Department of Health Care Services
CA-MMIS
Quality Management Plan

Project Management Methodology

October 5, 2012
Version 3.0

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Preface

Executive Policies

The *Project Policies* document, which is stored in the California Medicaid Management Information System (CA-MMIS) SharePoint site, contains policies that apply directly to this Contract and tasks to develop, maintain, convert, or re-engineer computer software and services. The *Project Policies* document is to be made applicable to subcontractors by including a requirement in the applicable contract, Statement of Work (SOW), or task order.

Professional Responsibility

The Project Management (PM) Team has a responsibility to maintain ethical and professional conduct in the management of CA-MMIS projects. This obligation includes producing quality products or services within the Contract's scope, with consideration to time and cost. Cooperation and good faith are the professional responsibility of the stakeholders.

Revision History

Version	Date	Description	Author
2.0	06/28/2011	Upload the DHCS Approval	Rick Alfaro
2.01	05/08/2012	Planned updates including changes per DHCS feedback; reformat to SPARK-ITS template	Cyrus Hoseini
2.02	07/30/2012	Added Sections 2.5 System/Software Quality Management and 2.6 System Replacement Quality Team Internal Reviews. Expanded on the EPMO Quality Standards Group processes in Section 2.7.	Cyrus Hoseini
2.03	08/05/2012	Quality Management Review	Deirdre Smith
2.04	09/06/2012	EPMO Review	Corrine Housley
2.05	09/06/2012	QM Review	Deirdre Smith

Version	Date	Description	Author
2.06	10/02/2012	Addressed DHCS Comments: • Added back Section 1.5 and added new Table 4: Systems and Tools Used for Monitoring and Reviewing Deliverables, Work Products, and Processes • Section 2.3.3 - added new Table 8: Interrelationship among Incidents, eFixes, Defects, Problem Statements, and Erroneous Payment Corrections • Section 2.4.1.2 – removed bullet • Updated Sections 2.4.1.3.3 and 2.4.1.3.4 Updated dates on Table 3	Kalpana Kumar, Cris Campbell
2.07	10/03/2012	QM Review	Cris Campbell
3.0	10/05/2012	DHCS Approval	Tanya Sachdeva

Configuration of this Document

This document is under limited configuration management. See the Configuration Items List in the CA-MMIS SharePoint site for details.

Executive Summary

The Department of Health Care Services (DHCS) has contracted with Xerox State Healthcare, LLC (Xerox) to deliver the CA-MMIS Contract. The Enterprise Project Management Office (EPMO) has been established to implement a Project Management Methodology (PMM) for the CA-MMIS contract (as described in the *Project Management Plan Overview*). As part of the PMM, the EPMO Team implements and maintains PM processes and tools that allow Xerox to manage contract activities effectively across CA-MMIS Contract phases.

The CA-MMIS Quality Management (QM) Team is designed to be an independent quality organization reporting to DHCS executives and, therefore, is not under the control and management of the EPMO. In support of QM's independence, the *Quality Management Plan (QMP)* was separated and excluded from the Project Management Plans (PMPs) per Fiscal Intermediary (FI) letters T-0309/A-0273. QM interacts and maintains essential relationships with Communication Management, Governance Management, Defect Management, Deliverables Management, Issue Management, and Risk Management activities.

The *QMP* details the quality strategy used to confirm that the quality objectives of contract implementations are met based on the appropriate Request for Proposal (RFP), Narrative Technical Proposal (NTP), Deliverable Expectation Documents (DXD's), Medicaid Information Technology Architecture (MITA), and other artifacts. It identifies and defines the enterprise framework for confirming management and delivery of quality processes, procedures, services, and products for the life of the CA-MMIS Contract. The *QMP* details the methods, tools, and processes that QM uses to independently examine, review, and assess CA-MMIS operational processes on behalf of DHCS. In addition, the methods and processes that QM uses to independently examine, review, and assess project quality for the System Replacement (SR) solution (please refer to Appendix K. for a list of major QM reports). The *QMP* describes QM's approach to measuring the quality of work being performed, assessing contract compliance, and incorporating continuous improvement across the Contract as described in Section 2.4.

The CA-MMIS Contract's QM program embraces two primary objectives that are achieved through an enterprise integrated quality program that defines, measures, and improves quality:

- **Product Quality** – Product quality focuses on contract deliverables and work products. Meeting this objective verifies the completeness and accuracy of the deliverables and work products submitted to DHCS for approval as described in Section 2.2
- **Process Quality** – Process quality focuses on how contract activities, work products, and deliverables are developed, monitored, and evaluated. Meeting this objective verifies that internal processes produce the desired result of achieving compliance with program and contract requirements (as defined in Sections 2.1, 2.2, and 2.3)

As shown in Figure 1, the *QMP* focuses on five primary QM processes: Program Compliance, Quality Assurance (QA), Contract Compliance, Quality Improvement, and System/Software Quality Management. These five processes are described at a high level below.

Program Compliance – Identifies and defines the framework for confirming the overall quality level in CA-MMIS operational processes, procedures, and services are sustained, and continual improvement is achieved in order to provide improved customer service. This activity especially focuses on gathering and analyzing data related to the claims processing processes and provider relationship activities. Please refer to Section 2.1for a description of the program compliance sampling approach, process inputs, steps, outputs, and metrics.

Quality Assurance – QM works within the established EPMO program governance processes to review deliverables and work products prior to submission to DHCS. As part of deliverables management, the QM Deliverable Review Analysts review deliverables and work products to verify contractual requirements have been met and review comments have been appropriately addressed by:

1. Performing an independent review of the entire CRFP and NTP
2. Searching for requirements in DOORS
3. Verifying requirements listed in the DXD are addressed in the document

Please refer to Section 2.2.1for a description of deliverables, work products, and artifacts, as well as a description of the Document Quality Assurance (DQA) approach, process inputs, steps, outputs, and metrics. Appendix E. provides a description of the deliverables and work products QM will review.

In addition to performing DQA reviews, QM staff participate in and review CA-MMIS contract staff training, including monitoring staff training effectiveness and supporting the training team in preparation of training documentation and DHCS/Xerox staff training. Please refer to Section 2.2.2for a description of the staff training monitoring approach, process inputs, steps, outputs, and metrics.

Contract Compliance – Monitors the overall compliance of the CA-MMIS Contract and measures and analyzes Contract requirements, as well as Service Level Agreements (SLAs) agreed upon by DHCS and Xerox management. Please refer to Section 2.3.1for a description of the contract compliance monitoring approach, process inputs, steps, outputs, and metrics.

Additionally, the Quality Management Organization (QMO) manages the Problem Correction System (PCS) (ClearQuest), which is the main system used to manage Problem Statements (PSs) and Erroneous Payment Corrections (EPC) in this Contract. Please refer to Section 2.3.2 for a description of the problem correction process approach, process inputs, steps, outputs, and metrics.

Quality Improvement – Identifies actions that will have a positive effect on the contract, generates post-production reports, conducts data analysis, and studies anomalies in order to detect quality issues in their early stage. The main drivers of this process are improving operational performance to achieve the highest impact at the lowest cost, and providing insight on production statistics. Please refer to Section 2.4.1for a description of the process improvement approach, process inputs, steps, outputs, and metrics.

Additionally, ad hoc reporting and special QA studies are essential in understanding and identifying trends and anomalies and in verifying that newly implemented and existing policies and procedures are working as designed. Please refer to Section 2.4.2for a description of the ad hoc reporting and special QA studies approach, process inputs, steps, outputs, and metrics.

Corrective Action Plans (CAPs) are actions taken to overcome non-conformities or deficiencies in the process, system, procedure, and other areas as defined in the CA-

MMIS Contract. They are designed to prevent the recurrence of non-conformities and make the processes more efficient. QM is responsible for monitoring and controlling of the CAPs and reporting progress to DHCS. Please refer to Section 2.4.3for a description of the CAP monitoring approach, process inputs, steps, outputs, and metrics.

System/Software Quality Management – Systematic reviews throughout the System Development Life Cycle (SDLC) to verify the application fulfills the requirements and steps have been completed as designed and planned with acceptable quality and in a timely manner. These include the following reviews, which are described in Section 2.5.

