasks were further sequenced by either deliverable or phase. For example, the application development activities are grouped by

requirements analysis, design, and build. After each section of the WBS was completed, the sections were consolidated into a master WBS that was then reviewed to confirm that none of the contractual deliverables had been omitted.

3A.7.4.2 Estimating Level of Effort

The owners of each section of the WBS were then asked to prepare estimates in hours for each of the tasks and activities. A variety of estimating techniques were used, depending on the functional area:

- Project Management: hours estimates were developed for the major deliverables, and ongoing activities were estimated based on a percentage of overall project hours and the management staff needed to support those activities.
- Quality Management: hours estimates were developed for the major deliverables and ongoing activities were estimated based on a percentage of overall project hours and the management staff needed to support those activities.
- Technology Architecture: hours estimates were based on previous experience with the same technology.
- Application Development: hours estimates were developed using guidelines from the system development methodology, then refined using actual hours from similar projects.
- Testing: hours estimates were developed using guidelines from the system development methodology, then refined using actual hours from similar projects.
- Implementation Management: hours estimates were developed for the major deliverables. For Statewide and LCSA activities, tasks were organized by implementation discipline, then estimated based on the scale of the implementation (very small, small, medium, etc.).
- Maintenance and Operations: hours estimates for application maintenance were based on alliance experience from other states, then validated from industry analyst data. Help desk and customer service estimates were based on projected call volume, existing support structure and current levels of staffing.

3A.7.4.3 Establishing Dependencies

Dependencies are identified from two perspectives – sequentially within functional area, and cross-project. Within each functional area, the predecessor and successor tasks are defined such that the critical path of activities may be derived. Also, decisions are made about which tasks may take place in parallel, which activities must take place sequentially, and what degree of overlap in activities is possible. Then, dependencies across the functional areas are mapped out so that the appropriate hand-offs occur across organizational entities (such as development having completed integration testing in time for software qualification testing to commence).

3A.7.4.4 Assigning Resources

Resources are assigned to the tasks within each functional area using generic resource categories such as programmer analyst, and business analyst. The resources are spread across months, which yields a staffing plan, showing the types of resources

needed over time. The staff loading is verified using actual staff numbers from previous projects.

3A.7.4.5 Deriving the Schedule

Once the dependencies are identified and the resources are assigned by month, the relative start-end dates can be derived for each task using the staffing plan. The start and end dates are then extracted and used to create an initial project Roadmap, which is used to check the sequence and alignment of key milestones and activities. The scheduled dates are adjusted as necessary to meet the targets established in the planning framework and to smooth the staffing estimates as much as possible.

3A.7.4.6 Refining the Project Plan

The initial Project Schedule (CDL PM 009) is due to the State at contract award. The alliance proposal team has based this schedule on our current understanding of the scope of work described in the SCP as well as the information we gained during confidential discussions. During the period between proposal submission and contract award, the initial project plan will be further refined as a result of collaborative, detailed project planning involving both alliance and CCSAS management. These planned activities are described in the section below.

3A.7.5 Collaborative Planning Process

Though an initial version of the Integrated Plan has been created during the proposal development process, it cannot be considered complete until it has been revisited, refined and reviewed with members of the CCSAS management team. During the course of contract negotiations, changes may arise that necessitate some degree of re-planning and/or adjustments to the initial Project Schedule and WBS. We intend to develop a final WBS and Project Schedule in partnership with the CCSAS project staff so that the CCSAS CSE project will be implemented successfully and will result in the planned benefits. The updated Project Management Plan, WBS and Project Schedule contract deliverables will be submitted upon contract award and refined within the first 30 days of the project.

Figure 3A.7-5 illustrates the key activities that are anticipated for the post-proposal submission planning process.

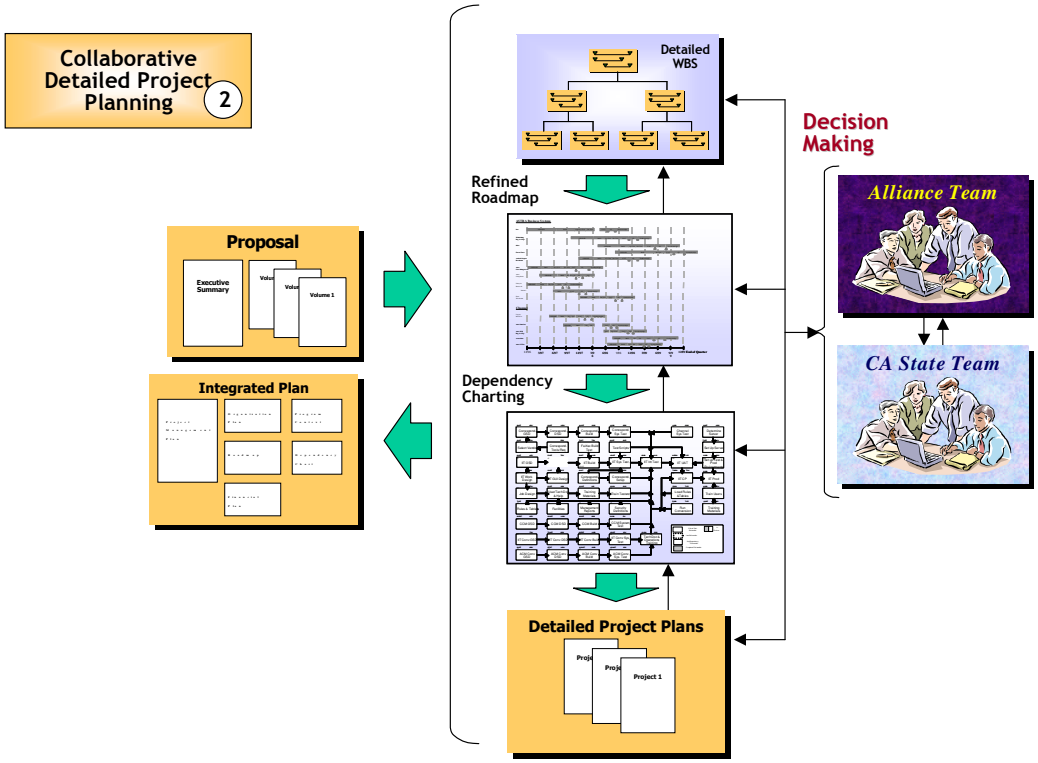


Figure 3A.7-5 Collaborative Planning Process - *The initial planning components are revisited and refined during contract negotiations, then finalized during Project Launch activities.*

3A.7.5.1 Revisiting the Initial Planning Components

The joint management team (alliance and CCSAS) must review the initial set of planning components – the roadmap, the WBS and the Project Schedule – and determine if there are any significant gaps or misalignments across groups. If changes to the project scope have arisen as a result of contract negotiations, this is the time to adjust the WBS, the staffing and the Project Schedule. Additionally, the alignment of the cross-project activities must be confirmed if there have been any changes to project scope, or the timing of key milestones.

3A.7.5.2 Joint Dependency Planning

Using the refined Roadmap as a starting point, the joint management team will need to develop the Dependency Chart for the CCSAS CSE project. We also may wish to develop a Dependency Chart for the broader CCSAS Program at this time. The representatives from each functional area will need to agree on which cross-project dependencies to highlight, and which organization owns each dependency. During these discussions, the management team will focus on what each organizational entity needs from other organizations in order to fulfill its portion of the overall program. As the dependencies are identified, the target dates associated with them must be validated against the roadmap activities and timeframes – do the dates for the dependencies support the Roadmap? Can the project managers commit to these dates?

An important part of developing the Dependency Chart is documenting the planning assumptions. For example, the Application Development group might plan the beginning of their analysis and design activities based on the assumption that "the development environment will be fully configured, tested and meet defined criteria by Month xx". When these planning assumptions are documented, the alliance team must include the impact if the assumption proves invalid.

Once the key dependencies are identified and agreed upon, it may also be useful to define ways of monitoring progress towards selected dependencies. These progress indicators are a means of avoiding the "90% done syndrome". Using pre-defined and agreed upon progress indicators, progress may be tracked over time to assess status. If a particular dependency called for 15 detailed designs to be completed per week, it would quickly become apparent if the development team were behind schedule. A slight variance for a single reporting period might not be a cause for alarm, but if the overall trend indicates that the team is falling further behind over time, then it will become apparent that follow-on dependencies are at risk unless action is taken. Once the alliance Project Executive and the project managers agree on the appropriate progress indicators for the key dependencies, so long as the progress indicators are being completed on schedule, there is no reason to delve into the details of that particular project.

3A.7.5.3 Finalizing the Plans

A critical element of finalizing the integrated planning components is reconciling the detailed, bottom-up project plans with the overall Roadmap and Dependency Chart. Once the detailed project schedules have been reviewed and adjusted by the individual project managers, the project managers are in fact making a commitment that their detailed project schedules for the near-term planning horizon support the top-down integrated plan.

During Project Launch activities, the Project Schedule (CDL PM 009) will be updated from the detailed project schedules so that it represents the resources and hours for the entire CSE project, and thus may serve as the baseline against which project progress is measured and future changes to scope are assessed.

Prior to each new phase of work being started, a planning cycle will be conducted to plan the work for that phase at a lower level of detail with increasingly detailed estimates. These planning cycles will focus on the near-term planning horizon (i.e., 3-6 month timeframe).

Throughout the project, the Project Schedule and components of the Integrated Plan and the Project Management Plan (CDL PM 001) will be updated to reflect the current status of the project, and to report project status to the alliance Project Executive and the State.

3A.7.6 Monitoring and Controlling Progress

As outlined above, the finalized Project Schedule serves as the baseline against which project progress is measured. Throughout the course of the project, team members will

report progress in the form of time spent against tasks and task status. In turn, the individual project managers will update their detailed plans to reflect the current status of the work and report project-level status to the alliance Project Executive. The alliance Project Executive will work with the executive stakeholders to monitor overall progress using the Roadmap, while the entire management team will focus their attention on meeting the cross-project commitments reflected on the Dependency Chart. In this manner, the key activities necessary to achieve the CCSAS CSE goals and objectives will be managed in a consistent manner across all levels of management.

Figure 3A.7-6 represents the cycle of planning control activities. Additional information is provided in the subsections that follow and in the Project Management Plan.

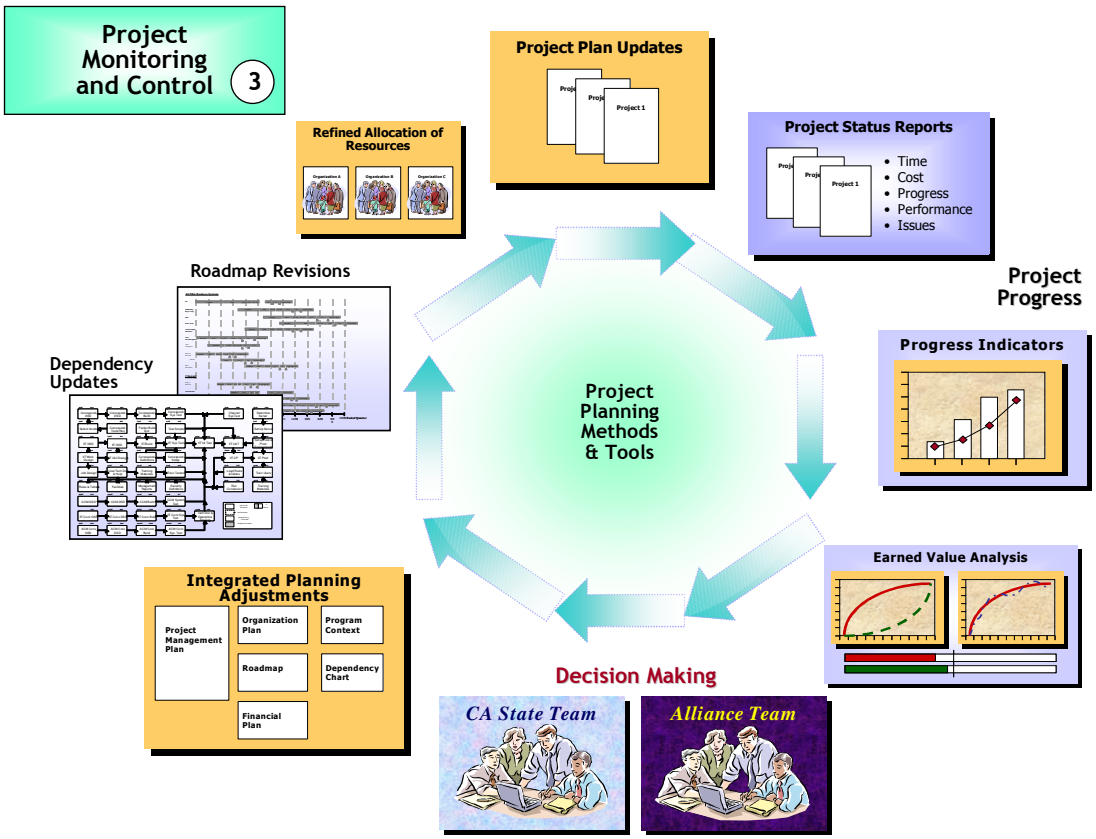


Figure 3A.7-6 Project Monitoring and Control – *Represents the elements of the ongoing monitoring and control cycle.*

3A.7.6.1 Status Reporting

As part of the Project Launch activities described in Section 3A.3, project members will be trained in status reporting and time tracking procedures. The alliance project teams will use PMOffice™'s electronic timesheet to record the time spent against tasks and record the actual start and end dates for those tasks. In addition, team members will also prepare a weekly status report that will include narrative detail about the work performed such as tasks accomplished for the current period, tasks not completed, tasks planned for the next period, and any issues or concerns. Team leaders, group leaders and project managers will prepare consolidated status reports for their functional area on

both a weekly and a monthly basis. These consolidated status reports will be used by the alliance PMO to prepare the Monthly Project Status Report (CDL PM 006), which will highlight the accomplishments for the reporting period for each functional area as well as provide a recap of staffing and deliverable status, and a summary of change requests and issues.

3A.7.6.2 Schedule and Cost Tracking

In order to focus attention on potential cost and schedule variances, the alliance PMO staff will track progress using actual data collected in PMOffice™ on a weekly basis. Actual start and end dates and hours spent for tasks will be compared with the planned dates and estimated effort. The start and end dates, plus status, of the cross-project dependencies will be updated and assessed at this time. In addition, the planned vs. actual status of progress indicators will be assessed. From these comparisons, the alliance PMO will adjust projections of longer-term milestones and cost, and also determine if re-estimating or staffing changes are needed.

Metrics to be captured in PMOffice™ and reviewed include:

- Percent of tasks started/completed on time
- Late tasks
- Estimates to complete
- Milestone status, including a trend analysis of planned to actual dates
- Earned Value, using hours for those tasks that are included in the fixed price effort
- Earned Value, using dollars and hours for those tasks that are a result of scope change
- Cost Performance Index
- To Complete Performance Index

These data provide key inputs to the earned value analysis process described below.

3A.7.6.3 Earned Value Analysis

The alliance has made a commitment to using Earned Value (as defined in industry standards such as PMBOK) management techniques to evaluate cost and schedule performance on the interdependent tasks and activities that comprise the CCSAS project. Using these techniques, we will measure and communicate progress taking into account the work completed, the time spent on that work, and the costs incurred to complete that work during a particular reporting period.

The approach to earned value management includes the following metrics:

- How much work has been scheduled to be completed during the reporting period
- The budgeted value of the scheduled work, using a blended hourly rate
- How much work was accomplished during the reporting period, based on reported hours by task

- The budgeted value of the work actually performed
- The incurred actual costs, drawn from project invoices
- Schedule variance – the budgeted value of the scheduled work compared to the budgeted value of the work accomplished
- Cost variance – the earned value compared to the actual costs of the work performed, using a blended hourly rate

The alliance PMO will prepare the Cost/Schedule Variance Report (CDL PM 010) from this analysis on a monthly basis. It will accompany the Monthly Project Status Report (CDL PM 006).

By taking a snapshot of the project and calculating the Earned Value metrics, we can not only compare the planned with the actual but also make an objective assessment of the project's progress. In addition, and perhaps most importantly, the Earned Value methodology will allow early warning of potential project issues – as well as early corrective action.

3A.7.6.4 Corrective Actions and Lessons Learned

Individual team managers will use the cost/schedule data captured in PMOffice™ to manage the implementation of their detailed project schedules, including adjustments, as appropriate, in order to keep their projects on track. In addition, these data will be aggregated to allow CCSAS CSE program-level corrective actions.

If a task is behind schedule or running over the estimated hours, the team manager will determine the most appropriate course of action. If a need for corrective action is identified, the team manager will work with the team member to develop a corrective action plan. This corrective action plan will take advantage of lessons learned and refinement of estimating techniques. The team manager will follow up to see that the corrective action plan has been implemented. From that point, the effectiveness of the corrective action plan will be reported via the status report.