- Planning Review
- Requirement Analysis Review
- Architecture Design Review (ADR)
- Solution Analysis Review
- Detailed Design Review (DDR)
- Verification and Validation Plan Review
- Configuration, Modification, and New Development Review
- System Testing Review
- Readiness Testing Review
- Implementation Review
- Post-implementation Review (PIR)
- Decommissioning Review

2.1 Program Compliance

Assess accuracy and effectiveness of Claims Processing, system maintenance, modifications (including implementation of Operating Instruction Letters (OILs), table updates, and changes in error codes), and provider relations processes

Tools:

- Quality Review and Support Team (QRST)
- Provider Contact Review System (PCRS)

Outputs:

- Quarterly: Treatment Authorization Requests (TAR) and Service Authorization Request (SAR) Reports
- Monthly: QM Performance Report (QMPR)
- Monthly: Provider Relationship Organization (PRO)
- Weekly:180-Day Aged Claim Report
- Weekly: Payment Data Review

2.2 Quality Assurance

2.2.1 Document Quality Assurance

Review deliverables and work products to verify they meet the requirements and content is effectively addressed

2.2.2 Staff Training Monitoring

Review staff training effectiveness and make recommendations for improvements in training curricula and strategies, as appropriate

2.3 Contract Compliance

Monitor and analyze CA-MMIS SLA Compliance and adherence to the Contract requirements; manage PSs and EPCs

Tools:

- Cognos (SLAs)
- ClearQuest (PSs and EPCs)
- Contract Management Tool (for analysis)

Outputs:

- SLA Monthly Status Reports (Cognos)
- PS and EPC Meetings and Reports

2.4 Quality Improvement

2.4.1 Process Improvement

2.4.2 Ad Hoc Reporting and Special QA Studies

2.4.3 Corrective Action Plan (CAP) Monitoring

2.5 System/Software Quality Management

2.5.1 Planning Review
2.5.2 Requirements Analysis Review
2.5.3 Architecture Design Review (ADR)
2.5.4 Solution Analysis Review
2.5.5 Detail Design Review (DDR)
2.5.6 Verification and Validation Plan Review
2.5.7 Configuration, Modification, and New Development Review
2.5.8 System Testing Review
2.5.9 Readiness Testing Review
2.5.10 Implementation Review
2.5.11 Post-Implementation Review
2.5.12 Decommissioning Review

Figure 1: Five Primary Quality Management Processes

This Plan includes the following sections:

Section 1 – Introduction, which includes scope, objectives, and quality standards

Section 2 – Processes that define the approach this plan will take for Quality Assurance (QA), Quality Control (QC), and continuous process improvement, as well as inputs to the process, process steps, and outputs from the process

Section 3 – Roles and Tools, which includes responsibilities, training needed, and tools used

Section 4 – QA for this plan along with milestones and verification steps

Section 5 – Definitions of acronyms applicable to this document

Section 6 – Risks and Mitigation Strategies

Section 7 – Process Changes, including business and technical changes

Appendices – Supplemental information in support of this plan

The target audience for the *QMP* includes DHCS staff, CA-MMIS Contract Managers, and QM staff. The *QMP* is intended to serve as a management tool that describes the processes and tools necessary to execute QM for the enterprise. It is not intended to be used to teach CA-MMIS staff the management skills necessary to manage this process.

The methodology used in this plan closely follows the *Project Management Body of Knowledge (PMBOK® Guide) — Fourth Edition* and maps to Capability Maturity Model® Integration (CMMI) Level 2. Additional applicable standards are listed in Appendix C.

1. Introduction

The CA-MMIS PMM is comprised of a group of plans, processes, procedures, and tools used to effectively and efficiently manage projects. Key relationships between the various plans and processes support execution of project tasks and activities in a structured and repeatable manner. The *QMP* is one of the components of the PMM, and as such maintains integral support relations with other PM processes.

In Figure 2, key PM processes are displayed with supporting PM and system development (SD) processes. Essential relationships of the *QMP* are illustrated in Figure 2 and discussed in the paragraphs following the figure. PM and SDLC-supporting processes are included in the figure. Additionally, the figure illustrates the existence of QM standard operating procedures (SOPs). These SOPs are located on the SharePoint site: CA-MMIS Home > Workgroup > Quality.

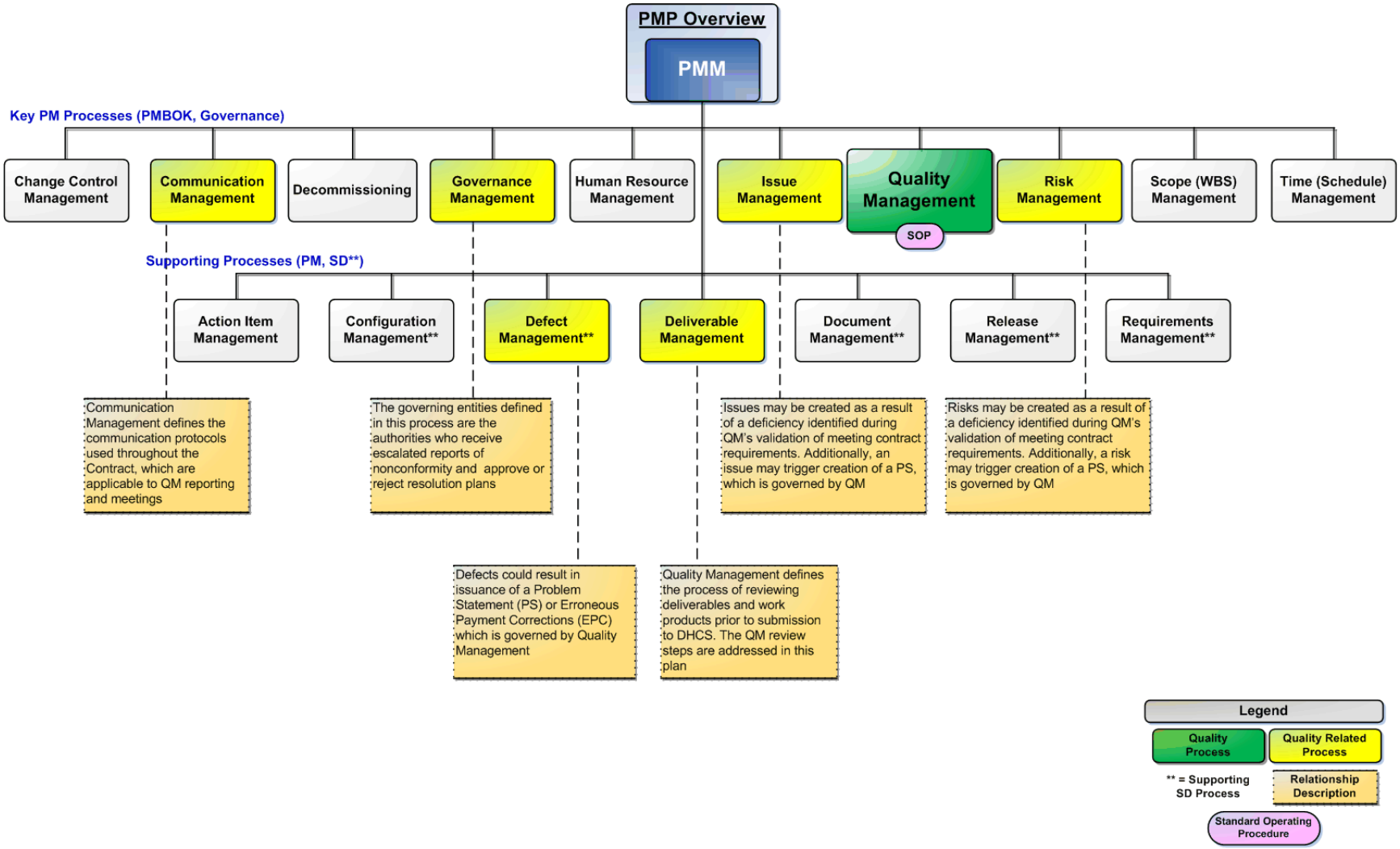

Figure 2: Key Inter-related PM Processes

QM is closely integrated with other PM processes, including Communication Management, Defect Management, Deliverables Management, Governance Management, Issue Management, and Risk Management. This integration is an important aspect of managing and controlling project activities and scope.

- **Communication Management** – QM uses the defined communication protocols throughout the Contract as it relates to QM reporting and meetings
- **Defect Management** – Defects could result in the issuance of a PS or EPC which is monitored by QM
- **Deliverables Management** – QM defines the process by which deliverables and work products are reviewed prior to submission to DHCS
- **Governance Management** – The governing entities defined in this process are the authorities who receive escalated reports of nonconformity and approve or reject resolution plans
- **Issue Management** – Issues may be created as a result of a deficiency identified during QM's validation contract compliance; additionally, an issue may trigger the creation of a PS, which is monitored by QM
- **Risk Management** – Risks may be created as a result of a deficiency identified during QM's validation of contract compliance; additionally, a risk may trigger the creation of a PS, which is monitored by QM

Utilizing the methods, tools, and processes defined in Sections 2.1– 2.7and integrating the CMMI Level 2 processes, the CA-MMIS Contract firmly establishes quality as a foundation for operational and continuous improvement. QM is required to follow the standards of the Contract as directed by the EPMO. As stated in the NTP, "QM processes are International Organization for Standardization (ISO) 9001:2000 compliant or CMMI Level 2 certified." A quality focus is critical to the success of the entire CA-MMIS Contract. Please refer to Appendix I. for a comparison of CMMI Level 2 standards with ISO 9001:2008 standards.

QM applies stringent quality checkpoints and balances through its understanding that poor quality directly relates to increased costs associated with rework within each operational area, adjustments due to non-standardized processes, and fraud, waste, and abuse. With this understanding, we are committed to supporting DHCS in advancing the following key indicators in MITA version 2 categories: Timeliness of Business Process, Data Access/Accuracy, Effort to Perform, Accuracy of Process, and Value to Stakeholders. Xerox provides an independent, dedicated QMO that imparts an open line of communication to DHCS leaders while preserving the traditional reporting relationship with the Executive Director of the Xerox CA-MMIS Contract. As explained briefly in the Executive Summary, key functions of QM include conducting program compliance reviews, deliverable reviews, contract compliance reviews, continuous process improvement activities, and ad hoc reporting and special QA studies. Additionally, QM develops and maintains the *Quality Assurance Procedures and Standards Manual (QAPSM)*, which contains the SOPs that guide QMO Program and Contract Management operations. Please refer to Appendix B. for location of the *QAPSM* on SharePoint.

The QM approach is based upon *PMBOK® Guide — Fourth Edition* and integrates CMMI® principles. Using this integrated management approach throughout the life cycle confirms that the applications conform and function according to the specified standards and requirements throughout the workflows.

The Project Management Institute (PMI) defines QM as a combination of quality planning, assurance, and control. Quality planning includes identifying relevant quality processes, measurements, and performance standards. QA is the systematic application of quality processes and activities to confirm performance meets requirements. QA is also the

process area that describes continuous process improvement initiatives and activities. QC is the monitoring of specific results to determine if they comply with the relevant quality standards and identification of ways to eliminate unsatisfactory deviations (e.g., operations anomalies as described in Section 2.4.2, or Program Compliance deficiencies as described in Section 2.1.6.

QM operates within the established EPMO framework as documented in the *PMPs*. This includes following the standards for developing and managing project plans, managing risks and issues, initiating change requests, following configuration management protocols, training on Xerox tools, and monitoring Xerox milestones, project schedules, and deliverable submissions to DHCS.

QM functions are conducted employing the Define, Measure, Analyze, Improve, and Control (DMAIC) model. The DMAIC model introduces a proactive approach to solving quality problems through proper use of statistical analysis and quality tools and techniques, which support the QM Team in identifying potential issues and proactively identifying and resolving their root causes.

Define – Identify the issue or potential risk causing a decrease in customer satisfaction or performance

Measure – Collect data from the existing process

Analyze – Study the process and data for clues to what is happening

Improve – Recommend actions based on the data to change the process for improvement

Control – Monitor the system or process to sustain the gain

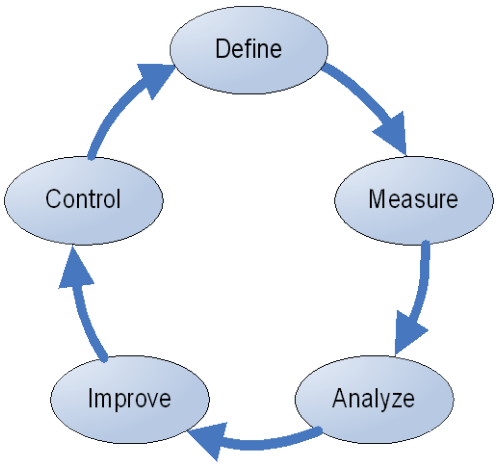

Figure 3: DMAIC

Although QM provides management and oversight of the CA-MMIS quality activities, the CA-MMIS Project Team members have the responsibility of verifying that a high level of quality processes, procedures, services, and products are delivered each step of the way (as defined in Section 3.1).

1.1 Scope

The *QMP* focuses on supporting quality reviews of CA-MMIS deliverables, work products, and services and planning for the QM activities that will be in place during the life of the Contract, including Legacy Operations, Legacy Enhancements, SR, and SR Operations.

The scope of quality throughout the phases of the CA-MMIS Contract extends beyond the QMO. Tables 1 and 2 present a visual map of the scope of quality throughout the CA-MMIS Contract and the responsible teams.

QM conducts quality activities throughout the life of the CA-MMIS Contract that encompass monitoring, measuring, and reporting on DHCS-required contractual, program, functional, and technical areas within DHCS and the CA-MMIS Contract. This document describes the processes and procedures QM applies to independently measure the quality of work being performed and assesses program compliance. The *QMP* includes process information for the following QM areas:

1. **Program Compliance**
    a. Quality reviews and metrics for monitoring and improving the accuracy and efficiency of claims adjudication, system maintenance, modifications (including implementation of OILs, table updates, and changes in error codes), and provider relations processes. Please refer to Section 2.1for a description of the program compliance process approach, inputs, process steps, outputs, and metrics
2. **Quality Assurance**
    a. DQA: Evaluate deliverables and selected work products for alignment with internal standards, templates, and applicable contractual requirements. Please refer to Section 2.2.1for a description of the DQA process approach, inputs, process steps, outputs, and metrics
    b. Staff Training Monitoring: Monitor staff training effectiveness and support the Training Team in preparation of training documentation and DHCS/Xerox staff training. Please refer to Section 2.2.2for a description of the staff training monitoring process approach, inputs, process steps, outputs, and metrics
3. **Contract Compliance**
    a. Contract Compliance Monitoring: Monitor, validate, and analyze Contract requirements, SLAs, and reporting through proper use of reporting processes and systems. Please refer to Section 2.3.1for a description of the contract compliance monitoring process approach, inputs, process steps, outputs, and metrics
    b. Problem Correction Process: Identify and track PSs and EPCs identified by either the DHCS or Xerox staff in response to problems related to CA-MMIS Operations, including emergency fixes. Please refer to Section 2.3.2for a description of the problem correction process approach, inputs, process steps, outputs, and metrics
4. **Quality Improvement**
    a. Process Improvement: Identify, promote, and implement operational continuous process improvement initiatives throughout the life of the contract. Please refer to Section 2.4.1for a description of the process improvement process approach, inputs, process steps, outputs, and metrics
    b. Ad Hoc Reporting and Special QA Studies: Manage and implement Ad Hoc Reporting and Special QA Studies requested by DHCS. Please refer to Section 2.4.2for a description of the ad hoc reporting and special QA studies process approach, inputs, process steps, outputs, and metrics
    c. CAP Monitoring: Monitor the implementation and progress of the managerial CAPs initiated by DHCS. Please refer to Section 2.4.3for a description of the CAP monitoring process approach, inputs, process steps, outputs, and metrics
5. **System/Software Quality Management**
    a. Software development reviews conducted by Software Quality Analysts in QMO during each software development phase from planning through post-implementation, as described in Section 2.5

This plan also explains quality-related activities conducted by the System Replacement Quality Team (SRQT) (please refer to Section 2.5.13.5 and the EPMO Quality Standards Group (QSG) (please refer to Section 2.7). However, this plan does not address QM related activities conducted by the SR Functional Team (e.g., peer reviews) or the SG Team (e.g., SG SDLC metrics monitoring) as they are defined in other documents (e.g., L Series for SG and *SDA* for SR Functional team activities).