Each behind-schedule task will be assessed in terms of its criticality to the overall project. If the late task appears on the Dependency Chart, then the down-stream impact of its schedule slippage must be carefully reviewed in order to reduce the risk to the overall project. The alliance management team will work with the CCSAS management team to determine how best to get the at-risk task back on schedule.

Following decisions by the alliance management team and the executive stakeholders, these data may be used to make adjustments to the Integrated Plan components such as modifying the high-level schedule represented in the Roadmap, adjusting the Project Schedule or realigning the dates of cross-project dependencies. These updates are essential to notify impacted teams that re-planning is needed. Additionally, keeping the Roadmap and Dependency Chart current makes it possible to brief executive management on key changes, and request decisions and approvals on a proactive basis.

The alliance will perform post-project reviews for each functional area at agreed-upon checkpoints so that project successes and challenges may be discussed and documented. The project team will be able to take advantage of lessons learned and successful approaches taken as they refine their detailed plans for the next phase of work.

3A.7.7 Conclusion

Effective and efficient cost and schedule management are crucial to the success of the CCSAS CSE project. Three primary phases of planning and management have been discussed in this section: Proposal Preparation, Proposal Submission to Contract Award, and On-Going Project Monitoring and Control.

A family of integrated planning tools will be central to the alliance strategy in achieving successful cost and schedule management. One of the most important of these will be the use of PMOffice™ to support the earned value analysis process. Another will be the use of the Roadmap and the Dependency Chart to align milestones and activities across the diverse projects and organizations. Together, these tools reflect the perspective of management at various levels, their shared management responsibilities and the cross-project commitments that are necessary to succeed in the context of the complexities of a project of the scale of CSE and the broader CCSAS efforts.

3A.8 Staffing Management

Timely and effective staffing management governs the entire project effort and is part of the foundation for project success.

3A.8.1 Introduction

A project can only succeed when talented and motivated people join together effectively to achieve common objectives. A project manager will be well versed in the methods of dealing with people in the operations of an on-going enterprise. However, the project manager must also be sensitive to the unique needs of the project environment and how to apply this general knowledge in a specific way.

The temporary nature of projects means that personal and organizational relationships generally will be temporary and quite often new. Staff-related project management processes must address these transient relationships. Both the nature and the number of people involved in a project will change as the project moves through its life cycle. It is critical to identify and secure the correct skills on the project team throughout the project, as outlined in Section 3A.6 Contractor Team Management. Staff management processes must also recognize and address these changing needs and employ an aggressive plan for retention.

The alliance brings together talented people to meet the challenge of the CCSAS CSE project. The State brings talented people and knowledge specific to the business needs of CCSAS. Together, we can establish the infrastructure and the environment for project staff to succeed.

3A.8.2 Staffing Approach

The CCSAS CSE project represents a large and complex undertaking. A project of this nature must be staffed with skilled individuals whose roles and responsibilities are clearly defined, communicated, and understood. The staffing process begins with establishing the objectives of the project team. Next, we apply the prior experience of our team in delivering projects of similar size and complexity. Experience and knowledge drives the organizational structure, roles and responsibilities, allowing for the successful development and implementation of the California Child Support Enforcement System.

One of the innovative approaches to our proposed project organization is our use of "blended" teams. The people of the alliance bring strong credentials to this project. We will create a team that blends the experience of each of our partners, providing a team with extensive experience in designing and implementing systems. Our team will then unite with the CCSAS staff to form an integrated project team, building a quality, state-

of-the-art CSE system, implemented and transitioned in a non-disruptive and timely manner.

The first step in determining an effective organizational structure is to establish common objectives for the integrated CCSAS CSE project team. These objectives must be in concert with the overall objectives of the CCSAS project. We have chosen the following objectives on which to build our project organization:

- Promote partnership among the team members (CCSAS project staff, State agencies and departments, their stakeholders, and the alliance project team) through frequent and honest communication between all teams
- Work as one team
- Hire/staff the right people, with the right skills
- Instill a culture focused on quality results, based on a motivated and productive work ethic, that expects and rewards this behavior
- Deliver the required services with an experienced, skilled team that produces high quality work products and deliverables
- Mutually accomplish these objectives on schedule and on budget
- Promote a cooperative relationship in which conflicts are resolved through communication and negotiation
- Pledge commitment to a process for continuous improvements

3A.8.3 Staffing and Time Estimating

The alliance respects the large resource and political investment that a project like CCSAS requires of California. We will step up to our project management responsibilities backed by a proven methodology designed to keep this project on time, within budget, and up to quality standards.

In the process of preparing our response, we have defined a Work Breakdown Structure with the tasks and activities needed to accomplish the CCSAS CSE project. Using our proven management methodology, the proposal development team constructed both top-down and task-based estimates. The estimating methodology provides for estimates of the project effort using a bottoms-up technique at a detailed task-by-task level. It allows for extrapolation of effort for subsequent phases of the project, and an estimation of both the management and the contingency effort. Using these estimates, we then drew upon past experience to determine what types of resources will be needed to accomplish these tasks and activities, and what skills those resources will need to possess. When the resources were applied to the tasks and activities over time, an initial version of the project schedule was established. The staffing estimates were then adjusted to align more closely with the overall effort, and reduce “peaks and valleys” in project staffing. This process of estimating and staffing will be repeated during the collaborative planning effort (as described in Section 3A.7.5) and refined again during the Project Launch, and subsequent planning efforts thereafter.

The planning process results in a project schedule, task resource assignments, and definition of a critical path. A clear definition of each member’s role and responsibility on the team will accompany the project plan. Because detailed planning is critical to the

decomposition of project activities into work tasks, the alliance will conduct project-planning workshops with the management team and the team leaders. The output of these planning workshops will be a series of detailed project plans that contain the Work Breakdown Structure (WBS) for the activities to be performed within a functional area. This WBS defines the scope of the project, with each descending level representing an increasingly more detailed definition of the work elements.

In order to manage the staffing needs of a complex undertaking like the CCSAS project, comprehensive resource planning will be a critical success factor.

The Deputy Project Executive will track the planned number of staff against the actual number of staff based on the planned and actual start dates of each. Costs and skills are also tracked by resource category. Early during planning activities, the staffing levels are no more than an estimate, derived from the initial Project Work Plan, of what numbers of which skills will be needed in what time frame. As planning proceeds, the staffing needs become more solid and act as a constraint on the project management schedule.

3A.8.4 Approach to Acquiring & Retaining Skilled Staff

Our alliance brings extensive numbers of resources with child support experience that have worked on similar projects, in other states. The WBS and Project Schedule determine the numbers and types of staff needed. Project procedures will be developed to support staffing from multiple organizations since many of the staff will not have worked together previously. Human resource policies and procedures from each of the alliance partners will need to be adhered to. Additionally we will work with the CCSAS project team to determine the assignment of State personnel to the combined CCSAS CSE project team. Staff requisitions will include descriptions of position, skills, and duration of assignment.

Existing staff due for roll-off will be considered first for positions within the project, depending on the skills match. This method will help to support staff continuity throughout the life of the project. It will be critical to balance the skills needed during a project phase with the valuable knowledge that staff members will have gained by working on the project. Staffing decisions will need to weigh the relative value of a high skills match vs. project knowledge when assignments are made.

Each of the alliance partners has a wealth of experience in retaining high performance teams. Our firms are deeply rooted in a high performance culture that rewards staff for results delivered. There are various methods the alliance partners employ to retain highly skilled staff:

- Opportunity for new skills development, training, and education
- Providing promotions from within the team to new roles over time
- Mentorship programs
- Opportunity for working on market relevant technologies
- Awards based programs for high performers and successful project delivery

3A.8.5 Approach to Training New Staff

The alliance project staff will arrive with the fundamental skills and subject matter expertise needed, as a result of the screening during the acquisition process. The training and team building exercises that are identified during Project Launch activities are critical to supporting staff productivity for the specific CCSAS CSE project demands. A specific requirement is orientation to the CCSAS project, introduction to PMOffice™, and assimilation into the project team and the standards, procedures and tools documented in the Project Management Plan. This focus will help all members of the project team to remain motivated and become productive as quickly as possible. The ongoing skills training program will support growth opportunities and retention goals.

Steps to support the orientation process are:
1. Prepare the orientation materials needed. These materials provide the team with a common understanding of the project, including information about sponsor, project goals and objectives, the project management system, approach, scope, deliverables.
2. Orient staff using individual and group meetings as appropriate.
3. Deliver any initial training and orientation, especially on project specific procedures, , and the use of PMOffice™.
4. Allocate office and material.
5. Assign a team member as a mentor and “go to” person for questions about the project.
6. Assign work packages and task assignments in the WBS and Project Schedule.
7. Validate successful assimilation by examining early outputs from work to validate assimilation of assignments.

3A.8.6 Approach to Identifying and Mitigating Related Risks

The primary risk to staff acquisition is the lack of affordable skills in the marketplace in the specific locations where the work needs to be done. Additional risks related to staff retention and turnover include:

- Lack of communication about performance expectations and measurements
- Lack of clear understanding about the project’s objectives
- Skills/job mismatch
- Failure to establish and support high performing teams

The Project Management Plan will address staff acquisition, team building, and orientation activities. However, there are specific actions that will be put into place to mitigate the risks noted above. These actions are described in the PMP and include:

- Targeting the appropriate staffing levels for the skills needed in the WBS
- Setting performance expectations and measurements for the team

- Assessing the performance of team members
- Enhancing individual and team performance
- Providing challenging and interesting growth opportunities

Setting performance expectations and measurements mitigates the risk of lack of communications about performance expectations and lack of a clear understanding about the project's objectives. The functional area managers and/or team leads will be responsible for working with individual members of their team to develop and administer individual and team objectives such as: sponsor satisfaction, quality, achievement of milestones, productivity, cost control, and teamwork.

Assessing performance of the team members helps to mitigate the risk of a skill/job mismatch. These assessments will be performed at the end of each phase or every six months. The functional managers and/or team leads will be responsible for working with each team member to:

- Analyze the individual's overall performance
- Consider the team member's contribution to the team
- Consider the team member's relationship to CCSAS project staff
- Provide suggestions for improvement
- Review the assessment with the next level manager

Enhancing team and individual performance helps to mitigate the risk of failure to support high performing teams. Each team will follow a set of common objectives and ground rules for the operation of the team. This encourages an environment for high performing teams. Some of the characteristics of high performing teams are: a sense of purpose, trust and mutual respect, effective working procedures and environment, building on differences, flexibility, and adaptability.

Management of each team will be critical to the project as a whole. The goals of team management are:

- Integrate the team into the project and promote a shared common vision
- Develop team communication channels
- Establish leadership of the team
- Build a supportive atmosphere for the team
- Acknowledge conflicts and resolve them early

3A.8.7 Conclusion

The development and continual revision of staffing requirements embodied in the Project Management Plan, WBS, and Project Schedule provide the means to successfully manage staff and skill sets throughout the life of the CCSAS CSE project.

The benefits derived from careful planning and execution of the human resource management activities of a project include fast ramp-up as resources are assigned to project work, improved efficiency as individuals begin to perform as a cohesive team,

and reduced costs associated with lower turn-over, higher productivity and fewer errors than would otherwise arise when individuals are dissatisfied in the project's work environment.

3A.9 Risk Management

Effective risk management helps transform ill-defined concerns about what can go wrong into well-defined strategies and tasks for dealing with threats to project success.

3A.9.1 Introduction

All projects have risks. A risk is a potential event or future situation that may adversely affect the project's ability to achieve success targets. Adverse effects include diminished quality, increased costs, delayed completion, a dissatisfied sponsor, or ultimately, project failure. The management of risk is a vital undertaking for any project. By managing risks throughout the project life cycle, the alliance will proactively reduce the likelihood of project disruption, rather than reactively deal with problems after they occur, thus reducing potential cost and schedule impacts. The CCSAS has demonstrated their awareness of the importance of managing risk by their development of a Risk Management Plan. In alignment with the CCSAS plan, the alliance has assigned oversight of risk management to the alliance PMO, although every member of the alliance management team shares responsibility for risk management.

An integrated approach to both project and technical risk management facilitates coordination of risk mitigation strategies and contingency planning.

The alliance's task-based approach to risk management provides the key prerequisite to successful risk management—an explicit definition of targets and the targets' measures of success. Our approach provides the framework for analyzing and evaluating risks, and it defines a strategy for mitigating risks by reducing uncertainty, generating options, and addressing the threats directly. This approach, combined with periodic performance measurement and the discipline of formal project reviews, will help the project achieve breakthrough performance and meet its performance measures for critical functional areas.

The alliance's risk management approach stresses three key elements that are applied in the planning phase:

- Identifying the key elements for success
- Identifying the risks that threaten these elements of success
- Establishing specific actions to minimize risk and integrating these actions directly into the project management plan

A critical success factor in establishing effective management controls is creating and maintaining the Risk Management Plan (CDL PM 012) as a living document. The Risk Management Plan is created as an initial step in project launch, and is continually reviewed and updated. Risk status is communicated regularly to key stakeholders as part of the project management process, to allow the organizations to improve

themselves and their performance. The Risk Management Plan will contain a task-based approach. Our approach consists of several key areas: defining and setting targets, identifying risks, analyzing risks, mitigating risks, and monitoring and reporting risks. As another approach to managing risk, the alliance conducts formal project reviews (as described in Section 3A.10). We have developed and refined the concept of a formal project review as a powerful method for managing risk. The primary objective of the review is to identify and assess significant risk and to determine how to reduce the likelihood and severity of the risk.

The alliance's approach embraces the concept of continuous risk management as defined by the Software Engineering Institute (SEI). Continuous risk management requires that risks be identified throughout the project, not as a one-time only activity during the planning of the project. Risks must be analyzed on an on-going basis to deal with changing conditions and priorities on the project. As new risks are identified, strategies and plans to deal with them must be developed and executed. Risk management needs to be integrated across all the project teams. The alliance management team will be assessing risks for each of the project phases, using the PMOffice™ tool, and using accepted best practices to develop mitigation strategies.

The IEEE standards also note that it is critical to identify and mitigate risks continuously. They define risk management as " A continuous process for systematically addressing risk throughout the life cycle of a product or service." The alliance's risk management procedures address internal risks (those under the control or influence of the project team, such as quality of deliverables, cost/schedule or technical risks) and external risks (those outside the control or influence of the project team such as governmental legislation). While the focus of the alliance Risk Management program will be on internal risks (i.e., those under its control), we will also identify risks outside of the control of the alliance and bring them to the attention of the CCSAS Risk Management organization. There is also a subset of internal project risks that will be forwarded for management review at the CCSAS level. In the remainder of this chapter, risks managed by the alliance are referred to as alliance-level risks, while those forwarded to the CCSAS Risk Management program are referred to as CCSAS-level risks.

3A.9.2 Organization of Alliance Risk Management Program

The participants in the alliance Risk Management program described in this plan include:

- Alliance Project Executive
- Alliance Risk Coordinator
- Alliance Management Team
- Alliance Risk Owners
- Action Managers
- Risk Reporters

Their roles and responsibilities are described below:

Alliance Project Executive

This role is described in the Project Management Plan. The following list of responsibilities addresses only those associated with risk management. This role includes many additional responsibilities. The risk management responsibilities include:

- Assuming overall responsibility for Risk Management activities within the CSE project
- Escalating at appropriate points to the CCSAS Risk Management Program
- Overseeing the activities of the alliance Risk Coordinator
- Participating as needed in meetings with the CCSAS Risk Management Program

Alliance Risk Coordinator

This role is a person within the alliance PMO with specific responsibilities for risk management. He/she reports to the alliance Project Executive. His/her responsibilities include:

- Acting as the primary liaison between the CCSAS Risk Management Program and the alliance Risk Management Program, and participating on a regular basis in the CCSAS Risk Management Program
- Facilitating the identification of all risks that may impact the project.
- Confirming that all alliance-level risks are appropriately logged into PMOffice™ tool
- Reviewing alliance-level risks so that there are no duplicates
- Confirming that a risk owner is assigned to each alliance-level risk
- Confirming that each alliance-level risk is assessed for probability of occurrence and potential impact on the project
- Confirming there is a mitigation strategy with clearly defined actions for each alliance-level risk, and that the strategy is properly implemented
- Recommending to the alliance management team which risks should be reviewed by them and which are potential candidates for forwarding to the CCSAS Risk Manager
- Regularly reviewing the alliance-level risks and associated data in the PMOffice™ tool to validate that it is complete and up to date, and notifying owners if updates are needed
- Issuing reports on alliance-level risks and their status to all interested parties at both alliance and CCSAS levels

Alliance Management Team

This team is the senior management team, comprised of the alliance Project Executive, the Deputy Project Executive, and the project managers. Their roles are broader than those described below, which includes a description of only the responsibilities specifically related to risk management. These responsibilities include:

- Actively monitoring the top 5-10 alliance-level risks, based on selection subsequent to probability/impact analysis, including approval of the mitigation strategy for these risks
- Approving those risks that are to be forwarded to the CCSAS Risk Manager (to become CCSAS-level risks)
- Recommending/approving ownership of alliance-level risks
- Reviewing any additional alliance-level risks referred to them by the alliance Risk Coordinator
- Reviewing/monitoring alliance-level risk reports
- Approving the closure of alliance-level risks.