Table 1: Scope of Quality throughout the Phases of the CA-MMIS Contract (Part 1- QMO and EPMO)

Organization Phase	QMO					EPMO Quality and Standard Team
	Program Compliance	**Contract Compliance**	**Document Quality Assurance**	**Process Improvement and Ad Hoc Reporting**	**System/Software Quality Management**	
Legacy Operations	Review Claim Processing and PRO processes	• Monitor SLAs • Support the PS/EPC Process	Review Takeover Exit and Legacy deliverables and work products	• Manage operational Process improvements • Design and run System/Software reports and special studies • Monitor CAPs	L. Series	• Deliverable Management • Verify adherence to CMMI Level 2 of SG QA processes • Work with SG to track audit deficiencies through resolution • Provide guidance related to CMMI Level 2 and ISO standards • Conduct Periodical CMMI, IEEE, and PMBOK Audits • Conduct Periodical SDLC adherence audits • Identify process improvements via audits and track through implementation
Enhancement	Review Claim Processing and PRO processes (Post implementation)	• Monitor SLAs • Support the PS/EPC Process	Review deliverables and work products • Staff Training Monitoring	• Manage operational Process improvements • Design and run System/Software reports and special studies • Monitor CAPs		
System Replacement	N/A	• Monitor SLAs • Support the PS/EPC Process	Review deliverables and work products • Staff Training Monitoring	• Manage operational Process improvements • Design and run System/Software reports and special studies • Monitor CAPs	• Software Specifications Review (SSR) • Architecture Design Review (ADR) • Detailed Design Review (DDR) • Verification and Validation Review • Readiness Testing Review • PIR • Decommissioning Review • System Maintenance Plan • MITA adherence	
System Replacement Operations	Review Claim Processing and PRO processes (Post implementation and including new functionality)	• Monitor SLAs • Support the PS/EPC Process	Review deliverables and work products • Staff Training Monitoring	• Manage operational Process improvements • Design and run System/Software reports and special studies • Monitor CAPs		

QMP SDA L Series

Table 2: Scope of Quality throughout the Phases of the CA-MMIS Contract (Part 2- SG and SR)

<table>
<tr><th rowspan="2">Organization Phase</th><th colspan="3">System Group (SG)</th><th rowspan="2">Enhancement Project</th><th colspan="2">System Replacement (SR)</th></tr>
<tr><th>Software Engineering Process Group (SEPG)</th><th>Process and Product Quality Assurance Group (PPQA)</th><th>Metrics Measurement and Analysis (MA) Group</th><th>SR Functional Team</th><th>SR Quality Team (SRQT)</th></tr>
<tr><td>Legacy Operations</td><td rowspan="2">Responsible for compliance to the existing processes at the Systems Group (SG) level for the defined SDLC.</td><td rowspan="2">Responsible for monitoring and evaluating the process deployment and its performance capabilities.</td><td rowspan="2">Identify non-compliances and areas for improvement and publish Metrics Analysis Reports and PPQA Audit Reports based on qualitative and quantitative assessment.</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Enhancement</td><td>Systematic code reviews, document quality reviews, executing test cases as defined in the Master Test Plan, proper quality controlled release management and change control processes verifying appropriate deployment and approval processes throughout the SDLC</td><td>N/A</td><td>N/A</td></tr>
<tr><td>System Replacement</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td rowspan="2">Conduct Peer Reviews
Participate in testing as described in the Master Test Plan</td><td rowspan="2">Process and work product internal reviews to verify:
The functional and system components are peer reviewed as described in SDA
Testing activities are performed as described in the Master Test Plan
The software testing of maintenance and modification outputs in accordance with the Change Control Board (CCB) approved processes and procedures
The follow-up reviews are performed to confirm problems have been resolved
The system test results include verifying the product results met the approved requirements and expectations, and defects were reported</td></tr>
<tr><td>SR Operations</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
</table>

QMP SDA L Series

1.2 Interaction with EPMO and Software Development Methodology

QM is conducted throughout the life cycle of the Contract including the following phases: Takeover, Legacy Operations, Legacy Enhancement, System Replacement, Replacement System Operations, and Turnover. Team members are responsible for confirming quality processes, procedures, services, and products are delivered. Xerox' commitment to quality is demonstrated by following the processes defined in "Process Steps" sections of this document.

QM collaborates with the EPMO QSG, which focuses on promoting enterprise consistency across projects and work products.

Through planning, QM identifies and defines the approach to provide quality in the management of processes and procedures. This framework applies to operational processes and procedures, as well as the processes and procedures surrounding developing and examining required contract deliverables and work products for valid content and accuracy. The EPMO and the SR Team contribute considerably to QM activities (please refer to Sections 2.5.13.5 and 2.7for a description of SR Team and EPMO contributions). The large scope of the contract, complexity of the proposed solution, and multi-phased approach to SR results in a complex QM structure with a high level of collaboration among different teams. Figure 4 presents a high-level view of the collaboration between different teams involved in QM, including System/Software Quality Management (SQM) and QA teams from QMO, EPMO QSG, SR Functional Team, and SRQT.