Alliance Risk Owners

Alliance Risk Owners may own alliance-level risks as well as CCSAS-level risks. Their responsibilities are basically the same, regardless of the type of risk owned. Alliance Risk Owners should be members of the alliance management team, and should be attendees at the regularly scheduled alliance management team meetings. Their risk-related responsibilities include:

- Formulating and implementing risk mitigation strategies for risks assigned to them, updating and modifying them as necessary as time progresses
- Assigning responsibility for mitigation actions to Action Managers and monitoring progress of those actions
- Validating that the completion of actions is entered into PMOffice™ (for alliance-level risks) or reported to CCSAS Risk Coordinator (for CCSAS-level risks)
- Participating as required in CCSAS Risk Management Program
- Recommending to the alliance management team that they approve closure of alliance-level risks at the appropriate time.

Action Managers

Action Managers are those members of the CCSAS CSE project who are assigned activities for mitigating both alliance-level and CCSAS-level risks. Their responsibilities are basically the same, regardless of the type of risk being mitigated. Their responsibilities include:

- Performing risk mitigation activities as assigned
- Entering completion data into PMOffice™ (for alliance-level issues) or reporting completion data to the CCSAS Risk Coordinator (for CCSAS-level issues) as it occurs.

Risk Reporters

Risk Reporters are project team members (either alliance or CCSAS project staff) who identify risks and enter them into the PMOffice™ tool. Risk Reporters should verify the appropriateness of a risk with their managers prior to data entry. Responsibilities include:

- Entering alliance-level risks into the alliance PMOffice™ tool, validating that the risk isn't a duplicate of one already identified
- Notifying the alliance Risk Coordinator that a new risk has been entered.

3A.9.3 Overview of Alliance Risk Management Process

The alliance has customized its risk management procedures based on those documented by the California Franchise Tax Board in the Risk Management Plan for the CCSAS project (final version 4.1 dated January 5, 2001). While there are minor modifications to the State procedures for the management of alliance-level risks, the similarity in process facilitates the movement of risks from the alliance to CCSAS, and provides a common framework for risk management at all levels of the program.

Risk management is iterative, and is conducted throughout the project life cycle. The basic phases are:

- Identification
- Assessment
- Mitigation
- Documentation and Reporting

This section is an overview of the alliance risk management process for managing alliance-level risks. The alliance will follow the CCSAS program procedures for CCSAS-level risks. Figure 3A.9-1 represents the alliance Risk Management Process.

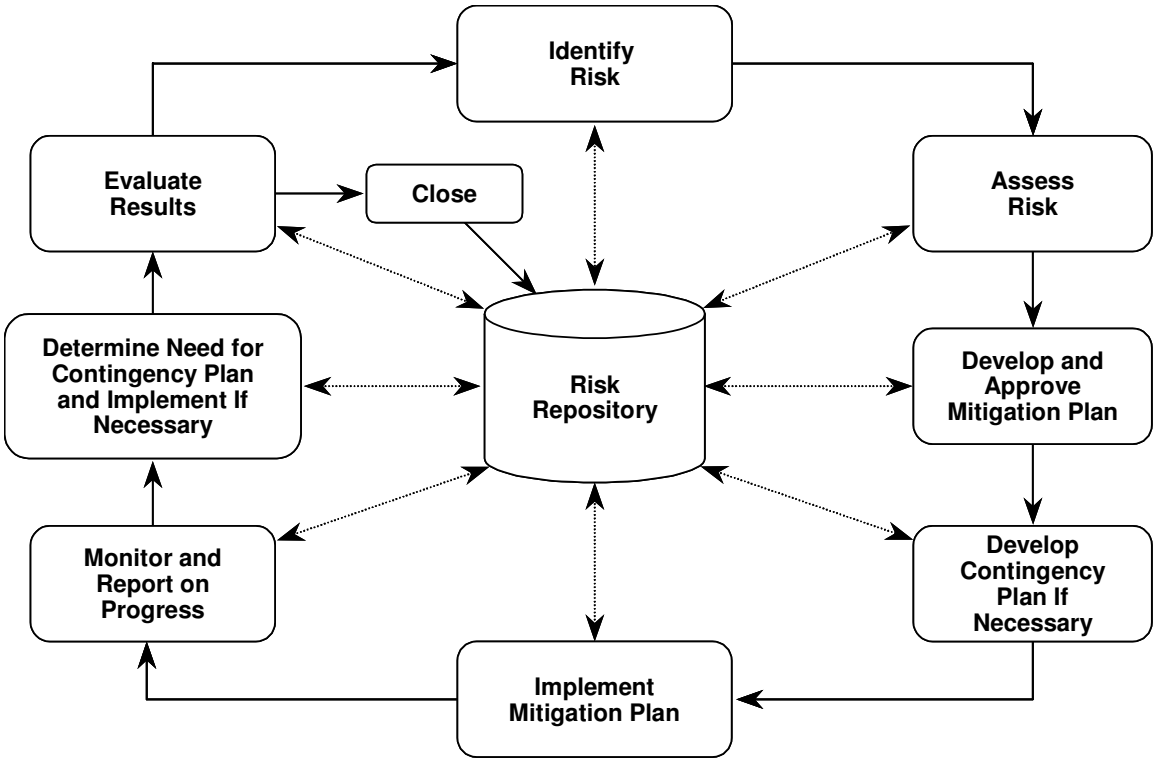


Figure 3A.9-1 Alliance Risk Management Process – *All information related to risks and their status is contained in the PMOffice ™ tool.*

Once identified, each alliance-level risk will be recorded in the alliance PMOffice™ tool. With the approval of the alliance management team, the alliance Risk Coordinator will assign a Risk Owner, who will perform a qualitative assessment and will enter that information into the PMOffice™ tool. The alliance Risk Coordinator reviews all risks and recommends to the alliance management team the top 5-10 risks that they should actively monitor. The alliance Risk Coordinator will also make a recommendation about which risks should be forwarded to the CCSAS Risk Management Program, and then reviews that list with the alliance management team. The alliance management team approves mitigation strategies for those risks they are actively managing. The alliance Risk Coordinator reviews the mitigation strategies for all other risks, and brings only selected risks to the alliance Management Team. Risk Owners develop and implement Risk Mitigation plans, and report actions in the PMOffice™ tool. Reports are issued on a regular basis to the alliance management team and other interested parties.

In the sections following, a description of what takes place in each of the individual phases is provided. As part of the project launch activities, the alliance Risk Management Plan (CDL PM 012) will be developed and documented for all team members. This plan will present the details to supplement the overall processes described here. Activities to take place during project launch include:

- Develop and document a detailed Risk Management Plan (including identification of key elements for success)

- Review values for data elements already set up in PMOffice™ and determine which are appropriate for alliance risks, and identify if any new values need to be entered
- Determine frequency, contents, and distribution lists for alliance Risk Reports and risk meetings
- Review risks already identified and determine if additional risks have surfaced during start-up.

3A.9.4 Phases of Risk Management Process

3A.9.4.1 Risk Identification

As stated in the CCSAS Risk Management Plan, risk identification "is the process by which the perception of a potential problem is translated into recorded information containing sufficient detail to enable effective assessment of the risk to support subsequent management decisions." Figure 3A.9-2 presents possible sources of risk identification.

Source Type	Source Input	Feedback Mechanism
Top Down	Executive Stakeholder Meetings	Feedback from executives at meeting
	Project Reviews	Feedback from senior managers at project reviews
	Dependency Management	Results of monitoring dependencies
Middle Management	Individual Team Leaders	Discussions with Team Leaders
	Executive Stakeholder Meetings	Preparation for meeting, looking ahead 1-2 months for barriers to success
	Issue Management	Escalation of issues that become risks because they cannot be resolved
	Alliance Team Meetings	Discussion of current threats
Bottom Up	Weekly Team Status Reports	Content of Team Leader reports focusing on tasks completed, tasks late, and issues/risks facing each team
Outside In	Technical Architecture Review	Feedback from technical SMEs who review the technical architecture
	Deliverable reviews on selected work products	Feedback from end users or others not involved in the day-to-day project work
	IV&V Assessments	Assessments that indicate quality expectations are not being met

Figure 3A.9-2 Sources of Risk Identification – *Risk discovery and identification takes place from many perspectives.*

As indicated, risks can be discovered at every level of the organization. All team members should be alert to recognize risks in the course of their daily work, and should bring potential risks to the attention of their team leaders or managers as they discover

them. Risks may also gain exposure at reviews with managers or executives, at meetings held with co-workers, or during interactions with stakeholders.

One form of risk identification involves a top down approach. Executives or senior managers have insights into multiple projects and thus can look for patterns that occur across projects. From their vantage point, they can often see trends that are not visible to staff involved in the day-to-day work on a specific project. Feedback from executive stakeholder meetings provides this type of feedback. Feedback from senior managers at project reviews provides the same kind of input. The alliance's integrated planning approach includes creation of a dependency chart at the program level, and the subsequent monitoring of how well dependencies are met. Difficulties in meeting dependencies are yet another indicator of potential risks.

Another form of risk identification involves input from middle management. These people are involved in the day-to-day management of the project, but their roles often require them to periodically step back and analyze project status. One instance in which this occurs is when they are preparing for executive stakeholder meetings; another is when they are discussing current threats at regularly scheduled alliance management team meetings. Other forms of risk identification from middle management include the escalation of issues that reach risk-level because they cannot be resolved at lower levels, as well as the cumulative impact of large volumes of unresolved issues. Another aspect of the middle management role is that they communicate with subordinates across teams on a regular basis, thus having a broader view of the entire project, and may be able to see patterns that individual team leaders do not recognize.

A more formal input to risk identification is through status reports. These provide a bottom-up view, in that at each level of the organization, there is a mechanism for reporting upwards. These reports include status of current and late tasks, as well as a discussion of issues/risks facing the status reporter. This is the primary vehicle for most of the project staff to participate in the process of identifying risks.

People outside of the project may also have unique, broader perspectives, which will indicate risks that may not be as obvious to people with a single project focus. One way to encourage outside input is to invite SMEs from outside the project itself to participate in reviews and walk-throughs. Another way is to involve end-users in such exercises. Also, IV&V will sometimes identify risks. For information on how technical risks are handled, see Section 3C.6 Technical Risk Management.

Once a risk has been identified, the Risk Reporter documents the basic information in the PMOffice™ tool and notifies the alliance Risk Coordinator. The Risk Coordinator will assign a priority based on the definitions and thresholds contained in the Risk Management Plan. The alliance Risk Coordinator presents a list of newly-entered risks at the next alliance management team meeting, and gets approval for appropriate risks. A key role of the Risk Coordinator is to keep the Risk Management process from being confused with the Issue Management process. The alliance management team assigns an owner, whose name is entered into PMOffice™ by the alliance Risk Coordinator. If the alliance management team determines that further detail is required prior to acceptance, the alliance Risk Coordinator communicates that request to the Risk Reporter. If the

management team decides to reject the risk, the alliance Risk Coordinator updates the PMOffice™ accordingly and communicates the decision to the Risk Reporter.

3A.9.4.2 Risk Assessment

The alliance analyzes and prioritizes risks based on a qualitative assessment. Qualitative risk assessment is performed on every alliance-level risk to estimate the probability of a risk occurring and the potential impact of the risk on the project. The steps for qualitative assessment are as follows:

Assess probability: The Alliance Risk Owner estimates the probability of the risk occurring, according to the following definitions (matching those of the CCSAS Risk Management program):

- Very likely >95%
- Probably >50%
- Possible <50%
- Unlikely <10%

Assess impact: The alliance Risk Owner then judges the impact of each risk, assuming that it will occur, according to the following criteria (matching those of the CCSAS Risk Management program):

	Schedule Slippage	Cost Increase	Resulting Performance
High	>6 months	>$20M	<80%
Medium	> 3 months and <6 months	> $5M and <20M	<90% and >80%
Low	<3 months	< $5M	>90%

In this context, schedule slippage refers to the number of months the schedule will fall behind if this risk occurs. Cost increase refers to the increase in total cost of the project if the risk occurs. Resulting performance refers to the impact on either functional or technical performance, as compared with the currently agreed to requirement. At the point in the risk management process at which this estimation occurs, it will of necessity be a high level estimate, and it should be understood that more detailed analysis would need to occur before these estimates would be validated. However, it is worthwhile to perform the estimate to provide a context in which to prioritize risks.

Present results: The alliance Risk Coordinator then shows the overall results of this analysis on an Impact/Probability Chart called a Risk Grid (see figure 3A.9-3). The alliance Risk Coordinator then uses this assessment to determine which risks he/she will recommend be monitored at the alliance management team level. It also provides input to the alliance management team as they determine which risks to forward to the CCSAS Risk Management Team. It is likely that the alliance management team will actively monitor only the top 5-10 alliance-level risks, but will continue to oversee management of all alliance-level risks via risk reports.

Figure 3A.9-3 Risk Impact/Probability Grid – *Risks are assessed both on their impact to the project as well as their*

Probability (scale of 1 to 5)				
1, 10	2, 3, 5	21, 22	7, 12	8, 9, 14
	4	6, 9, 17	18, 25	16, 26
	11, 23	27		
		28		
		29, 30	33	31, 32

Impact (scale of 1 to 5)

probability of occurrence. (The numbers in the boxes are the Individual Risk Numbers for each probability/impact combination.)

As part of the discussions at its regularly scheduled meetings, the Alliance Management Team may determine that it is appropriate to forward a risk to the CCSAS Risk Management team. Reasons for doing so may include:

- Control of the risk is external to the alliance and thus more appropriately managed at the CCSAS level
- The impact is significant enough that the CCSAS Risk Management Committee needs to be aware of and monitor this risk

3A.9.4.3 Risk Mitigation

The purpose of risk mitigation is to identify, define, plan and staff activities that can reduce the probability of a risk occurrence or the impact of a risk, should it occur. Countermeasures will either change aspects of risk factors leading to risk and/or attack the consequence of the risk itself. The alliance Risk Owners will develop the mitigation strategies, document them, and determine when these plans need to be initiated.

The alliance management team will review and approve/modify/reject the mitigation strategies for those risks they are actively monitoring. The alliance Risk Coordinator will review and monitor all other mitigation strategies, bringing them to the attention of the management team if he/she has any concerns about their viability.

Often, it is not possible for a Mitigation Plan to make a risk disappear (i.e., have 0% probability.) Rather, risk mitigation strategies often address reducing the negative impact of the occurrence of a risk. Strategies usually address one of the following, as described in the CCSAS Risk Management Plan:

- Risk Reduction—reduction of the effect of the risk to an acceptable level
- Risk Monitoring—mitigation could have a more negative effect than the risk itself, so a strategy might be to continue monitoring the risk and not mitigating it unless something changes
- Risk Protection—adoption of parallel measures that would reduce the impact if the risk occurred; an example would be having a second source of hardware if there is risk of the original source not delivering
- Risk Transference—transferring the impact of the risk to another area where the consequences are more tolerable

Risk mitigation strategies have actions associated with them. These actions should be reflected in the detailed project plans for each functional area. Also, the alliance Risk Owners, working with the alliance Risk Coordinator, will identify measures that will be collected to monitor the effectiveness of each mitigation plan in avoiding or reducing the impact and probability of the risk. These will be gathered and reported on regularly.

3A.9.4.4 Contingency Planning

Depending on the nature and severity of a particular risk, the alliance management team may decide that it is necessary to create a contingency plan for that risk. The purpose of contingency planning is to define the actions to be taken if a risk consequence occurs or the impact of a risk is greater than expected. A risk contingency plan contains the following information:

- Contingency plan objective
- Measures and values that cause the contingency plan to be put into effect
- Early warning signals that the contingency plan is needed (if any)
- Approval necessary
- Owner
- Specific actions to be taken
- Any impacts to cost or schedule

Not every risk on the project will require a contingency plan, but it is important to have the details of the contingency plan mapped out in advance of a risk occurrence in the event that the risk mitigation strategy fails to meet expectations.

3A.9.4.5 Risk Documentation and Reporting

The documentation of risks should occur on an ongoing basis from the beginning until the end of the project. The alliance Risk Owner is responsible for confirming that the updates to the risk documentation in PMOffice™ occur on a regular basis. The alliance Risk Coordinator monitors this and coordinates with the appropriate alliance Risk Owners if documentation falls behind.

Once an alliance-level risk is no longer considered a threat, the alliance Risk Owner, with the concurrence of the alliance Risk Coordinator, recommends closure of the risk to the alliance management team. If closure is agreed to, the alliance Risk Owner changes the status in PMOffice™ to "closed", and records the reason for closure in the database. Data from all closed alliance-level risks will remain in PMOffice™ for future analysis and reporting.

Risk reporting is also an ongoing process throughout the project life cycle. Reporting needs may vary at different points in the project, depending on the number of risks, their severities, etc. At the beginning of each phase, the alliance Risk Coordinator should address this issue with the alliance management team and reach agreement on what reports should be issued, to whom they should be distributed, and at what frequency they should be prepared. At a minimum, the alliance Risk Coordinator will prepare a risk report for each alliance management team meeting in which risks are discussed. In addition, on at least a quarterly basis, the alliance Risk Coordinator will revisit the status of all risks on the projects, and will develop a report for the alliance management team. Upon approval of the report, the alliance Risk Coordinator will then forward it to the Project Executive. The Risk Management Plan (CDL PM 012), which will be developed during project launch, will detail the considerations for these reports.

3A.9.5 Approach to Risk Orientation and Training for Project Staff

As a part of the orientation, a discussion of risk management and the specific risks associated with this project will be provided to the CCSAS CSE project staff. A walk through of the risk identification procedures will be included. CCSAS CSE project staff members will also be trained to raise potential project risks as a part of their weekly project status reports. Training on the Risk Management tool will be given to appropriate project staff.

3A.9.6 Conclusion

Vigilant risk management is essential throughout a project's life cycle, from project initiation throughout implementation and on-going operations. In a project, risks will originate at various times from various sources. The alliance's proactive approach to risk management provides iterative processes concerned not only with the identification and analysis of risk, but also responds to project risks through the development of mitigation strategies. By actively managing and monitoring the results of mitigation activities, and by developing and implementing contingency plans as necessary, the alliance's risk

management program enhances the likelihood of achievement of project success targets.

For any project's risk management plan to be successful, it is essential that all staff understand how they report risks, the difference between issues and risks, and how their actions and insights can help increase the success of the project. The recognition of the importance of each team member's role is vital. It will be an integral part of the alliance's project culture from the beginning, and will be reinforced throughout the project life cycle. By having all team members cognizant of the importance of risk identification and mitigation, by having a comprehensive Risk Management Plan in place throughout the project, and by actively managing and mitigating risks, the alliance will achieve breakthrough performance and meet its performance measures for critical functional areas.

3A.10 Quality Management

Quality is everyone's job – our quality management approach provides the infrastructure and oversight to make sure it happens.

3A.10.1 Introduction

Quality Management is an integral component of the alliance's management approach. Its primary purpose is to oversee each aspect of the project so that it meets the overall CCSAS objectives. The alliance has found that without a specific focus on measurable quality and productivity, results may vary across project areas and project activities on a large-scale project such as this. Therefore, we use Quality Management activities to focus on improving project productivity, improving project quality, and measuring compliance with project objectives and progress toward them.

The intent of the alliance's Quality Management activities is to provide the project teams with the procedures, standards and infrastructure that maximize quality results. Quality is in the eye of the receiver – our customer. In the alliance's view, everyone working on a project is responsible for establishing quality, so quality initiatives are inter-woven throughout the project plan and sufficient time for quality activities is build into the estimates for each task or activity.

3A.10.2 Approach to Quality Management

> You can't achieve quality…unless you specify it
>
> Deutsch & Willis

The alliance team will employ a quality management approach so that the program activities and deliverables adhere to our high quality standards. Focusing on the CCSAS program objectives, we will build quality up-front into our overall project at multiple levels (project, team, etc.) and independently assess that quality throughout the life cycle to verify its integrity.

Four principles act as the foundation for the alliance approach to Quality Management:

- **Define quality objectively.** When we define what quality means within the CCSAS CSE project, we can determine how to achieve it.
- **Do it right the first time.** When we build in quality from the start, we won't have unexpected rework.
- **Eliminate defects early.** Early defect identification (design flaws, issues, code defects, etc.) and correction result in a higher quality result and lower cost of maintenance.

- **Use data to manage quality.** We measure and analyze performance data about quality, so we can see how we are doing and what needs to be improved. We will collect and analyze data to answer two questions: How are we doing relative to our plan? Where should we focus our attention?

We have selected these principles to define the alliance approach to quality management for three reasons:

- They are compatible with the kind of work that we do, and our corporate culture
- They are consistent with the international standards (such as ISO 9000-3, ISO 9004 and IEEE 1061)
- They work

The alliance quality management approach is fundamentally consistent with recognized industry standards such as the Project Management Institute (PMI), the Institute of Electrical and Electronics Engineers (IEEE), the Capability Maturity Model (CMM) and the ISO 9000 Quality Standards. The alliance quality practices are robust in that they provide a comprehensive end-to-end roadmap, with guidelines for the overall effort needed to meet the needs of projects like the CCSAS CSE project. However, they are intentionally less prescriptive to provide flexibility, allowing project managers to be responsive to the requirements of individual organizations in determining what is most appropriate in the context of each unique project.

Our approach to Quality Management includes the following techniques:

- Standards Definition
- Deliverable Reviews
- Quality Oversight
- Performance Measurement
- Project Reviews

3A.10.2.1 Standards Definition

Project standards and guidelines are created to provide consistency and quality of interim work products and deliverables across the CCSAS CSE project team. These standards enable all team members to understand the expectations for producing quality deliverables and allow them to easily review or contribute to deliverables developed by other teams. The standards are used during deliverable reviews, and also serve to improve maintainability after final delivery of the system. There will be multiple standards since different standards are required for different types of work products and deliverables.

3A.10.2.2 Deliverable Reviews

The main purpose of a deliverable review is to identify and correct defects found in the deliverable as early as possible to avoid any potential project implementation risks. Secondary benefits include developing a better understanding of the work products,

determining how defects might be prevented in the future, and improving maintainability. The deliverable review sessions occur during all phases of the system development life cycle and should detect, reduce, and verify the correction of defects identified in the deliverable.

3A.10.2.3 Quality Oversight

The purpose of Quality Oversight is to provide the alliance management team with appropriate control of and visibility into the management processes established for the CCSAS CSE project. The Quality Management team is responsible for overseeing the Project Management and Quality Management processes and confirming that they are being followed as documented in the Project Management Plan (CDL PM 001) and the Quality Management Plan (CDL PM 013). The Quality Management team will conduct routine reviews to assess how well the project is following the prescribed processes, and then report on the results in the Quality Activity Report (CDL PM 014).

3A.10.2.4 Performance Measurement

Performance measurement involves the selection of appropriate performance measures for software, management processes, and deliverables, and the subsequent collection and tracking of metric data. For further detail on quality metrics, see section 3A.10.7. The alliance management team will work with the Quality Manager and the Metrics Coordinator during project launch to determine the right set of performance measures that support proactive management. The overall goal for performance measurement is to provide quick feedback to the alliance management team and to rate the performance against the chosen targets and applicable standards. Problems with either quality or productivity indicators require corrective actions and possibly, revisions to the estimates.

3A.10.2.5 Project Reviews

Project reviews serve both a quality control and a project management function because they assess the overall status and condition of the project and generate substantive decisions and action items. The project review team will examine various project-level metrics to determine the overall health of the project:

- Schedule metrics: percent of tasks started/completed on time, late tasks, estimates to complete, estimated LOE vs. actual LOE, key milestone status
- Issue metrics: number and severity of open issues, length of time critical issues have been open
- Risk metrics: number of risks by category (identified, need mitigation, watch, accepted), number of mitigation plans completed, the period-to-period change in total risks identified
- Staffing metrics: ability to complete the project with current and future confirmed resources
- Defect metrics: number and severity of defects, defect discovery rates, defect closure rates
- Financial metrics: planned vs. actual costs, estimated cost to complete, increase in cost due to change requests

Another objective of project reviews is to improve the effectiveness of the overall lifecycle process by reviewing task status and performance against both quality and productivity targets. Unburdened by the day-to-day details of managing the project, the reviewers often identify approaches that may have been overlooked. Often, the normal question and answer process creates new and better ideas for how to address a particular functional, technical, or management issue.

Project reviews are a key component of the alliance's Quality Management approach because they provide senior management from both the alliance partners and the State with a formal means to monitor the project's performance against its underlying business objectives.

3A.10.3 Quality Management Organization

The Quality Manager reports directly to the alliance Project Executive and is responsible for confirming that the approach, standards and procedures defined in the Quality Plan (PM 013) are executed appropriately. The placement of Quality Management in the project organization enhances its ability to conduct objective quality assurance evaluations throughout the project teams and initiate and verify corrective actions required to maintain compliance with the project processes, standards, procedures, and contractual requirements.

3A.10.3.1 Quality Roles and Responsibilities

- Quality roles do not apply solely to the Quality Management team – they are reflected in the way that the CCSAS CSE project team works together to achieve quality results. Figure 3A.10-1 provides an overview of these roles and responsibilities.

Quality Role	Responsibilities
Quality Manager	• Establishes Quality Management policies, coordinate, and communicate the direction of the overall Quality process for the CSE project • Works closely with the QA vendor and the IV&V vendor on quality initiatives for the CCSAS Program • Manages the Quality Management activities and deliverables • Communicates quality issues, trends, and quality-related status to the senior management team • Identifies and resolves issues of non-compliance with the Quality Plan and escalates to the CSE Project Executive when necessary • Oversees Configuration Management activities
Quality Analyst	• Creates and maintains the Quality Management Plan • Performs the quality roles and activities defined in the Quality Management Plan, including review and verification that defined procedures are effectively executed and recorded • Selects and implements appropriate standards and methodologies for project activities

Quality Role	Responsibilities
	• Helps the project prepare for external audits and assist external auditors as requested • Reports the results of internal and external reviews and audits to CSE management and the CCSAS leadership team • Identifies and resolves issues of non-compliance with the Quality Management Plan
Quality Coordinator	• Acts as a dedicated quality resource on the Development, Testing and Implementation teams, with dotted line authority to Quality Manager • Confirms that quality review activities are planned and scheduled • Verifies the deliverables meet their documented specifications • Verifies the deliverables conform to applicable standards, guidelines, plans, and procedures, and documents any deviations from these standards • Works with the team managers to make certain that deviations are corrected by the team • Works with the team managers to collect metric data (e.g., software defect severity, defect type, etc.) • Uses feedback and metrics to improve the deliverable review process • Promotes communication and knowledge transfer amongst project team members
Metrics Coordinator	• Develops the goals and objectives for the measurement program • Establishes processes and tools for collecting, analyzing and reporting metric data • Assists quality coordinators and other project staff with collection of metric data • Prepares metric reports for input to Quality Activity Reporting and Project Status Reports
Alliance Project Executive	• Helps provide adequate, qualified resources to execute the Quality Management activities • Approves and actively supports the project's Quality Plan, roles, and responsibilities • Addresses and resolves escalated issues of non-compliance with the Quality Plan
Alliance Manager and Team Leader	• Performs quality review activities at the team level • Produces deliverables and interim work products in compliance with applicable standards, policies, and procedures as documented in the Quality Plan • Identifies and resolves issues of non-compliance with the Quality Plan
CSE Team Member	• Produces high quality deliverables and interim work products that comply with the defined standards and guidelines for the CCSAS project • Performs quality activities as specified by the standards, policies, and procedures applicable to the deliverables and activities
All CSE Staff	• Make recommendations for improving the documented deliverables, software, and quality processes and procedures to better achieve quality results

Figure 3A.10-1 Quality Roles and Responsibilities - *Quality is the responsibility of everyone on the CSE project, not just the Quality Management organization.*

3A.10.4 Putting Principles into Practice

> It is not enough to say, "We have a quality process and we follow it."

The alliance recognizes that effective quality management complements sound project and technical management. As a result, the alliance manages quality aggressively, so that quality is institutionalized, and integrated into activities across the project, with each team member recognizing his/her personal responsibility as a stakeholder in the project.

3A.10.4.1 Quality Plan

During project launch activities, the Quality Management team will prepare the Quality Management Plan (CDL PM 013), which identifies the specific processes, procedures, standards, and tools to facilitate the quality of work delivered, and to communicate these concepts across the CCSAS CSE project team.

The Quality Management Plan (CDL PM 013) is reviewed and updated every six months so that it remains responsive to project needs and objectives. The Quality Manager works with the management team to implement the quality activities so that the project team knows why and how the quality procedures are being used, and how they can support their use. As updates are made to the Quality Management Plan (CDL PM 013), the Quality Management staff will work with the team managers to train the project staff in the new/updated procedures. The purpose of the training will be to develop the skills and knowledge to perform the quality roles effectively and efficiently. Towards that end, training needs for the different roles will be identified along with the most effective means to impart the knowledge.

3A.10.4.2 Quality Records

It is not enough to say, "We have a quality process, and we follow it." The alliance has to create and maintain quality records that *document* that we followed the process defined in the project quality plan.

Although quality records provide an audit trail, that is only a part of their purpose. **The primary reason to create quality records is to enforce the defined process.** Figure 3A.10-2 represents examples of quality records that would be created and maintained on a large-scale project such as CSE:

• Quality Management Plan (CDL PM 013)
• Project Management Plan (CDL PM 001)
• Risk Management Plan (CDL PM 012)
• Issue Management Plan (CDL PM 016)
• Status Reports
• Meeting Minutes

• Issues, their status, comments and resolution
• Change requests, their status, estimates and disposition
• Test results – unit test, software qualification test, integration test, and others defined in the Software Test Plan.
• Results of deliverable reviews
• Revisions to completed deliverables
• Deliverable sign-off/record of acceptance

Figure 3A.10-2 Quality Program Documentation – Our process for documenting quality management activity provides an audit trail and enables management insight to quality effectiveness.

The Quality Management Plan (CDL PM 013) will document the quality records that will be maintained throughout the CCSAS CSE project and describe how quality activities will be reported.

3A.10.4.3 Quality Management Independence and Authority

Quality Management will report directly to the alliance Project Executive. This placement in the alliance organization shows how seriously the alliance treats quality. In many project organizations, the quality assurance function is part of the development team or the project management team. In those situations, it is difficult, if not impossible, for the Quality Management team to be objective and unbiased in carrying out the responsibilities of the position. By having the Quality Management organization report to the alliance Project Executive, the alliance places the Quality Manager as a peer to both project and technical management. This organization structure provides the independence, authority, and a sufficient number of skilled resources to facilitate objective evaluations and unbiased reporting of findings.

3A.10.5 Verifying Product Quality

Quality control is applied to everything we deliver as part of the CCSAS CSE project – this includes not only the software we modify or develop but also the COTS hardware and software that we configure and install for project use. As part of the services we provide for COTS hardware and software, we will conduct informal audits to verify that this hardware/software functions according to the product specifications, on a limited as-needed basis. For non-technical deliverables, the quality inspections will assess adherence to the defined standards. For software and management deliverables and services, a more formal review process is needed.

3A.10.5.1 Quality Reviews

By formally reviewing our interim work products and deliverables as we complete them—analysis papers, specifications, designs, procedures, code, test plans—we can detect and reduce defects in a more timely fashion. Quality reviews offer additional benefits as well:

- **Improved work product quality in other dimensions**. Reviews enable us to measure and improve readability, completeness, adherence to standards, and performance (for software).
- **Skills growth for the staff**. Reviews help less experienced people to learn best practices, and all team members to understand other parts of the project.
- **Increased productivity for the project**. Reviews identify opportunities to improve the process: need for new or improved standards, opportunities for common functions and software, where team members need training or other help, and where future reviews should focus.

Project managers include in their estimates the time and resources for appropriate reviews of all work products, along with the staffing needed to support implementing quality standards. What is "appropriate" depends on the nature of the work product, the capability of the person who prepared it, and the need to share information about the work product with others on the team. For example, an in-depth and detailed review is required for a complex design or for a new programmer's first program. However, a less rigorous review may be appropriate for less complex work products prepared by experienced team members with proven track records, so management discretion is required.

3A.10.5.2 Deliverables Management Process

The Quality Management organization is responsible for helping to support the CDL Acceptance Process that has been defined for the overall CCSAS project. Quality Management supports this process in the following manner:

- **Deliverables definition.** Confirming that the standards and content for the deliverable are clearly documented and understood.
- **Deliverables control.** Verifying that deliverables are controlled through configuration management.
- **Deliverable validation.** Working with the team managers to determine if the deliverable meets the documented requirements and design.
- **Deliverable release.** Assessing the progress of internal deliverable reviews and corrective actions.
- **Deliverable acceptance.** Working with the Deliverable Coordinator so that appropriate walkthroughs are held, walkthrough minutes distributed, revisions incorporated and revised deliverable resubmitted for approval.

3A.10.6 Relationship to Technical Quality Management

The Quality Manager is responsible for designing and implementing a quality process, overseeing the process to validate that it is being followed, and taking appropriate action if it is not. The Quality Manager is responsible for the quality of the process and the monitoring of that process, *not* of the results. That is the responsibility of the entire project team. That being said, it is worthwhile to illustrate how the Quality Management organization supports and integrates with Technical Quality Management.