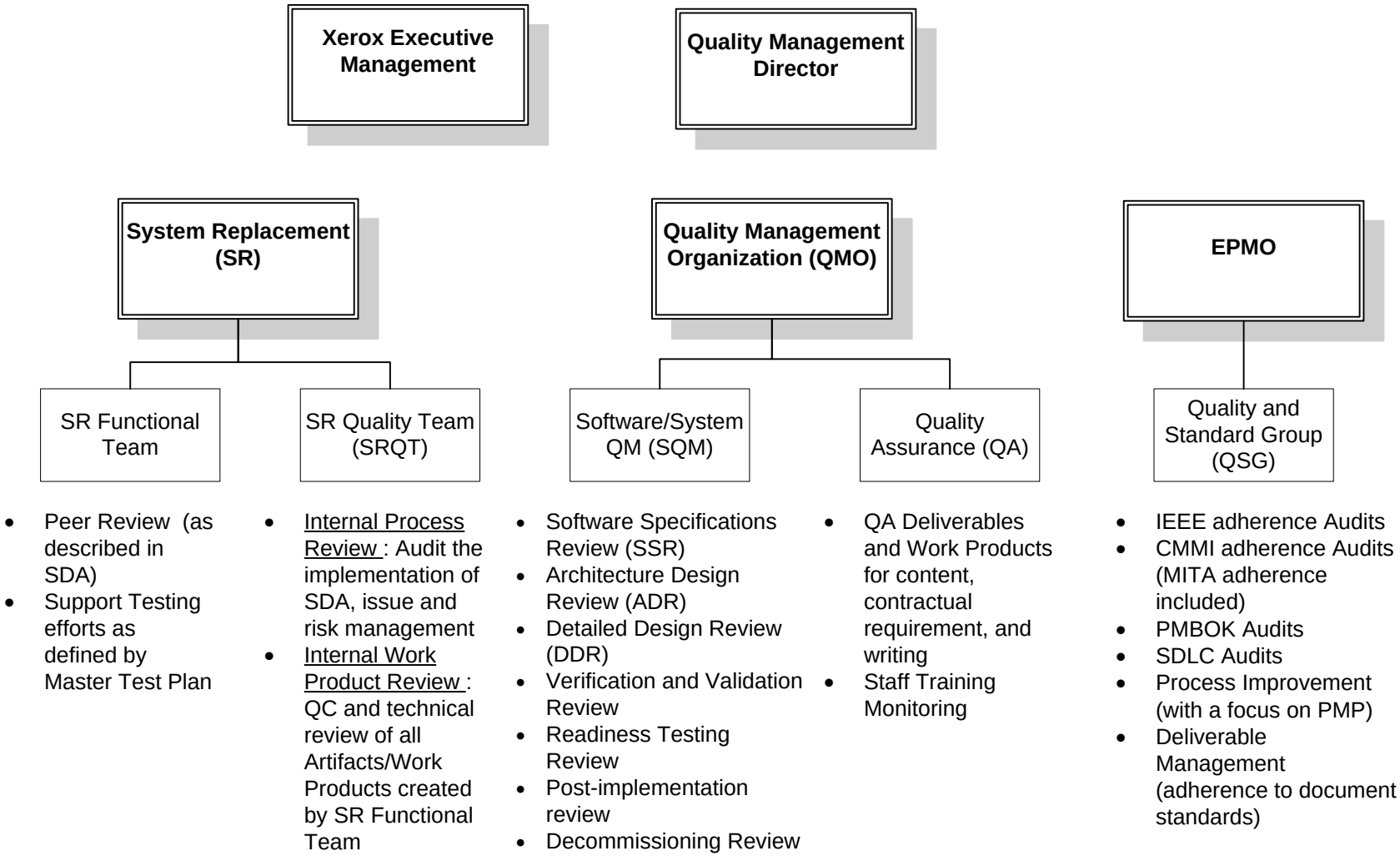

Figure 4: Collaboration between QMO, EPMO QSG, SR Functional Team, and SRQT

1.3 Updates to *QMP*

The quality activities begin with defined and measurable performance standards and goals, which apply to not only activities and operations, but also to work products, deliverables, project processes, and product quality. These performance measures are met through the execution of documented processes and procedures that meet Contract requirements and stakeholder approval. Central to our quality activities are the ongoing monitoring, evaluation, and reporting of project activities to measure actual performance. Closely tied to these activities are the Contract's training activities, which are essential to developing quality outputs throughout the Contract.

Constant changes in the Medi-Cal statutory and regulatory environment pose potential changes to the operation and contract, which may consequently affect the business processes. Additionally, the functionality of the system components may change in each phase of system enhancement and replacement systems. These changes may drive a need to update the *QMP* (especially the metrics introduced in this plan). We suggest a pre-defined timetable for future revisions to the *QMP* to include updates to the list of QM metrics as new system functionality is implemented during system enhancements and Replacement System implementation. Table 3 proposes a timetable for updating the *QMP* according to the progress of the CA-MMIS Contract life cycle.

Table 3: *QMP* Updates Timetable

Phase	System	Go Live Date	Program Compliance Process	Quality Assurance Process	Contract Compliance Process	Quality Improvement Process	System/Software Quality Management Process
Legacy Operations	Legacy Operations	Existing	Defined in this *QMP*	Defined in this *QMP*	Defined in this *QMP*	Defined in this *QMP*	Defined in L. Series
Enhancements	HIPAA 5010	06/01/2012	Defined in this *QMP* – PC reviews are not changing	Defined in this *QMP* – Review the HIPAA 5010 deliverables and work products (Completed)	Defined in this *QMP*	Defined in this *QMP*	Defined in L. Series
	ICD-10	10/01/2014	List of reviews and metrics will be reviewed and potentially updated by 08/01/2014	Defined in this version of *QMP* – Review the ICD-10 deliverables and work products	List of SLAs will be reviewed and potentially updated by 08/01/2014	Process Improvement and CAP Monitoring defined in this *QMP* – Ad hoc report metrics will be reviewed and potentially updated by 08/01/2014	Defined in L. Series
System Replacement	Phase I	05/01/2014	List of reviews and Metrics will be reviewed and potentially updated by 03/01/2014	Defined in this *QMP* – Review the Replacement System deliverables and work products - Staff training Monitoring	List of SLAs will be reviewed and potentially updated by 03/01/2014	Process Improvement and CAP Monitoring defined in this *QMP* – Ad hoc report metrics will be reviewed and potentially updated by 03/01/2014	Defined in this QMP – Metrics will be reviewed and potentially updated by 03/01/2014
	Phase II	03/01/2015	List of reviews and metrics will be reviewed and potentially updated by 01/01/2015	Defined in this *QMP* – Review the Replacement System deliverables and work products - Staff training Monitoring	List of SLAs will be reviewed and potentially updated by 01/01/2015	Process Improvement and CAP Monitoring defined in this *QMP* – Ad hoc report metrics will be reviewed and potentially updated by 01/01/2015	Defined in this QMP – Metrics will be reviewed and potentially updated by 01/01/2015

Phase	System	Go Live Date	Program Compliance Process	Quality Assurance Process	Contract Compliance Process	Quality Improvement Process	System/Software Quality Management Process
	Phase III	12/30/2015	List of reviews and metrics will be reviewed and potentially updated by 10/30/2015	Defined in this *QMP* – Review the Replacement System deliverables and work products - Staff training Monitoring	List of SLAs will be reviewed and potentially updated by 10/30/2015	Process Improvement and CAP Monitoring defined in this *QMP* – Ad hoc report metrics will be reviewed and potentially updated by 10/30/2015	Defined in this QMP – Metrics will be reviewed and potentially updated by 10/30/2015
	Phase IV	03/30/2017	List of reviews and metrics will be reviewed and potentially updated by 01/30/2017	Defined in this *QMP* – Review the Replacement System deliverables and work products - Staff training Monitoring	List of SLAs will be reviewed and potentially updated by 01/30/2017	Process Improvement and CAP Monitoring defined in this *QMP* – Ad hoc report metrics will be reviewed and potentially updated by 01/30/2017	Defined in this QMP – Metrics will be reviewed and potentially updated by 01/30/2017
Replacement System Operations	Operations	05/01/2014	List of reviews and Metrics will be reviewed and potentially updated by 03/01/2014	Defined in this *QMP* – Review the Replacement System deliverables and work products - Staff training Monitoring	List of SLAs will be reviewed and potentially updated periodically	Process Improvement and CAP Monitoring defined in this *QMP* – Ad hoc report metrics will be reviewed and potentially updated periodically	Defined in this QMP – Metrics will be reviewed and potentially updated periodically

Note: The dates reflected in the table above are driven by the SR schedule. Any changes to the SR schedule will affect these dates.

1.4 An Integrated Approach to Quality Management

The QM approach integrates CMMI Level 2 standards in addition to the DMAIC process improvement methodology in order to provide DHCS exemplary quality delivery. Adopting a proactive approach as the method of choice in delivering quality results, QM involves DHCS and Xerox stakeholders in identifying, assessing, monitoring, and improving DHCS processes, procedures, services, and products. QM applies this integrated approach throughout the life cycle of the Contract, setting the foundation for CA-MMIS Team members to be aware of, and focused on, producing high quality results.

The QM Team continuously strives to infuse preventive quality tools (as described in Section 3.3) and techniques into its QM approach to streamline review, assessment, and reporting tasks. These tools and techniques allow QM to focus on root cause analyses (RCAs) of defects, and common cause and special cause issues. To this end, QM also responds to quality issues identified during operations monitoring. This reactive-based method continues to occur as QM identifies human and system-generated problems, errors, defects, and non-conformities; however, QM expects the volume to decrease substantially over the course of delivering continuous process improvement activities (please refer to Appendix K. for a description of how some QM deficiencies are reported).

As part of QM's business continuous process improvement, QM continues our collaboration efforts with DHCS to promote the advancement of the MITA maturity level(s) during the remaining phases of the CA-MMIS Contract. QM will work with both the Business Change Management and the SR Technical Architecture Teams to gather MITA maturity level progress metrics for the MITA metrics scorecard. The scorecard will be updated for each phase of the SR Project to monitor MITA progress for business architecture, information architecture, and technical architecture.

QM has primary responsibility for developing, reviewing, tailoring, and executing the *QMP's* processes, procedures, and tools used to monitor, measure, and report DHCS Quality Management as described in this plan. The QM Director and the QM staff work with the Xerox leaders and project team members to address identified defects or issues resulting from the quality reviews.

QM collaborates with DHCS and Xerox to employ quality processes across the CA-MMIS Contract. QM works with project team members to communicate quality standards, measures, improvements, and awareness across the entire organization. QM analyzes and reports qualitative and quantitative data that encompasses processes throughout the project, including but not limited to systems, claims operations, PRO activities, and TAR Field Offices. It is imperative that Xerox works with the DHCS to instill an understanding of quality standards, measures, and processes. Operational items are reported formally through weekly and monthly reports, and System Replacement metrics are reported through the project governance processes following the *Governance Management Plan*.