The Quality Manager is responsible for verifying that the activities described in the Configuration Management Plan (CDL TM 003) are taking place. Likewise, the Quality Manager has the responsibility for verifying that the Requirements Traceability Matrix is created and maintained according to the procedures defined in the Requirements Management Plan (CDL TM 006). The Quality Manager, working with the Quality Coordinators, will assess the compliance of the Architecture, Application Development, Testing and Implementation teams with the processes and procedures that have been established for their respective areas. Within each functional area, the Quality Coordinators will be responsible for executing the activities described in the Technical Quality Management section such as system design reviews (section 3C.8), and the code reviews and standards reviews outlined in Section 3C.9, and reporting the results of those activities to the Quality Manager.

For more information on the alliance approach to Technical Quality Management and the principles embodied in the EXPECT model, see Section 3C.9.

3A.10.7 Quality Metrics

You cannot manage what you cannot measure.

Establishing an effective Metrics Program for the CCSAS CSE project involves selection of appropriate quality measures and the subsequent collection and tracking of performance data. The overall goal for the alliance Metrics Program is to provide timely feedback on productivity and quality to the alliance team and management, and to measure the performance against chosen targets and applicable standards.

The alliance's approach to software quality measurement includes starting from an initial set of core measures, then expanding the set of chosen measures over time to meet process improvement needs. In addition to the core measures, additional measures, collection methods, and reporting schemes will be tailored to the needs of the CCSAS CSE project and the management control practices defined in the Project Management Plan (CDL PM 001).

3A.10.7.1 Core Software Measures

In order to gauge the capabilities and measure the progress of the CCSAS CSE project team, the alliance will make use of the four core measures recommended by the Software Engineering Institute (SEI):

- Schedule – the planned and actual dates for key milestones and phases
- Size – the estimated and actual size of the software
- Effort – the planned and actual effort in staff-hours for each phase and/or key deliverable
- Defects – the estimated and actual number of defects discovered by phase

The alliance has chosen the measures shown in Figure 3A.10-3 because they relate directly to management concerns:

Measure	Addresses
Schedule	• How long will it take? • Is the schedule feasible given the staffing levels?
Size	• How big is the application?
Effort	• How many staff? • For how long? • What type of skill-sets?
Defects	• How fit-for-purpose are the deliverables? • How reliable is it? • How much effort is required to get the application to agreed-upon level of quality?

Figure 3A.10-3 Core Software Measures – Quantified measures enable effective management control of software development or modification.

In addition to supporting the need for information on productivity and quality, these core measures may also be used to assess software development risk and provide a reliable basis for future estimates. All in all, the core measures should be viewed as a management tool that can be used to create a disciplined software process that is dependable, repeatable and predictable.

3A.10.7.2 Software Metrics and Thresholds

Software metrics provide a framework for assessing the software quality throughout the CCSAS CSE project life cycle. The use of metrics provides an objective basis for making this assessment. By defining software metrics and establishing performance targets, software developers and quality management know what is necessary to achieve and assess software quality.

Some examples of metrics could be:

- Number of defects identified during testing
- Number of defects not fixed correctly the first time by stage
- Ratio of defect to test conditions
- Average time to fix a defect for a given cycle

We propose to work with CCSAS project staff to define reasonable metrics for the CCSAS CSE project development.

Sample metrics thresholds are provided in Figure 3A.10-4.

Metric	Target Performance	Deficiency Action
Number of defects identified during testing	Defects reduce by at least 25% for each subsequent test cycle	More frequent reviews conducted during system development life cycle.
Number of defects not fixed correctly the first time by stage	No more than 15% of defects	Programmer personnel who do not meet target performance are identified for more frequent code reviews.
Ratio of defect to test conditions; and	No more than 10% defect rate during witnessed software qualification testing	Track personnel who completed dry run test prior to witnessed software qualification test. Enforce more stringent review for future software qualification tests for personnel responsible.
Average time to fix a defect for a given cycle	No more than 20% of software coding / unit test budget for the software item	Programmers repeatedly failing to meet target performance are assigned to less complex functions.

Figure 3A.10-4 Sample Quality Metrics and Thresholds. *Quality metrics and thresholds "set the bar" by which quality is measured.*

3A.10.7.3 Additional Project Measures

In addition to the core measures, supplemental measures will be collected for individual teams in order to gauge the quality and effectiveness of their processes. During design activities, the management team will focus on performance against scheduled deliverable dates as a way of measuring a team's productivity. Achieving interim deliverable dates for design components is a good indicator of a team's ability to meet the overall schedule. If a particular team shows a high frequency of missed dates, remedial action is recommended to change the staffing and/or schedule, depending on the underlying cause for the delays. The results of deliverable walkthroughs may also be analyzed to monitor a team's quality results. A design team with a high frequency of walk-through defects suggests again that remedial actions need to be taken. During software development and testing activities, performance measurement involves measuring the volume of defects per line of code or function point at various stages in the development process.

For activities not directly related to software development such as training development and delivery, performance measurement is accomplished through routine assessments collected from participants. In addition, the alliance will perform competency testing to document training course effectiveness. This feedback not only identifies potential problems in test or initial prototype modes, but also provides valuable guidance on how to improve overall performance. These assessments are collected, summarized, and the results maintained to track performance trends throughout the CCSAS CSE project.

3A.10.7.4 Metrics Collection, Analysis and Reporting

Collecting, analyzing and acting upon metrics information is the joint responsibility of the Metrics Coordinator and the management team. The effort needed to collect the data on the core measures is minimal on the part of the project team since information on planned vs. actual dates and effort expended per task is already required as a function of status reporting. Defect data will be extracted on a periodic basis from the defect

tracking tool, and will include information such as open defects, closed defects, defect classification by severity and by discovery type. The metric data will be fed into a metrics control tool and then will be analyzed and used to reforecast the remaining project effort.

The Metrics Coordinator will work with the CCSAS leadership and the alliance management team to define which quality indicators will be represented on the balanced scorecard described in Section 2.2.2. The Metrics Coordinator will also be responsible for preparing the backup detail for the measures that appear on the balanced scorecard. The Metrics Coordinator may also be asked to prepare a targeted analysis to answer specific management questions, such as early warning signals for software complexity or testing coverage.

It is important to remember that metrics and measurements are just tools. Metrics must not only be used; they must be used properly in conjunction with other management techniques.

3A.10.7.5 Process Improvement Opportunities

What doesn't get measured, doesn't improve.

The purpose of a measurement process is to ***prove project accomplishments*** and ***improve processes.*** Our approach to ongoing process improvement is focused on improving overall project efficiency and effectiveness.

After a trial period of metrics analysis and reporting, the delivery organization's baseline capabilities are known and understood. At that point in time, the management team can take action to:

- Improve quality
- Improve productivity
- Improve the cost of quality
- Improve satisfaction with deliverables
- Improve project/application estimates
- Improve project/application issue and risk recognition

After reviewing the quality records, and the metrics reports and detailed backup, the alliance management team may decide to take corrective action or introduce process improvements. Corrective action may take the form of re-estimating current and/or future tasks and activities, identifying new tools or updates to existing tools, streamlining procedures, or bringing in additional expertise. The management team will carefully assess the impact of the proposed improvements in terms of schedule, cost and quality, and then make an informed decision about how best to introduce any change in procedure.

It is important to focus on the capabilities of the project organization as a whole rather than using metrics data only as a way to pinpoint problems with individual or team performance. Only when all members of the project see the value of measurement can true process capability improvements be achieved.

3A.10.8 Conclusion

Quality management requires a balance between an effective and practical process, and discipline in following it. The extremes are of little value—an exhaustive process that is not followed, or rigorously following an ineffective process. To establish an effective process, we follow the four principles outlined below:

- Define quality objectively
- Do it right the first time
- Eliminate defects early
- Use data to manage quality

To apply the principles in practice, the alliance will follow a disciplined process to Quality Management:

- Develop and maintain a project quality plan to define the process
- Prepare quality records to support and document the defined process
- Measure and assess quality results, and use them to improve the process
- Prepare quality records to demonstrate compliance to documented standards and procedures

Performed rigorously and with attention to the details, this process will lead to quality results for the CCSAS CSE project.

3A.11 Issue and Action Item Management

Issue and Action Item management provides a standardized method for dealing with issues and actions, focusing on reviewing them in the context of their effect on the entire project, not just on the immediate need.

Unresolved action items may turn into issues. Unresolved issues often turn into risks.

3A.11.1 Introduction

Issues are present in any project, so success depends on an effective, proactive Issue Management Process that continually identifies and manages issues to closure. Implementing an effective issue management process requires more than simply setting up an issue-tracking tool. Effective issue management requires commitment from program management, project management and the project teams to establish and institutionalize processes, procedures, and standardized approaches to identify, prioritize, analyze, and resolve issues. This requires careful consideration of the roles and responsibilities belonging to both the management team and members, the procedures for escalating unresolved issues and a commitment to track and monitor issue resolution trends over the life of the project. An effective process should also be appropriately sized to match the size and complexity of the program and associated projects.

By managing issues in a consistent manner throughout the project life cycle, the alliance will proactively reduce the risk of having unresolved issues cause project disruption, undesirable work-arounds and increased costs to the project. The CCSAS project has demonstrated their awareness of the importance of managing issues by their development of an Issue Management Plan. In alignment with the State plan, the alliance has assigned oversight of Issue Management to the alliance PMO, although every member of the alliance management team shares responsibility for issue management.

3A.11.2 Approach to Issue Management

3A.11.2.1 Issue Definition

An *issue* is a problem or question that requires a decision or agreement from multiple stakeholders in order for the project to proceed and prevent the issue from affecting the course of the project. However, every question or action item that arises on the project is <u>not</u> an issue.

It is critical that what constitutes an issue be clearly defined and understood by all team members. The alliance will use the following guidelines listed in Figure 3A.11-1 to distinguish between issues, questions, risks, actions items and incidents.

Term	Definition and Characteristics
Issue	• Problem or question that, if not resolved, will have an adverse impact on the project • Resolution often requires structured analysis of alternative solutions, followed by an explicit decision • Resolution process may also require input and consensus from multiple members of the team • Clear documentation of the issue, option and resolution is critical to understanding and agreement
Question	• An area of uncertainty that requires an answer from one of more people • Little or no analysis is needed to reach a decision • Decision-making process requires little or no consensus building • There is the expectation that the question can and will be answered on a timely basis such the project deliverables will not be impacted by delays • Unresolved questions may become issues
Risk	• A potential event or future situation that may adversely affect the project's ability to achieve success targets • Requires active management and oversight throughout the life of the project • Unresolved issues may become project risks and risks are often related to key issues
Action Item	• Specific action required to maintain forward momentum on a particular aspect of the project • Typically does not require a decision – it is simply something that must be done • Uncompleted action items may create issues
Incident, problem or defect	• Incidents are detected during testing and are directly tied to a functional or technical requirement • Perceived defects based on expectations that are not a documented requirement can become issues, where a decision is needed regarding policy, procedure or generating a change request for additional software functionality

Figure 3A.11-1 Distinctions between Issues, Action Items, and Questions – *Clear guidelines permit alliance staff to take the right actions under different circumstances.*

3A.11.2.2 Issue Management Considerations

Issue Management is an ongoing function over the life cycle of the project from inception through to completion. As such there are many participants, necessitating a clearly defined process and clearly defined roles and responsibilities. Issue management is done at every level of the project from the individual teams through to the senior management level. It is necessary to have a process that clearly addresses the following:

- Who defines and manages the issue management process – the alliance's goal is to integrate as closely as possible with the CCSAS PMO Issue Management process
- Who is responsible for administering the issue management process – roles and responsibilities will be addressed in detail
- Who is authorized to:
  - Document or log issues into the tracking tool
  - Assign or reassign issues for resolution
  - Recommend the issue resolution
  - Review and approve or reject recommended resolutions
  - Close issues
  - Reopen issues
  - Escalate issues (to each level)
  - Monitor and track the status of issues
  - Generate issue status and trending reports
- How the alliance issue management process aligns and integrates in the broader CCSAS issue management process
- How issues generated by CCSAS stakeholders or end-users will be tracked

The Issue Management Plan (CDL PM 016) will address these considerations and define the process by which issues will be identified, diagnosed, and resolved in a timely manner.

3A.11.2.3 Issue Escalation

Issue management is the process of driving issues to resolution and closure. A closed issue is one where the resolution is mutually agreed upon by multiple parties and deemed to be the best decision for a given set of circumstances. There are times when an issue needs to be resolved by a more senior level and hence escalated to that level. The following points will be defined in the Issue Management Plan (CDL PM 016):

- Escalation path for issue resolution
- Escalation criteria for when an issue should be escalated to the next level

- Escalation authority (i.e., who is authorized to escalate issues)

Well-defined escalation procedures result in appropriate mechanisms being in place to focus timely and appropriate senior-level attention when:

- An issue is past due for resolution
- Higher levels of management are required to participate in the resolution of an issue
- An issue requires immediate resolution or will adversely impact the overall project
- An issue has reached an impasse and cannot be resolved within the current level

The alliance PMO will work with the CCSAS PMO in order to define the escalation process for issues originated at the alliance level. These escalation procedures will be documented as a part of the Issue Management Plan (CDL PM 016). As a starting point, the alliance would like to propose the following escalation levels and timeframes:

- Critical – this status indicates that the issue has been escalated to critical status and must be acted upon with urgency, and must certainly take no longer than a week before being escalated to the next level.
- Project Managers – this status indicates that the issue has been escalated to the alliance and CCSAS management level. This status will be raised to the next level within one week.
- Executive Managers – this status indicates that the issue has been escalated to the CCSAS Executive Director and alliance Project Executive level. This status will be raised to the next level within one week.
- Executive Steering Committee – this status indicates that the issue has been escalated to the CCSAS Executive Steering Committee for resolution.

3A.11.3 Organization of Alliance Issue Management Program

Defining issue management roles and responsibilities is one of the first steps in establishing an effective issue management process. Clear articulation of the roles and responsibilities is critical to the overall success for several reasons:

- It results in someone taking ownership and responsibility for resolving critical issues,
- It helps set expectations regarding the alliance and CCSAS responsibilities for issue resolution,
- It helps establish some parameters around the entire process, in terms of who is authorized to do what, and
- It specifies key requirements for the issue tracking system in terms of database access rights and authority.

The participants in the alliance Issue Management Program will include the:

- Alliance Project Executive
- Alliance Management Team
- Alliance Issue Coordinator
- Issue Owners/Originators
- Issue Item Assignee

Their roles and responsibilities related to issue management are described below:

Alliance Project Executive

The following list of responsibilities addresses only those associated with issue management. The issue management responsibilities are:

- Assuming overall responsibility for Issue / Action Item Management activities within the alliance
- Escalating at appropriate points to the CCSAS Issue Management Program
- Overseeing the activities of the alliance Issue Coordinator
- Participating as needed in meetings with CCSAS Issue Management Program
- Making decisions that resolve issues escalated to that level, or further escalate to CCSAS.

Alliance Management Team

This team is the senior management team, comprised of the alliance Project Executive, the alliance Deputy Project Executive, and the project managers. Their roles are broader than those described below, which includes a description of only the responsibilities specifically related to issue management. These responsibilities are:

- Actively monitoring and resolving escalated alliance-level issues
- Approving those issues that are to be forwarded to the CCSAS Issue Manager (to become CCSAS-level issues)
- Recommending/approving ownership of alliance-level issues
- Reviewing any additional alliance-level issues referred to them by the alliance Issue Coordinator
- Reviewing/monitoring alliance-level issue reports
- Approving the closure of alliance-level issues

Alliance Issue Coordinator

This role is a person within the alliance PMO with specific responsibilities for issue management. He/she reports to the alliance Project Executive. His/her responsibilities are:

- Acting as the primary liaison between the CCSAS Issue Management Program and the alliance Issue Management Program, participating on a regular basis with the CCSAS Issue Management Program.
- Actively participating in the CCSAS IMP Issue Coordination Team meetings
- Facilitating the identification of all issues that may impact the project
- Monitoring all alliance-level issues so that they are appropriately logged into issue tracking tool, PMOffice™
- Coordinating the assignment and ownership of issues including the assignment of issue resolution due dates
- Recommending to the alliance management team which issues should be reviewed by them and which are potential candidates for forwarding to the CCSAS Issue Manager
- Regularly reviewing the alliance-level issues and associated data in the Issue Management tool, PMOffice™, and confirming that PMOffice™ is complete and up to date, and notifying owners if updates are needed
- Issuing reports on alliance-level issues and their status to all interested parties at both alliance and CCSAS levels
- Reviewing alliance-level issues to prevent duplication

Issue Owners/Originators

Issue Owners can be found at any level within the CSE project. Their responsibilities are basically the same, regardless of the level of the issue, with the exception of the responsibilities associated with issue escalation. Their responsibilities are:

- Identifying an issue requiring resolution in accordance with the issue management process
- Defining the issue, making the initial assessment of the impact, setting the initial issue priority
- Entering alliance-level issues into the web-based issue tracking tool, PMOffice™
- Confirming the issue isn't a duplicate of one already identified
- Notifying the alliance Issue Coordinator that a new issue has been entered

Issue Assignee

The Issue Assignee, like the Issue Owner, can be found at any level within the CSE project. Their responsibilities are:

- Collaborating with the issue owner and issue coordinator regarding the status of the issue until it is closed
- Researching and drafting a resolution to the issue and creating an issue response package
- Driving the issue to resolution and closure

3A.11.4 Overview of Alliance Issue Management Process

Common issue processes between alliance staff and CCSAS staff will facilitate quick turnaround for issues.

The alliance has customized our issue management procedures based on those documented by the California Franchise Tax Board in the Issue Management Plan for the CCSAS project (final version 2.3 dated June 8, 2001). While there are minor modifications to the State procedures for the management of alliance-level issues, the similarity in process facilitates the movement of issues from the alliance to CCSAS, and provides a common framework for issue management at all levels of the overall program.

Issue management is iterative, and is conducted throughout the project life cycle. The issue management process flow is as follows:

- Identify Issue
- Document and Log the Issue
- Review of the Issue by the Issue Coordinator
- Assign the Issue to an Issue Assignee and set a Response Due Date
- Research the Issue
- Develop the Issue Response Package (IRP)
- Review/Approve the Issue Response Package
- Escalate the Issue, as required
- Submit the IRP to Issue Response Package for implementation
- Close the Issue
- Archive the Issue Response Package

This section is an overview of the alliance issue management process for managing alliance-level issues. The alliance will follow the CCSAS program issue procedures for CCSAS-level issues. Figure 3A.11-2 below is a high-level graphical representation of the alliance Issue Management Process, based on the CCSAS process.

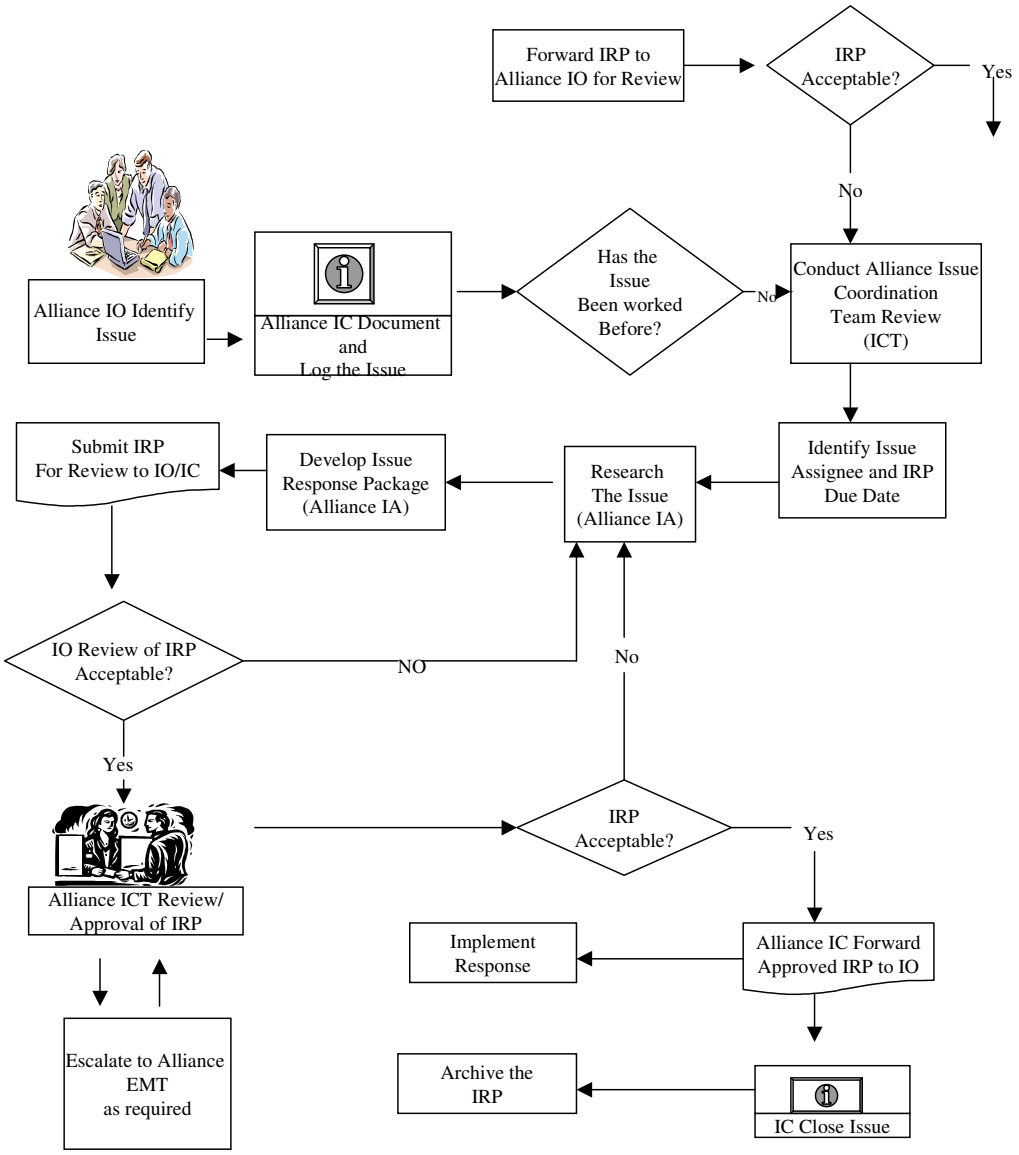


Figure 3A.11-2 Alliance Issue Management Process – *Any CSE team member may raise an issue and support the effort to drive it to resolution.*

Once identified, each alliance-level issue will be recorded in the alliance Issue Management tool, PMOffice™. The alliance Issue Coordinator (IC) will assign an Issue Owner (IO), who will perform a qualitative assessment and will enter that information into the Issue database. The alliance Issue Coordinator monitors all issues and brings the most critical ones to the attention of the alliance management team along with monitoring the escalation process for process conformance. The Issue Assignees (IA) develop and submit Issue Resolution Packages (IRP). Reports are issued on a regular basis to the alliance management team and other interested parties.

The following subsections provide additional descriptions of the steps involved in the Issue Management process, The Issue Management Plan (CDL PM 016), which will be

developed during project launch, will provide detailed instructions for project members involved in the issues management process.

3A.11.4.1 Issue Identification

An issue may be identified in any number of ways such as:

- A current situation or event that cannot be answered immediately but requires some research and analysis to provide insight into actions that should be taken
- An inability of two project bureaus or functional groups to come to an agreement on a particular item or process
- The need for information external to the project inhibits or stops the development of the project solution until resolved

Issue priorities will be defined using the same definitions as the State:

High – An issue that, if not resolved expeditiously, severely impacts the cost, schedule or technical performance and severely jeopardizes the success of the project or is urgently needed to support a near term project need in **less than 30 days**. The alliance Issue Coordinator must confirm the designation of "High" priority, and bring it to the attention of the alliance management team

Medium – An issue that will have moderate impact on cost, schedule or technical performance if not resolved or is required to support a project need **within 30-90 days**.

Low - An issue whose impact has a minor impact on cost, schedule or technical performance or is required to support a project need in **more than 90 days**.

Issue identification occurs when an Issue Originator completes the Issue Statement, including a recommended issue priority. The Issue Originator submits the Issue Statement to his/her manager. There should be an effort made to resolve the issue at the lowest level possible, but when necessary, issues are escalated to the group level. If there is agreement to proceed with the issue, the issue priority is reviewed. If the manager rejects the issue or requires rework of the Issue Statement, the reason is annotated on the Issue Statement and it is returned to the Issue Originator. Approved, rejected/reworked issues are forwarded to the alliance Issue Coordinator by the appropriate functional area manager or team leader to be entered into the issue database. The alliance Issue Coordinator logs both internal and external issues in the issue database.

3A.11.4.2 Logging an Issue

The alliance Issue Coordinator receives the Issue Statement from the Issue Originator and enters the necessary data elements into the database. As a first step, the Issue Coordinator will perform a search of the issue database in order to avoid a duplicate listing of the issue. If the issue is determined to be original, it will be logged in the issue

database as a draft issue. If the issue has been previously worked, the alliance Issue Coordinator will forward a copy of the previously worked issue to the Issue Originator to determine if the previous resolution satisfactorily addresses the issue. If deemed acceptable by the Issue Originator the issue is closed. If the Issue Originator finds the previous resolution insufficient, the issue is forwarded to the alliance management team for review.

3A.11.4.3 Alliance Issue Coordination Team (ICT) Review

The Alliance Issue Coordination Team is composed of the alliance Issue Coordinator and the alliance management team.

The ICT reviews all newly originated issues, recently closed issues, status of all issues in process, Issue Response Packages, and takes action as required to resolve the outstanding issues, especially those of high priority or those that are overdue.

The status of a new issue is changed from “Draft” to “Opened” when it is reviewed and approved by the alliance Issue Coordination Team.

3A.11.4.4 Assigning an Issue

The alliance Issue Coordinator takes direction from the alliance management team and coordinates with the appropriate project leaders to identify an Issue Assignee (IA) and to confirm a due date for the Issue Resolution Package.

The alliance Issue Coordinator updates the issue database with the issue information and notifies the Issue Assignee of his/her assignment and responsibilities.

3A.11.4.5 Issue Research

The Issue Assignee is responsible for researching and developing the Issue Response Package. This research may include:

- Collaborating with the issue originator to ensure the issue is clear and understood
- Reviewing documentation and identifying requirements
- Conducting interviews
- Holding discussion meetings or workshops
- Conducting testing activities (hardware, software, etc.)
- Developing work-around plans
- Identifying alternative solutions along with their associated cost, schedule, performance and risk impacts
- Performing comparative analysis of alternatives and options
- Developing a schedule to implement actions required to close the issue
- Recommending resolution of the issue

3A.11.4.6 Drafting the Issue Response Package

Once research is completed, the Issue Assignee drafts the Issue Response Package with a proposed resolution to the issue. Issue responses should be concise, complete and organized in such a fashion as to directly answer the issue statement. All IRPs are developed in softcopy files including attachments. Should supporting data not be available in electronic format (such as a large paper document), it should be referenced in the IRP and its location identified.

3A.11.4.7 Issue Response Submission

Once an issue response is drafted, the Issue Assignee submits the Issue Response Package to the Issue Owner and the Issue Coordinator. The Issue Coordinator logs the IRP into the database. The Issue Assignee then coordinates a meeting with the Issue Originator to discuss the package if requested by the Issue Originator. If the Issue Originator agrees the response is complete and sufficiently addresses the issue, the Issue Coordinator forwards the resolution to the alliance management team for review. If the Issue Originator is not satisfied with the proposed resolution, the Issue Assignee reworks the Issue Response Package as appropriate. If no agreement can be reached between the Issue Originator and the Issue Assignee, it is escalated to the alliance management team and further to the CCSAS Issue Coordination Team, if required.

3A.11.4.8 IRP Review by the ICT

The Issue Coordination Team reviews all issue response packages for cost, schedule, performance impacts and risks. If the Issue Originator is satisfied with the proposed resolution, and the proposed resolution does not adversely impact the CCSAS CSE project schedule, cost or performance, the resolution will be implemented as required, the issue marked closed in the database and archived. If the Issue Originator is not satisfied with the proposed resolution after attempts to resolve the matter and/or there is a significant impact to cost, schedule, performance or risk, the issue is briefed to the alliance management team.

As the result of the resolution review, the ICT may direct the initiation of a new risk to the Alliance Risk Coordinator or a change to be entered into the change request process to change a requirement. For more information on the Risk Management process, see section 3A.9 and for more information on the Change Request Management process, see section 3A.4.

3A.11.4.9 Issue Escalation

If the Issue Originator and the Issue Assignee cannot reach an agreement by the required due date or if they jointly decide to escalate the issue to obtain management direction on how to proceed, the issue will be presented to the alliance Issue Coordination Team. The alliance Issue Coordination Team will review the proposed resolution and make a determination if it is appropriate, or they may decide to escalate the issue to the CCSAS Issue Coordination Team.

3A.11.4.10 Issue Closure

Closure of an issue is accomplished by obtaining an approval of the proposed resolution in the Issue Response Package by the alliance Issue Coordination Team. The alliance Issue Coordinator forwards a copy of the approved Issue Response Package to the Issue Originator for implementation. The alliance Issue Coordinator closes the issue in the issue-tracking tool by entering the final closure date. All pertinent issue information is archived in the database for future reference.

3A.11.4.11 Issue Documentation and Reporting

The documentation of issues should occur on an ongoing basis from the beginning until the end of the project. The alliance Issue Coordinator is responsible for validating that the updates to the issue documentation occur on a regular basis. The alliance Issue Coordinator monitors this process and coordinates with the appropriate Issue Owners if documentation falls behind.

Issue reporting is also an ongoing process throughout the project life cycle. Reporting needs may vary at different points in the project, depending on the number of issues, their severities, etc. However, at a minimum the alliance Issue Coordinator should prepare the following issue reports:

- Issues by status, severity and assignee
- Open issues
- Overdue issues
- Trend analysis of issues opened
- Issues aging
- Escalated issues

The alliance PMO will describe the timing and content of issue reports in the Issue Management Plan (CDL PM 016).

3.A.11.5 Approach to Issue Orientation and Training for Project Staff

As a part of the orientation, a discussion of issue management and the specific issues associated with this project will be given to project staff. A walk through of the issue management procedures will be included. Project staff members will also be trained to raise potential project issues as a part of their weekly project status reports as well as entering issues directly into PMOffice™.

3A.11.6 Action Item Control

An action is any unanticipated work that must be assigned and tracked by the project. Actions may be the result of meetings or reviews, or may be related to issues. Actions do not require decisions to be made – they are simply work that needs to be done. Typically, the level of effort related to completing an action is not sufficiently high to merit

the addition of the action to the project plan. However, there must be a process in place to track open actions and confirm that they are completed in a timely fashion so that they do not impede the forward momentum of the project.

The information that should be captured for an action includes:

- Short description of the action
- Priority
- Owner
- Date assigned
- Planned completion date
- Date completed
- Status
- Related actions (if any)

The alliance PMO will create and maintain an Action Log in PMOffice™, which will be used to communicate the actions and their status to the alliance management team and CCSAS project staff.

3A.11.7 Conclusion

The value of issue management becomes obvious when it is proactive, as it can impact other key processes for managing project exceptions, specifically, risk and project scope change management. Proactive issue management can help reduce or prevent risks. Therefore, proactive issue management helps prevent negative project outcomes and helps to avoid the potential associated cost and schedule impacts.

The opportunity for issue management presents itself across a project's life cycle, from the project initiation throughout implementation and on-going operations. Issues will originate from various sources and teams. The alliance's approach to issue management provides an integrated process focused on identifying, analyzing and responding to project issues from a multitude of sources. Proper issue management, especially prompt identification and resolution of issues, will be key to avoiding mistakes.

Action item control and tracking help maintain forward momentum on the project, and communicate unanticipated work to alliance and CCSAS project staff. Without an Action Log of all outstanding actions, open actions can remain buried in meeting minutes and there would be no visibility on the number of open actions and their status. Prompt attention to action items is crucial to preventing issues from arising.