QM performs activities that include:

- Providing contract compliance oversight via metrics and SLA reporting of functional areas (e.g., Claims, Systems, and PRO)
- Producing monthly performance reports on claims and PRO operations
- Conducting QM reviews of contract deliverables and work products

- Working with the Internal Auditor
- Reporting on project PSs and EPCs

Using Cognos, Xerox works with DHCS to develop customized dashboard views on contract requirements, including deliverables, performance measures, and SLAs.

Through an integrated approach to quality, DHCS, Xerox, and QM garner the following benefits:

- Project management reporting, contract management reporting, and the Cognos dashboard tool allow client visibility into the impact of projects on business units, providers, systems, and inter-project dependencies
- Periodic project status reporting provides proactive visibility into project performance, allowing leadership the opportunity to take corrective actions through planned risk mitigation
- Standardized processes, procedures, and templates promote adherence to contract requirements
- Standard quality reporting provides DHCS leadership consistent visibility into CA-MMIS program performance

Overall delivery performance improvement results in the following:

- Maximized financial investment resulting from reduced risk of contract failure, increased on-time delivery, and reduced project delays (e.g., stoppages and cancellations)
- Reduced overall costs and better on-time delivery
- Enhanced traceability of contract performance to business unit/customer requirements
- Improved delivery performance leading to improved relationships with client business units/customers
- Desired quality improvements realized more rapidly

QM monitors progress and facilitates improved program performance early and often. QM embraces the use of a peer review process (peer review process for SR is referenced in the *Peer Review Plan*), which is a key QC process that builds a continuous emphasis on quality into the life cycle.

The QM Team understands the importance of documenting lessons learned and best practices. Working with other teams within Xerox and with DHCS, QM seeks to capture lessons learned through communication and process feedback. This feedback helps members to act upon the lessons learned to improve processes, optimize efficiency, and implement best practices for future efforts. The Xerox Team applies best practices from previous experiences to the CA-MMIS Contract to help leverage insight into what works and what does not work. Recent examples of lessons learned include the following:

- Timely discussion of potential risks, issues, and upcoming activities that may impact the contract schedule
- Identification of appropriate stakeholders and strategies to incorporate communication channels and needs
- Review of account meetings to maximize productivity, optimize time usage, and standardize the meeting format
- Utilization of document processes and procedures to help drive successful, on time delivery

QM understands each phase of the CA-MMIS Contract presents new challenges. Using continuous communication, feedback, and open discussions with DHCS regarding concerns and expectations, and processing lessons learned (both internally and with DHCS), QM can effectively deliver at each phase and implement lessons learned to improve upon the contract phases.

QM's success depends on the entire organization clearly understanding their part in the QM effort. QM provides input for training as it pertains to QM processes and functions, or coordinates with other groups, as applicable, to provide an increased understanding of quality processes. Examples of inputs to training may include ClearQuest training (PS and EPC processing) and new employee orientation (specific to QM functions).

1.5 Support DHCS Access to Quality Information

The QM Team assists DHCS and the designated DHCS monitoring contractor with access to CA-MMIS systems and tools for purposes of monitoring and reviewing deliverables, work products, and processes. These systems include:

Table 4: Systems and Tools Used for Monitoring and Reviewing Deliverables, Work Products, and Processes

System/Tool	Deliverable/Work Product/Process	Location
Cognos	SLAs	COTS Tool
ClearQuest	PSs, EPCs	COTS Tool
SharePoint	Deliverables	CA-MMIS Home > Deliverables > Latest Versions - Approved/Conditionally Approved
	Contract Issues	CA-MMIS Home > Home > Issues
	Contract Risks	CA-MMIS Home > Home > Risks

2. Quality Processes

QM conducts quality activities throughout the life of the CA-MMIS Contract that encompass monitoring, measuring, and reporting of DHCS-required contractual, program, functional, and technical areas within DHCS and the CA-MMIS Contract. This section includes the processes and procedures QM applies to independently measure the quality of work being performed and assesses program compliance. This section includes process information for the following QM areas:

1. Program Compliance
2. QA
3. Contract Compliance
4. Quality Improvement
5. SQM
6. SRQT Internal Reviews
7. EPMO Process Compliance and Improvement

The first five QM areas represent the five primary QM processes. The SR Team and the EPMO contribute considerably to QM activities. The SRQT is responsible for performing oversight of the internal QC reviews for the SR Functional Team. The EPMO QSG validates process compliance by performing periodic process audits and reviews.

2.1 Program Compliance

QM develops, implements, maintains, monitors, and reports on processes and related quality measures for enhancing the accuracy and efficiency of claims adjudication, system maintenance and modifications (including implementation of OILs, table updates, and changes in error codes), and provider and beneficiary or member relations. The goal is to measure, monitor, and report on quality standards to DHCS to maximize performance related to program compliance. These activities drive continuous improvement throughout the CA-MMIS Contract by finding and eliminating root causes of errors, defects, waste, and other obstacles while maintaining the highest levels of quality. The QM integrated program compliance approach defines, measures, analyzes, improves, controls, and reports on CA-MMIS processes.

2.1.1 Program Compliance Approach

The program compliance approach incorporates oversight of Contract-wide processes. QM staff assigned to quality improvement functions are responsible for monitoring the results of reviews and resolving identified quality issues. The QMO determines root cause(s), and develops systematic means to correct the source of errors. It also encompasses reviewing and evaluating the efficacy of processes, procedures, and user training to verify they are not resulting in incorrect work products or unmet contractual requirements. The approach to implementing QM in program compliance is based on “inferential analysis.” This means QM uses statistical methods to select statistically valid

samples, analyze the results, and reach conclusions that extend beyond the immediate data alone. QM uses the inferential statistics, as appropriate, to infer from the samples pulled from operational processes what the population might be.

2.1.2 Sampling Approach

QM staff employ a variety of monitoring techniques based on industry-accepted standards. For ongoing quality monitoring, sampling is the most common technique. QM staff use automated tools (please refer to Table 26) to facilitate the collection of sample data for reviews of operational areas to verify that the selection of claims, TARs, Claim Inquiry Forms (CIFs) response letters, appeals, and other work products to be reviewed are based on an objective and systematic sampling technique. QM sampling methods included in the *QMP* are designed to yield samples large enough to produce a 95 percent confidence level that claims are processed in accordance with Medi-Cal policy; an adequate confidence interval will depend on the nature of each operational process that is subject to sampling. The QM sampling methods are described in Section 4: Statistical Sampling Methodology in the *QAPSM*. The QM sampling methods are based on the interval estimate of population proportion with a known or unknown population size. To determine the sample size for an interval estimate of a population proportion, we start with a sample proportion from a previous sample from the same or similar process or a pilot study. QM improves its sampling process by taking into account the historical error rate and applying operational knowledge to optimize the sample size selection and add intelligence to the sampling process. As operational understanding improves, a better estimate for population proportion can be used to calculate required sample size.

2.1.3 Program Compliance Inputs

The inputs to this process include:

1. Contract commitments – Conformed Request for Proposal (CRFP) or SOW and amendments, NTP
2. QM review schedule
3. Program compliance policies and procedures
4. *QMP*
5. *QAPSM*
6. Sampling methodology

2.1.4 Program Compliance Process Steps

The focus of planning activities is to confirm that the appropriate QM steps are performed when reviewing DHCS' contract and program activities in order to verify that they comply with the Medicaid Program policy, procedures, guidelines, and standards, and to provide management with the results of these reviews. Key activities in the QM process areas include:

- Performing quality planning
- Scheduling quality reviews
- Conducting quality reviews
- Analyzing quality review results
- Publishing quality review results (see Section 2.1.5Program Compliance Outputs)

2.1.4.1 Quality Planning

QM continuously identifies and documents quality requirements and presents them to DHCS for additional input, subsequent approval, and the current point of origination (e.g., system, application, and report). A list of CRFP and NTP requirements related to QM, which was agreed upon by the QM Workgroup, is located on the SharePoint site (please refer to Appendix B. for the location of QM requirements). Planning activities (e.g., gathering quality requirements, demonstrating the automated tool capabilities, understanding current and future reporting outputs) allow DHCS and QM to establish DHCS' initial quality review parameters for appropriate traceability and testing.