PART 2 - Project Management Statement of Work

Statement of Work	State Responsibilities
PM 0 General Project Management	
PM 0.1 - The Business Partner shall manage the project in accordance with the Project Management Approach and the Project Management Plan. (CDL PM 001)	
PM 0.2 - The Business Partner shall develop, implement, and monitor the processes and procedures necessary to implement the Project Management plans.	
PM 0.3 - The Business Partner shall deliver the contract items specified in the Contract Deliverables List (CDL), in accordance with the CDL requirements for content, frequency, submittal dates and format.	
PM 0.4 The Business Partner shall store documents referenced in the Project Management Approach, Technical Management Approach and Business Solution in the Business Partner's CCSAS CSE project library, and shall provide the State access to the CCSAS CSE project library as mutually agreed.	
PM 0.5 – The Business Partner shall manage project closeout activities in accordance with the Project Closeout Plan. (CDL PM 002)	
PM 0.6 - The Business Partner shall prepare a Post Implementation Evaluation Report (PIER). (CDL PM 003)	The CCSAS project staff will provide resources to consult on and approve the PIER.
PM 0.7 - The Business Partner shall participate in State requested meetings as necessary to convey information, resolve project issues, and support project goals and objectives.	
PM 1 Introduction (Reserved)	
PM 2 Referenced Documents (Reserved)	
PM 3 Overview of Required Work (Reserved)	
PM 4 Project Scope Change Management	
PM 4.1 – The Business Partner shall participate in the State's scope change control board meetings, and shall provide representatives from the technical management staff at meetings.	The State will conduct Scope Change Control Board meetings. The State will take minutes and distribute them to meeting participants.
PM 4.2 – The Business Partner shall develop and	The State will participate in the technical

Statement of Work	State Responsibilities
implement processes to assess the technical impacts of change requests to support the State's scope change control process.	impact analysis of change requests. The State shall provide a policy impact assessment. The State will participate in the Business Partner's technical change control board.
PM 5 Partnering	
PM 5.1 - The Business Partner shall prepare and disseminate meeting agendas and minutes as specified in the Project Management Plan (CDL PM 001) and as requested by the State. The Business Partner shall make the meeting agendas and minutes available to the State.	
PM 5.2 The Business Partner shall participate in the State's In-Process Reviews (IPR). Business Partner participation shall include providing agenda topics, presentation material or supporting information; attending the IPR and providing appropriate Business Partner representation; resolving action items assigned to the Business Partner by the due date and providing status on open action items; and assisting the State as requested to resolve action items assigned to the State.	
PM 5.3 The Business Partner shall prepare a Monthly Status Report. (CDL PM 006)	
PM 5.4 The Business Partner shall conduct Project Management Reviews (PMRs). The first review will be conducted two months after the project start. The second review will be conducted four months after the project start. The remaining Project Management Reviews (PMRs) will be conducted on a quarterly basis. The Business Partner shall prepare Project Management Review agendas and minutes and shall make the agendas and minutes available to the State.	
PM 6 Contractor Team Management	
PM 6.1 - The Business Partner shall implement processes to monitor compliance with standards and methodologies applicable to the work being done by the project team including the Business Partner's sub-contractors.	
PM 7 Cost / Schedule Management	
PM 7.1 - The Business Partner shall prepare and maintain a Project Schedule (CDL PM 009) The Business Partner shall use Critical Path Methodology in the development of the Project Schedule. Project Schedule activities shall be tied	The Project Schedule will be mutually developed with the State, so that dependencies with the overall CCSAS project may be included.

Statement of Work	State Responsibilities
to WBS elements.	
PM 7.2 - The Business Partner shall establish a schedule baseline and shall measure and report variance against this baseline. The Business Partner shall utilize a consistent methodology for reporting actual starts and finishes, remaining duration of incomplete tasks, and earned value for both completed and incomplete tasks. The Business Partner shall report variance in a Cost / Schedule Variance Report (CDL PM 010). The schedule baseline shall be maintained and reported in the Project Schedule (CDL PM 009).	
PM 7.3 - The Business Partner shall prepare and maintain a work breakdown structure (WBS) (CDL PM 011) to the Business Partner's cost-account level and shall track costs to this level. The Business Partner shall develop its cost account structure to a mutually agreed-to level. The WBS elements shall include baseline and actual cost (hours) information rolled up from the Project Schedule. The Business Partner shall use the WBS to prepare and maintain the project schedule.	
PM 7.4 - The Business Partner shall update and provide schedule data in accordance with the provisions established in the State's Schedule Maintenance Plan.	
PM 7.5 - The Business Partner shall participate in project scheduling meetings defined in the State's Schedule Maintenance Plan and as requested by the State.	
PM 7.6 - The Business Partner shall use an automated Project Management Scheduling tool to baseline, manage and track the project work breakdown structure, schedule and cost/schedule variances. The Business Part shall ensure its Project Management tool is capable of providing export files that can be imported by the State's Project Scheduling tool (Primavera P3E). The Business Partner's scheduling tool shall employ access control mechanisms. The Business Partner shall provide the State full read-only access to the data, reports and views in the Business Partner's Project Management tool.	The State will provide network level access to the central repository for project schedules.
PM 7.7 - The Business Partner shall prepare and maintain a schedule baseline and shall measure and report variance against this baseline in the Cost / Schedule Variance Report (CDL PM 010). The schedule baseline shall be maintained and reported in the Project Schedule (CDL PM 009).	

Statement of Work	State Responsibilities
PM 7.8 - The Business Partner shall establish a cost (hour) baseline and shall measure and report variance against this baseline in the Cost / Schedule Variance Report (CDL PM 010). The cost (hour) baseline shall be maintained and reported in the WBS or Project Schedule.	
PM 8 Staffing Management & Facilities	
PM 8.1 - Space permitting, the Business Partner shall co-locate development staff, including project management, development and testing staff, at the CCSAS project site.	The State will provide to the maximum extent possible contiguous, i.e. located on the same floor, suitable office space, meeting space, desks, supplies, furniture, connectivity, hardware (excluding PC's), software, and other facilities with telephone access for up to 225 Business Partner personnel working on the CCSAS project. The State will provide at least four hard-walled and seven modular-walled private offices for Business Partner key personnel at the State's CCSAS project site. The State will provide the Business Partner with access and Ids to the existing CCSAS Project email system.
PM 8.2 The Business Partner shall secure building space for a permanent Business Partner provided CCSAS project site within a maximum of 10 miles of the State's CCSAS project site, within the US Hwy 50 corridor and south of the American River. The Business Partner provided CCSAS project site shall comply local building codes which conform to ADA requirements, and be ready for Business Partner and State occupancy within 9 months of project start. The CCSAS Project Site shall include space for no more than 244 cubicles, and up to 30 offices, 5 small conferences rooms, 5 medium conference rooms, and the associated furniture complements, which may be reconfigured to meet the needs of the project. The CCSAS Project Site will be expanded to support additional staff members associated with the V1 Schedule Adjustment. This expansion includes approximately 7,000 square feet of new office space with 57 additional cubicles at the White Rock Road Facility. If a temporary project site is needed before the Business Partner provided CCSAS project site is ready for occupancy, the Business Partner shall provide a temporary Business Partner provided CCSAS Project Site, which is not required to be	(Will meet the ADA requirements as they are reflected in the building codes.

Statement of Work	State Responsibilities
within 10 miles of the State's CCSAS project site. The Business Partner shall assume all responsibilities and costs for relocating from the temporary Business Partner provided CCSAS project site to the permanent Business Partner provided CCSAS project site. The Business Partner shall rent facilities for all-hands meetings.	
PM 8.3 The Business Partner shall provide technical support including facilities planning for utilities hookups, security system, cabling, hardware / software, and office equipment including photocopiers, fax machines, overhead projectors, computing equipment, and office supplies for the Business Partner provided CCSAS project site facilities. The Business Partner shall provide telephone wiring, PBX, and telephone equipment for the Business Partner provided CCSAS project site facilities and training site. The Business Partner shall provide office furnishings, and office equipment for the Business Partner provided CCSAS State Project Site facilities and training site. (updated per CR-C-01157)	The State will share responsibility and work with the Business Partner to confirm that the connectivity, hardware, and software are integrated between CCSAS project sites.
PM 8.4 The Business Partner shall provide a model office at the Business Partner provided CCSAS project site as described in the Orientation Plan (CDL TM 054), configured to support up to 20 concurrent users. The Business Partner shall assist the State in the design of the Model Office	The State will assume the primary responsibility for designing the Model Office, and will provide the Business Partner the initial Model Office requirements for planning the Business Partner provided CCSAS project site.
PM 8.5 The Business Partner will locate one training center in or near Sacramento The Business Partner shall locate the training centers in the locations as further defined in the User Training Plan. (CDL TM 064-2) The Business Partner shall be responsible for closing the training center facility outside of the Business Partner provided CCSAS project site, including disposition of hardware. (updated per CR-C-01157)	
PM 9 Risk Management	
PM 9.1 - The Business Partner shall manage risks in accordance with the Project Management Approach and the Risk Management Plan (CDL PM 012) and shall meet the intent of IEEE 1540-2001.	

Statement of Work	State Responsibilities
PM 9.2 The Business Partner shall participate in risk management meetings defined in the State's Risk Management Plan and as requested by the State. Business Partner participation shall include identifying risks and mitigation strategies, preparing supporting information; conducting research and analysis to quantify risks; and providing appropriate Business Partner representation at risk management meetings.	The State will accept a CCSAS CSE representative who will actively participate as a member in risk management meetings.
PM 9.3 - The Business Partner shall conduct periodic risk analysis in accordance with the Risk Management Plan. (CDL PM 012)	
PM 9.4 - The Business Partner shall use or electronically interface with the State's Project risk management tool (Risk Radar). The Business Partner's risk management tool shall employ access control mechanisms. The Business Partner shall provide the State access to the Business Partner's risk management tool.	
PM 10 Quality Management	
PM 10.1 - The Business Partner shall develop and implement a Quality Management system in accordance with the Business Partner's Quality Management Plan (CDL PM 013). The Business Partner may use ISO 9001:2000, ISO 9000-3, ISO 9004 and IEEE-1061-1992 as guidance in developing the Quality Management system.	
PM 10.2 - The Business Partner shall produce a Quality Management Activity Report. (CDL PM 014)	
PM 10.3 - The Business Partner shall participate in State quality management activities for the CCSAS CSE project as defined in the Quality Management Plan (CDL PM 013) developed during the project.	The CCSAS project staff will provide resources to consult on and approve the Quality Management Plan.
PM 10.4 - The Business Partner shall document quality management activities and maintain a library of quality records throughout the life of the project. The Business Partner shall provide the State access to these records in a mutually agreed upon timeframe.	
PM 10.5 - The Business Partner shall provide requested information in response to the State's Quality Assurance audits and IV&V reviews within mutually agreed upon timeframes.	
PM 11 Issue and Action Item Management	
PM 11.1 - The Business Partner shall manage issues and action items in accordance with the	The State will accept a CCSAS CSE representative who will actively participate

Statement of Work	State Responsibilities
Issue Management Plan. (CDL PM 016).	as a member in issue management meetings.
PM 11.2 - The Business Partner shall use or interface with the State's Issue Management tool to log and track issues. The Business Partner's issue management tool shall employ access control mechanisms. The Business Partner shall provide the State access to the Business Partner's issue management tool.	The State will provide the Business Partner with electronic access to the State's Issue Management software. The State will also provide the Business Partner with update privileges that will be agreed to as a part of the Issue Management Plan.
PM 11.3 The Business Partner shall resolve issues mutually agreed to and accepted by the Business Partner. Appropriate issues assigned to the Business Partner must have a resolution timeframe that has been mutually agreed to by the State and Business Partner.	

PART 3 – Project Management Contract Deliverable Item List Descriptions

SOW/CDL Traceability. There is bi-directional traceability between the SOW and the CDL. CDL Items are declared within the SOWs, and have an associated Contract Deliverable List (CDL) description. As an example, in the SOW:

PM 10 Quality Management…

PM 10.2 The Business Partner shall produce a Quality Management Activity Report. (**CDL PM 014**)

The CDL Item descriptions provide a cross-reference to the SOWs that reference the deliverable in the field named SOW Paragraph Reference. In our example, CDL PM 014, Field 10 SOW Paragraph Reference = PM 10.2.

Table 1 provides the definition for each field contained within the CDL Item description.

Table 1 Contract Deliverable List Field Definitions

FIELD NAME	FIELD DESCRIPTION
1) Deliverable Identifier:	Unique identifier assigned to the CDL Item. This identifier is specified within each Statement of Work that references the deliverable.
2) Deliverable Name:	Name of the CDL Item
3) Standard:	Standard for the deliverable format / content. If no standard is indicated, the Business Partner shall recommend a format for the deliverable, which shall require State acceptance.
4) Acceptance:	The conditions under which the State will accept a CDL Item. There are three levels of acceptance: 1) Walk-thru prior to delivery – State review and acceptance required 2) State review and acceptance required 3) State acceptance required
5) Timeframe for State acceptance:	Number of days allocated to the State for review and acceptance following formal deliverable submission for acceptance.
6) Frequency of Submission:	Reserved for regularly occurring submissions: weekly, monthly, etc. If this item is completed, then Date of Subsequent Submission is not applicable.

FIELD NAME	FIELD DESCRIPTION
7) Date of First Submission:	Date the deliverable shall be initially due. The dates are expressed as relative dates, tied to a project milestone such as contract award. Note that in some instances the submission date is the milestone plus a stated period of time (e.g. Project Start plus 1 month), and in other cases the due date precedes the milestone (e.g. System Requirements Review minus 3 months). For all deliverables that require a walk-thru prior to delivery, the draft deliverable shall be made available a minimum of 10 State business days prior to the scheduled walk-thru. The Date of First Submission reflects the date that the reviewed and revised document shall be submitted for acceptance, which shall be no more than 10 State business days following the walk-thru.
8) Date of Subsequent Submission:	Indicates when non-regularly-scheduled (Frequency of Submission is N/A) deliverables shall be resubmitted. If this item is completed, then Frequency of Submission is not applicable. The Date of Subsequent Submission may be designated 'As Necessary and mutually agreed upon by CCSAS project staff and the Business Partner,' and would be invoked when it is agreed that an event warrants that the CDL Item be updated.
9) Delivery / Format:	Delivery / Format for the deliverable. The options include: 1) Electronic / In Accordance with CCSAS Office Automation Standards: 2) Hard Copy / In Accordance with CCSAS Office Automation Standards 3) Electronic & Hard Copy / In Accordance with CCSAS Office Automation Standards
10) SOW Paragraph Reference:	Cross-references CDL Item to the Statement Of Work paragraphs in which the deliverable is referenced.
11) Content:	May contain tailoring instructions for the cited standard, or Content outline / description for those CDL Items where the Standard is Business Partner format with State acceptance.

1. DELIVERABLE IDENTIFIER PM 001
2. DELIVERABLE NAME Project Management Plan
3. STANDARD PROJ-00068
4. ACCEPTANCE Walk-thru prior to delivery - State review and acceptance required
5. TIMEFRAME FOR STATE ACCEPTANCE 10 State Business Days
6. FREQUENCY OF SUBMISSION Every six months
7. DATE OF FIRST SUBMISSION Project start
8. DATE OF SUBSEQUENT SUBMISSION N/A
9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards
10. SOW PARAGRAPH REFERENCE PM 0.1
11. CONTENT

The content and format of the standard may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

The following Change Request Management section shall provide direction in the creation of Section 5.5 (Change Request Management) of the PMP.

1. **Key Terms**

As used in the Change Request Management process, all capitalized terms will have definitions ascribed to them in Section 3A.4.2 of the PMA.

2. **Development of Change Request Management Process**

This section of the Project Management Plan (CDL PM 001) will define in detail the process for managing change requests and will meeting the following requirements:

a. Describe a mechanism for establishing the Change Control Board (CCB) and the Technical Change Board (TCB), including:
    i. Constitution of membership of the CCB is determined in the discretion of the State and supported by representatives from the Business Partner, including the method for the appointment of members and the method for replacement of members;
    ii. Constitution of membership of the TCB, including an appropriate number of State and Business Partner representatives, the method for the appointment of members and the method for replacement of members;
    iii. Scope of tasks allocated to the CCB and the TCB, which will be consistent with the tasks described in Section 3A.4.4 of the PMA;
    iv. Scope of authority of the CCB, which will be consistent with the authority defined in the CCSAS Project Charter;
    v. Scope of authority of the TCB, which will be limited to the authority to approve Change Requests that do not increase the Contract Amount (excluding any Changes of the kind described in paragraph 5.5(2)(b)(v)), and do not make any material change to the then-current Project Schedule;

b. Describe a mechanism for either party's initiation of a Change Request, the content of the Change Request and the implementing Change Order and each party's responsibilities in responding, including:
    i. Describe a process that permits either party to initiate a Change Request, and trigger the Change Request Management process;
    ii. The format and content for the Change Request;
    iii. The format and content of the Change Order. A Change Order can be either a "proposed Change Order" or a "Change Order". The "proposed Change Order" is prepared by the Business Partner, and meets the requirements in 5.5(2)(b)(iv). The "Change Order" is the final Change Order prepared by the State, incorporating the Business Partner's required portions from the proposed Change Order, as supplemented by the State for the purpose of submitting the Change Order to the appropriate State and Business Partner officials for formal approval.
    iv. The format and content of the proposed Change Order responsive to the Change Request, describing at a minimum: (i) the impact on the Specifications to implement the particular Change Request; (ii) the impact on the Project Schedule to implement the particular Change Request; (iii) the proposed acceptance testing criteria for the particular Change Request; and (iii) the impact on the Contract Amount and proposed payment terms for the particular Change Request, and attaching all supporting documents (including the technical assessment from the TCB);
    v. Describe a process in which the Business Partner must deliver a proposed Change Order responsive to a Change Request if requested by the State, but the Business Partner may, if the size and complexity of the Change Request warrants, request that the response to the Change Request be in two phases: (i) a phase one, in which a first proposed Change Order is delivered, consisting of the statement of work for the assessment and design work required for the Business Partner to prepare the proposed Change Order containing the information described in paragraph 5.5(2)(b)(iv)(the calculation of the impact to the Contract Amount must be identified with specificity on a line item basis, to permit the State visibility into the manner in which the pricing was developed and to verify that the pricing is commercially reasonable), and (ii) upon approval of the implementing Change Order, and for the compensation described in the implementing Change Order, a phase two to implement the Change Request;
    vi. Permit the State to reduce the scope of work included within the Baseline in one area of the Contract and apply monies so saved within the Contract Amount to establish a new Baseline in other areas of the Contract, through the Change Request Management process.

c. Describe the time frame within which each party must respond to a Change Request and proposed Change Order, including:
    i. The reasonable period of time from delivery of a Change Request within which the Business Partner must prepare and deliver to the State proposed Change Order.
    ii. The mechanism for any redeliveries, submissions and reviews, and the time for such redeliveries, submissions and reviews.
    iii. Any limitations on the scope of a party's review of a redelivered proposed Change Order, including whether the review may be solely for the purpose of determining that corrections have been made as specified in any written

statement of objections and that the changes do not materially adversely affect other aspects of the Change Order.

d. Provide a mechanism(s) for the management of the logistics for each Change Request such that each Change is documented and tracked by the source and nature of the Change;
e. Maintain traceability between each Change Order and the applicable Specifications, in order to keep the scope of the project under control with full traceability;
f. Confirm that each Change Order is assessed for impacts to cost and schedule and for technical feasibility;
g. Establish Technical Change Board approval thresholds and confirm that each assessed Change Request is approved, (or rejected, or deferred) by the appropriate authority

PMP Outline

1. Introduction
   1.1 Purpose
   1.2 Scope
   1.3 Document Overview
   1.4 Maintenance of the PMP
   1.5 Related Documents
   1.6 Assumptions
2. Referenced Documents
3. Project Organization
   3.1. Overview
   3.2. Alliance Organization
   3.3. Alliance / State Organization
   3.4. Alliance Project Management Office (PMO)
   3.5. Roles and Responsibilities
   3.6. Escalation Process
4. Project Management Tools
   4.1. Project Scheduling Tool
   4.2. Project Office Tool
5. Management Processes
   5.1. Integrated Planning
   5.2. Major Project Milestones
   5.3. Cost and Schedule Control
   5.4. Deliverables Management
   5.5. Change Request Management
   5.6. Issue Management
   5.7. Risk Management
   5.8. Financial Management
   5.9. Contract Management
   5.10. Staffing Management
6. Supporting Processes
   6.1. Quality Management Plan
   6.2. Process Improvement Plan
   6.3. Configuration Management Plan
   6.4. Requirements Management Plan
   6.5. Communications Management Plan
   6.6. Document Management Plan

1. DELIVERABLE IDENTIFIER PM 002

2. DELIVERABLE NAME Project Closeout Plan

3. STANDARD Business Partner Format with State acceptance

4. ACCEPTANCE State review and acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE 20 State Business Days

6. FREQUENCY OF SUBMISSION Once

7. DATE OF FIRST SUBMISSION Six months before project completion

8. DATE OF SUBSEQUENT SUBMISSION N/A

9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards

10. SOW PARAGRAPH REFERENCE PM 0.5

11. CONTENT

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

This deliverable shall contain the plans necessary to ensure orderly closeout of the project. Items in the closeout plan shall include a staff roll-off plan, a plan for archiving project materials, a plan for post-mortem debriefings of project personnel.

Project Closeout Plan
Introduction
1.1 Description / purpose
1.2 Document Overview
1.3 Definitions
1.4 Referenced Documents
1.5 Related Deliverables
1.6 Project closeout Task Plan

Review and Close Project Issues

1.1 Review and close Project risks
1.2 Inventory Alliance Owned Assets and Equipment
1.3 Develop Asset Transfer Plan
1.4 Archive Data Files
1.5 Turnover Project Documentation and Files
1.6 Develop Staff Roll-Off Plan
1.7 Closeout Project Financials

Final Project Review Session (debrief of all key project personnel)
Appendix A: Sample Agenda for Final Project Review Session

1. DELIVERABLE IDENTIFIER PM 003
2. DELIVERABLE NAME Post Implementation Evaluation Report (PIER)
3. STANDARD In accordance with SAM section 4947
4. ACCEPTANCE State review and acceptance required
5. TIMEFRAME FOR STATE ACCEPTANCE 20 State Business Days
6. FREQUENCY OF SUBMISSION Once
7. DATE OF FIRST SUBMISSION One month before project completion
8. DATE OF SUBSEQUENT SUBMISSION N/A
9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards
10. SOW PARAGRAPH REFERENCE PM 0.6
11. CONTENT

Post Implementation Evaluation Report
1. Introduction
2. Background and Summary of Results
    - 2.1 Initiation
    - 2.2 Progress
    - 2.3 Problems
    - 2.4 Acceptance
    - 2.5 Management Views
    - 2.6 Management and Operations Strategy
3. Attainment of Objectives
4. Special Observations (Optional)
5. Corrective Actions (Conditional based on recommendations of the Steering Committee
6. Economic Summary
7. Projected Operations / Maintenance Costs
8. Project Management Schedule

Appendix A – PIER Economic Summary
Appendix B – Summary of Projected Operations / Maintenance Costs
Appendix C – SAM – Information Technology Project Review, Reporting and Evaluation
Appendix D – DOIT SIMM Post Implementation Report & Lessons Learned

1. DELIVERABLE IDENTIFIER PM 004
2. DELIVERABLE NAME Deleted
3. STANDARD
4. ACCEPTANCE
5. TIMEFRAME FOR STATE ACCEPTANCE
6. FREQUENCY OF SUBMISSION
7. DATE OF FIRST SUBMISSION
8. DATE OF SUBSEQUENT SUBMISSION
9. DELIVERY/FORMAT
10. SOW PARAGRAPH REFERENCE
11. CONTENT

1. DELIVERABLE IDENTIFIER PM 005
2. DELIVERABLE NAME Deleted
3. STANDARD
4. ACCEPTANCE
5. TIMEFRAME FOR STATE ACCEPTANCE
6. FREQUENCY OF SUBMISSION
7. DATE OF FIRST SUBMISSION
8. DATE OF SUBSEQUENT SUBMISSION
9. DELIVERY/FORMAT
10. SOW PARAGRAPH REFERENCE
11. CONTENT

1. DELIVERABLE IDENTIFIER PM 006 – (Converted to Work Product with CR-00082)

2. DELIVERABLE NAME Monthly Status Report

3. STANDARD

4. ACCEPTANCE No formal State acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE N/A

6. FREQUENCY OF SUBMISSION Monthly

7. DATE OF FIRST SUBMISSION 10 State business days from end of 1st complete month after project start

8. DATE OF SUBSEQUENT SUBMISSION No later than the 10th working day following the last Friday of the month. If the last day Friday of the month is not a work day, the final day will be considered the last work day of the week with the last Friday.

9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards

10. SOW PARAGRAPH REFERENCE PM 5.3

11. CONTENT

CR-00082 changes this CDL to a Work Product.

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

The Monthly Status Report shall include the following:

a) Activities completed in prior month

b) Deliverables produced in prior month

c) Deliverables missed and reason

d) Activities planned for upcoming month

e) Deliverables planned for upcoming month

f) Unplanned activities completed in prior month

g) Adjustments made to plan or schedule

h) Change request status

I) Quality review synopsis

j) Issues synopsis, including list of critical issues

k) Staffing summary, including retention rates

l) Risk summary

m) Host hardware maintenance results - previous month's activity

n) Network hardware/software maintenance results - previous month's activity

o) Application server hardware maintenance results - previous month's activity

1. DELIVERABLE IDENTIFIER PM 007
2. DELIVERABLE NAME Deleted
3. STANDARD
4. ACCEPTANCE
5. TIMEFRAME FOR STATE ACCEPTANCE
6. FREQUENCY OF SUBMISSION
7. DATE OF FIRST SUBMISSION
8. DATE OF SUBSEQUENT SUBMISSION N/A
9. DELIVERY/FORMAT
10. SOW PARAGRAPH REFERENCE
11. CONTENT

1. DELIVERABLE IDENTIFIER PM 008

2. DELIVERABLE NAME Deleted

3. STANDARD

4. ACCEPTANCE

5. TIMEFRAME FOR STATE ACCEPTANCE

6. FREQUENCY OF SUBMISSION

7. DATE OF FIRST SUBMISSION

8. DATE OF SUBSEQUENT SUBMISSION

9. DELIVERY/FORMAT

10. SOW PARAGRAPH REFERENCE

11. CONTENT

1. DELIVERABLE IDENTIFIER PM 009 – (Converted to Work Product with CR-02-00124a)

2. DELIVERABLE NAME Project Schedule

3. STANDARD N/A

4. ACCEPTANCE No Formal State acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE N/A

6. FREQUENCY OF SUBMISSION Monthly - 5 State Business Days after the last Friday of the previous month. If the last Friday is not a State Business Day, then the cutoff is the last State Business Day of the week, with the last Friday of the month.

7. DATE OF FIRST SUBMISSION Project start

8. DATE OF SUBSEQUENT SUBMISSION N/A

9. DELIVERY/FORMAT Electronic & Hard Copy/In Accordance With CCSAS Office Automation

10. SOW PARAGRAPH REFERENCE PM 7.1

11. CONTENT

CR-02-00124a changes this CDL to a Work Product

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

Project Schedule

1. Project Roadmap
2. Dependency Chart
3. Project Schedule (electronic delivery)

1. DELIVERABLE IDENTIFIER PM 010 (Converted to Work Product with CR-02-00124a)

2. DELIVERABLE NAME Cost/Schedule Variance Report

3. STANDARD N/A

4. ACCEPTANCE No formal state acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE N/A

6. FREQUENCY OF SUBMISSION Monthly - 5 State Business Days after the last Friday of the previous month. If the last Friday is not a State Business Day, then the cutoff is the last State Business Day of the week, with the last Friday of the month.

7. DATE OF FIRST SUBMISSION 10 State Business days following the last Friday of November – December 12, 2003

8. DATE OF SUBSEQUENT SUBMISSION On the 10th State Business day following the last Friday of the previous month beginning in December 2003.

9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards

10. SOW PARAGRAPH REFERENCE PM 7.2

11. CONTENT

CR-02-00124a changes this CDL to a Work Product

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

Cost / Schedule Variance Report

1. Introduction
   - 1.1. Description / Purpose
   - 1.2. Document Overview
   - 1.3. Definition
   - 1.4. Referenced Documents
   - 1.5. Related Deliverables
2. Project Identification
3. Performance Summary
4. Variance Detail
5. Pervious and Current Reporting Period's Variance Comparison

1. DELIVERABLE IDENTIFIER PM 011

2. DELIVERABLE NAME Work Breakdown Structure

3. STANDARD Business Partner format with State acceptance

4. ACCEPTANCE State review and acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE 5 State Business Days

6. FREQUENCY OF SUBMISSION N/A

7. DATE OF FIRST SUBMISSION Project start

8. DATE OF SUBSEQUENT SUBMISSION As necessary and mutually agreed-upon by CCSAS project staff and the Business Partner

9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards

10. SOW PARAGRAPH REFERENCE PM 7.3

11. CONTENT

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

Work Breakdown Structure

1. Introduction
   - 1.1. Description / Purpose
   - 1.2. Document Overview
   - 1.3. Definitions
   - 1.4. Referenced Documents
   - 1.5. Related Deliverables
2. Work Breakdown Structure (electronic delivery)
   - 2.1. Graphical Work Breakdown Structure

Detailed Work Breakdown Structure

1. DELIVERABLE IDENTIFIER PM 012

2. DELIVERABLE NAME Risk Management Plan

3. STANDARD IEEE 1540-2001, Annex A

4. ACCEPTANCE Walk-thru prior to delivery - State review and acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE 20 State Business Days

6. FREQUENCY OF SUBMISSION N/A

7. DATE OF FIRST SUBMISSION Project start + 2 months

8. DATE OF SUBSEQUENT SUBMISSION As necessary and mutually agreed-upon by CCSAS project staff and the Business Partner

9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards

10. SOW PARAGRAPH REFERENCE PM 9.1

11. CONTENT

The content and format of the standard may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

1. DELIVERABLE IDENTIFIER PM 013
2. DELIVERABLE NAME Quality Management Plan
3. STANDARD Business Partner Format with State acceptance
4. ACCEPTANCE Walk-thru prior to delivery - State review and acceptance required
5. TIMEFRAME FOR STATE ACCEPTANCE 20 State Business Days
6. FREQUENCY OF SUBMISSION N/A
7. DATE OF FIRST SUBMISSION Project start + 5 months
8. DATE OF SUBSEQUENT SUBMISSION As necessary and mutually agreed-upon by CCSAS project staff and the Business Partner
9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards
10. SOW PARAGRAPH REFERENCE PM 10.1
11. CONTENT

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

Includes electronic access to the quality management records.

Quality Management Plan

1. Introduction
   1.1. Description / Purpose
   1.2. Document Overview
   1.3. Definitions
   1.4. Referenced Documents
   1.5. Related Deliverables
2. Roles and Responsibilities
   2.1. Project Overview
   2.2. Project roles and Responsibilities
3. Standards Definition
   3.1. Overview of Project Standards
   3.2. Document Standards
   3.3. Document Management Procedures
   3.4. Tools
4. Metrics
   4.1. Overview of Metrics
   4.2. Metric Data
   4.3. Process Improvement
5. Project Reviews and Audits
   5.1. Overview of Project Reviews and Audits

5.2. Internal Review of Deliverables
5.3. Audits
5.4. Review of Improvement Opportunities
5.5. CCSAS CSE Project Reviews
5.6. Corporate Quality Reviews
6. Quality Reporting

1. DELIVERABLE IDENTIFIER PM 014 – (Converted to Work Product with CR-00082)

2. DELIVERABLE NAME Quality Management Activity Report

3. STANDARD

4. ACCEPTANCE No formal State acceptance required

5. TIMEFRAME FOR STATE ACCEPTANCE N/A

6. FREQUENCY OF SUBMISSION Monthly - 5 State Business Days after the last Friday of the previous month. If the last Friday is not a State Business Day, then the cutoff is the last State Business Day of the week, with the last Friday of the month.

7. DATE OF FIRST SUBMISSION QMP acceptance + 1 month

8. DATE OF SUBSEQUENT SUBMISSION N/A

9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards

10. SOW PARAGRAPH REFERENCE PM 10.2

11. CONTENT

CR00082 changes this CDL to a Work Product.

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

Quality Management Activity Report

1. Introduction
   - 1.1. Description / Purpose
   - 1.2. Document Overview
   - 1.3. Definitions
   - 1.4. Referenced Documents
   - 1.5. Related Deliverables
2. Activity Summary
   - 2.1. Prior Month Planned Activities
   - 2.2. Prior Month Completed Activities – Planned
   - 2.3. Prior Month Completed Activities – Unplanned
   - 2.4. Prior Month Planned Activities Missed and Reason
   - 2.5. Activities Planned for Upcoming Month
3. Deliverable Review Status
4. Metrics
5. Process Improvements
6. Audits

1. DELIVERABLE IDENTIFIER PM 015
2. DELIVERABLE NAME Deleted
3. STANDARD
4. ACCEPTANCE
5. TIMEFRAME FOR STATE ACCEPTANCE
6. FREQUENCY OF SUBMISSION
7. DATE OF FIRST SUBMISSION
8. DATE OF SUBSEQUENT SUBMISSION
9. DELIVERY/FORMAT
10. SOW PARAGRAPH REFERENCE
11. CONTENT

1. DELIVERABLE IDENTIFIER PM 016
2. DELIVERABLE NAME Issue Management Plan
3. STANDARD Business Partner Format with State acceptance
4. ACCEPTANCE Walk-thru prior to delivery - State review and acceptance required
5. TIMEFRAME FOR STATE ACCEPTANCE 10 State Business Days
6. FREQUENCY OF SUBMISSION N/A
7. DATE OF FIRST SUBMISSION Project start + 1 month
8. DATE OF SUBSEQUENT SUBMISSION As necessary and mutually agreed-upon by CCSAS project staff and the Business Partner
9. DELIVERY/FORMAT Electronic/In Accordance With CCSAS Office Automation Standards
10. SOW PARAGRAPH REFERENCE PM 11.1
11. CONTENT

The content and format below may be tailored as mutually agreed upon by the CCSAS project staff and the Business Partner.

This Issue Management Plan applies to project issues and action items. Product issues are addressed in CDL TM 010.

This plan shall include the issue management process, types of issues within the scope, how issues are opened and closed, how issues are escalated, and the reporting mechanism.

1. Introduction.
   1.1 Description / Purpose
   1.2 Document Overview
   1.3 Definitions
   1.4 Referenced Documents
   1.5 Related Deliverables
2. Scope
3. Issue Management Objectives
4. Issue Management Responsibilities
5. Issue Management Overview
6. Issue Management Process
7. Issue Communication
8. Issue Management Orientation and Training
9. Issue Management Process Evaluation

APPENDICES

Appendix A – Issue Management Data Elements
Appendix B – Issue Management Reports