The QM Team develops plans for establishing QM processes by following these steps:

1. Review reference materials, project documents, and other work products to gather information about required QM reviews for the Legacy system, Enhancement projects, and Replacement System
2. Propose planned requirements gathering, analysis, and workflow activities to DHCS
3. Define quality requirements to be measured, including frequency and output format
4. Schedule process walkthroughs with DHCS on a predefined basis
5. Establish and configure QM tools based on DHCS input
6. Plan for quality reviews for DHCS acceptance to requirements
7. Update *QMP* and submit for DHCS approval, as scheduled
8. Update *QAPSM* and submit for DHCS approval, as needed
9. Implement the DHCS-approved contract and program compliance management tools
10. Identify and implement process improvements and controls

On a periodic basis, QM recommends improved quality measurements to DHCS for consideration based on quality review results, process improvement analysis, or other trending patterns. Additionally, at least two months prior to the implementation of each enhancement project (e.g., HIPAA 5010, ICD-10) or each phase of system replacement implementation, QM will review the impact of new changes to the QM reviews and propose new reviews or changes to the current reviews to DHCS.

2.1.4.2 Schedule Quality Reviews

Quality reviews are conducted on CA-MMIS functional and technical processes on a periodic basis. The review frequency is determined based on the contractual requirements for quality review frequencies as indicated in Exhibit A, Attachment II, Section JJ in the Contract and outlined in Section 2.1.6. Descriptions of operational reviews are outlined in the *QAPSM*. Prior to the start of each calendar quarter, QM creates a schedule of quality reviews for the upcoming calendar quarter.

2.1.4.3 Conduct Quality Reviews

Using pre-established criteria/metrics, the QMO quality review function includes the validation of the results of the requirements operational functionality and activities via sampling. A QM Program Compliance Analyst (PCA) performs the following steps after being assigned to a scheduled process review.

1. Verify a process to confirm compliance with policy, procedures, and guidelines as defined by DHCS, Centers for Medicare & Medicaid Services (CMS), and FI-Letter process

2. Validate the process conforms to the specified standards and requirements throughout the SDA and operational workflows, including the policy and procedure
3. Monitor output of SDA and operational workflows, detect problems and defects, and allow for corrections prior to delivery of work products or services
4. Provide recommendations for process improvement and controls

These internal review processes:

1. Provide a means to verify there is an acceptable level of production quality
2. Provide a means to reduce error through systematic auditing within a production unit
3. Provide comparison between quality performance and quantity of work produced
4. Introduce process improvements and additional controls
5. Monitor, measure, and report on implemented process improvements and controls

2.1.4.4 Analyze Quality Review Results

The QM Team works with Xerox Team members to analyze defects and errors and assign each deficit a defect code (category). Defects here refer to exceptions (Operations errors) found through Program Compliance sample-based reviews. These defects have a wide range and can be system defects (e.g., scanner issue), policy and procedure related deficiencies (e.g., issues in OILs or implementation of OILs), and operator errors (e.g., manual pricing error). The measurement for these exceptions is explained in Appendix E. These categories are used to identify the root cause for each deficit and determine an appropriate corrective action and/or improved control. If a corrective action is necessary, the QM Team works with other Xerox Teams and/or DHCS to develop the corrective action and recommend a process improvement, if applicable. The QM Team validates the completion of the correction meets DHCS' expectations. Defects are tracked using the Quality Management tools and database. These findings (exceptions) and corrective actions are reported to DHCS as described in Section 2.1.5.

2.1.5 Program Compliance Outputs

QM program compliance processes and procedures, which are defined in the *QAPSM* (please refer to Appendix B. for the *QAPSM*'s location), provide DHCS with information about program compliance throughout the entire contract. Based on QM reviews and activities, corrective actions are developed and implemented by the affected operational area. Exceptions and their corrective actions are logged in the QM's QRST database and reported on the *Monthly Quality Management Performance Report (MQMPR)*. The QM processes result in determining corrective and preventive actions, continuous process improvements, and valuable lessons learned. The outputs and reports stemming from QM program compliance results include the following:

1. Updated *QMP* and objectives to target performance metrics
2. Updated operational risks, action items, and issues with corrective actions, and plans to monitor, control, and sustain performance improvements and control procedures
3. Identified weaknesses in staff training
4. Reporting of quality findings, which is critical and is part of the contract's standard status reporting activities. These reports include:
    - 180 Day Aged Claim Weekly Report
    - Payment Data Review Weekly Report

- MQMPR – this report provides information on process exceptions (non-conformances), corrective actions, and/or identified trends in deficits
- Monthly PRO Report – this report provides information on noncompliance findings and corrective actions
- TAR Quarterly Report
- SAR Quarterly Report

The QM Director confirms that DHCS and appropriate Xerox Leadership are kept fully informed of the quality review findings. Review results and supporting documentation are accessible to DHCS and Xerox Leadership within the CA-MMIS SharePoint site or the QM automated tools.

Critical DHCS defects are escalated to the Executive Director/Program Director and DHCS' Contracting Officer or delegation as defined by DHCS immediately upon identification.

2.1.6 Program Compliance Metrics

Program compliance metrics are defined, collected, and analyzed to facilitate the monitoring of DHCS' program requirements. These metrics are described in the *QAPSM* and SOPs that guide QMO Program Management operations. Please refer to Appendix B. for the location of the *QAPSM* on SharePoint. The primary objective of QM program compliance metrics is to specify the measures that are used while monitoring the effort and success of specific quality activities. These metrics are reported to the CA-MMIS Contract Leadership and used in the analysis of key CA-MMIS performance indicators and overall quality, including quality at the process level. Appendix E. presents the metrics QM measures and analyzes as part of Program Compliance.

2.2 Quality Assurance

2.2.1 Document Quality Assurance

DQA reviews are conducted to evaluate deliverables and selected work products for alignment with internal standards, templates, and applicable contractual requirements. Table 5 provides the definition (as documented in the *Software Development Approach* [*SDA*]) of deliverables, work products, and artifacts, as well as examples and conditions for DQA review.

Table 5: Relationship between Deliverables, Work Products, and Artifacts

Document	Description	Example	DQA Review
Deliverable	The specific product Xerox is required to submit to DHCS either on a specified frequency and/or upon completion of a task or subtask. When the deliverable is intangible, documentation must be provided demonstrating the completion.	Project Start-up Plan, Architecture Plan, PMPs, SDA	Reviewed if it is considered to be a formal deliverable listed in the Master Deliverables List (MDL)
Work Product	Document produced as a result of executing the development or project management processes. It may or may not be a formal deliverable.	Checklists, Test Materials Packet, Release Status Report, Training Attendance Records	Reviewed if it is part of a formal deliverable listed in the MDL or is considered to be a formal deliverable listed in the MDL
Artifact	Design for a system element such as a web page, report, or interface. It is typically comprised of a definition (high-level information), layout (mockup), and specification (field-by-field analysis).	Business Process Model, Business Capability Matrix, Conceptual Technical Architecture Model, Technical Capability Matrix, Test Cases/Scripts	Reviewed if it is part of a formal deliverable listed in the MDL

The purpose of a DQA review is to accomplish the following goals:

1. Verify requirements are addressed
2. Detect and remove defects from deliverables and work products early (i.e., before submission to the client and before the deliverables and work products are used)
3. Verify accuracy and completeness
4. Improve quality of deliverables and work products
5. Promote consistency across projects

2.2.1.1 Document Quality Assurance Approach

The DQA review process involves examination of document-based deliverables and work products to identify deficits for removal and to recommend changes. DQA reviews begin early in the document creation process in order to identify potential problems and take corrective action as soon as possible. The reviews also provide an opportunity for reviewers to understand the tasks involved in producing the overall solution and to share information among the CA-MMIS Team members.

QM works within the established EPMO program governance processes, which include the Deliverables Management Process, a PM discipline defined under the *PMBOK Guide*

– *Fourth Edition*. While EPMO oversees the review of deliverables and work products on the CA-MMIS Contract, QM plays a key role in the review of deliverables and work products prior to submission to the DHCS.

The Deliverables Management Process is the approach of developing, reviewing, and submitting deliverables and work products. This process helps to outline the necessary steps for development and submission of deliverables and work products and outlines the tasks for each member involved in the process. The process is referenced in the *Deliverables Management Plan*.

2.2.1.1.1. Review Prior to DHCS Submission

The QM Deliverable Analyst reviews the deliverable to verify CRFP/NTP/DXD requirements have been met, completes the QM Deliverable Comments Review Form, and works with the document author to verify comments have been addressed appropriately.

2.2.1.1.2. Review of Deliverable Owner Response to DHCS Comments

The QM Deliverable Analyst reviews the deliverable to verify the DHCS comments have been addressed appropriately.

2.2.1.2 Document Quality Assurance Inputs

The inputs to this process include:

1. Contract Commitments – CRFP or SOW and amendments, NTP, and DXD
2. Document and process candidates for DQA reviews, respectively
3. Contract and project schedules (i.e., work plans)
4. QA review schedule
5. *QM Deliverable Review SOP*
6. Peer Review Procedure
7. *Document Management Plan*
8. Standards, templates, and procedures
9. Stakeholder Analysis

2.2.1.3 Document Quality Assurance Process Steps

2.2.1.3.1. Identify Deliverables and Work Products for Quality Review

Deliverable and functional area process owners are responsible for incorporating quality into the development of deliverables and work products. This includes following the established Deliverables Management Process (e.g., conducting a formal peer review of the deliverable or work product prior to submitting to the QM Team for review).

In addition to the deliverables and work products identified in the *Deliverable Tracking List* (stored on the CA-MMIS SharePoint site), QM identifies supplementary documents, processes, procedures, or other DHCS-requested materials that should undergo a formal DQA review. The *CA-MMIS SRP Master Product List (MPL)* includes work products comprised of items such as checklists, test materials packets, cutover playbook, environment information, release reports, and ORT information. QM will review work products that are included in deliverables (e.g., as appendices).

The QM Deliverable Analyst Lead reviews project schedules and the *DTL* to determine the quality reviews to be measured, scheduled, and unscheduled during the current and next quarter. Deliverable review progress is tracked in the *QM Deliverable Review Activity Log* in SharePoint, and on the *QM Deliverable Review Checklist* and *QM Comment Review Form* used by the assigned QM Deliverable Analyst during the review process.

Appendix E. lists the types of deliverables and work products reviewed by the QM Deliverable Analysts, including the population, review frequency, review criteria, and output reports.

2.2.1.3.2. Schedule Quality Reviews

Prior to the start of each calendar quarter, QM creates a schedule of deliverable reviews for the upcoming calendar quarter. On a periodic basis, QM recommends improved quality measurements to DHCS for consideration based on quality review results, process improvement analysis, or other trending patterns.

The DQA review schedule is based on contract deliverable dates in the contract and project schedules. For each identified deliverable, the EPMO Director (or work plan owner on the EPMO) verifies a DQA review task is included in the schedule. Each DQA review task reflects a certain number of days to complete the DQA review process; the number of days varies based on the size of the deliverable. Project team members reference the Conduct Document Quality Assurance Review Procedure to complete their tasks.

2.2.1.3.3. Prepare for DQA Reviews

Based on the established DQA review schedule in the project schedules and following the *Deliverables Management Plan*, the work product owner initiates a DQA review. The work product owner informs the EPMO Director or designee that the deliverable is ready for a DQA review and analysts from QMO and EPMO are invited to the kickoff and walkthrough meetings. The EPMO Director or designee oversees communications between the Xerox Team members and the QM Deliverable Analysts.

2.2.1.3.4. Conduct Quality Reviews

Using pre-established criteria/metrics, the QM Deliverable Analysts verify and validate deliverables and work products against CRFP or SOW and amendments, NTP, and DXD requirements. The *QM Comment Review Form* metrics include the following dropdown values:

Type of Comment

Contract	Requirements not addressed/sufficiently addressed (from CRFP, NTP, DXD)
Cosmetic	Errors in spelling, grammar, punctuation, or tense
Formatting	Formatting errors such as incorrect fonts, header styles, page numbering, etc.
Functional	Content, as written, does not flow well or data is incorrect/invalid, etc.
Technical	There are specific hardware or software inconsistencies, or there is an item that is not in compliance with the chosen Technical Architecture

Severity of Comment

Contract 4 – Wording issue that does not affect scope 3 – Minor scope increase or minimally addresses requirement(s) 2 – Significant scope increase or insufficiently addresses requirement(s) 1 – Out of scope or missing requirement(s)
Cosmetic 4 – Affects look and feel, no violation of document standards 3 – Affects readability, violates document standards 2 – Affects understanding of deliverable content 1 – Affects entire deliverable (critical)
Formatting Determined by the size and complexity of changes needed to repair formatting
Functional 4 – Suggestion to re-order or organize deliverable content to increase clarity 3 – Content meets requirements, but needs better organization 2 – Content does not flow/read well, but is understandable 1 – Content is too complex to understand or content is invalid/incorrect

After being assigned to a scheduled deliverable review, the QM Deliverable Analyst performs the following steps:

1. Attend kickoff and walkthrough meetings
2. Verify, validate, and monitor deliverables and work products to confirm the requirements for quality and scope of work are fulfilled
3. Verify the deliverables and work products conform to document standards (defined in CA-MMIS Documentation Standards and *SPARK-ITS Styles using Microsoft Word*), requirements (e.g., DXDs, CRFP, and NTP), and policy and procedures (defined in the *Document Management Plan* and the *Deliverables Management Plan*)
4. Provide recommendations for process improvements

The assigned QM Deliverable Analyst follows the instructions in the *QM Deliverable Review SOP* to create a QM Comment Review Form specifically for the deliverable under review. The QM Deliverable Analyst documents deficits (items that must be resolved) and observations (items recommended for a resolution or suggestions that may prevent deficits in the future) in the checklist spreadsheet. Some repairs (e.g., spelling, punctuation, grammar) may be made directly to the document using track changes by the QM Deliverable Analyst. Please refer to Appendix B. for the location of documents referenced in this section.

2.2.1.3.5. Analyze DQA Review Results

The QM Deliverable Analyst works with the deliverable author to address and resolve deficits. Once the deficits are resolved, the QM Deliverable Analyst notifies the deliverable author and the EPMO that the QM review is complete and the deliverable is ready for submission to DHCS. Outstanding reviews are monitored by the QM

Deliverable Analyst Lead or designee and statuses of reviews are reported on the DQA status report.

2.2.1.3.6. Publish DQA Review Results

The QM Deliverable Analyst stores the review results and supporting documentation in the CA-MMIS SharePoint site per the *QM Deliverable Review SOP*.

2.2.1.4 Document Quality Assurance Outputs

The outputs and reports stemming from this process include:

1. Updated work products based on DQA review findings
2. Updated deliverables, work products, and process documentation
3. Updated comment review forms including document author responses and corrective actions related to QM comments
4. DQA Status Report – Consolidated report reflecting the status of the DQA review activities conducted during the reporting period
5. Updated *QM Plan* and objectives to target performance metrics
6. Updated risks, action items, and issues with corrective actions, and plans to monitor, control, and sustain performance improvements and control procedures
7. Updated work plan activities
8. Workflow lessons learned and recommended best practices

2.2.1.5 Document Quality Assurance Metrics

The QM Deliverable Analyst Lead compiles the Monthly Deliverable Review Report (internal report) using data from the following sources:

- *QM Deliverable Comment Review Form* – this form is used by QM during their reviews
- *DHCS Deliverable Comment Review Form* – this form is used by DHCS during their reviews, and by QM to verify the document author has responded to DHCS' comments

The report contains metrics regarding completed QM reviews and QM reviews of responses to DHCS comments.

2.2.2 Staff Training Monitoring

QM staff participate in and review CA-MMIS contract staff training, including monitoring staff training effectiveness and supporting the Training Team in preparation of training documentation and DHCS/Xerox staff training. QM provides feedback to Xerox Management on the effectiveness of training programs. In addition, QM validates training materials' compliance with policies documented in Systems Development Notices (SDNs), OILs, and provider manuals.

The focus of staff training monitoring activities is to confirm that the following objectives outlined in the *Operations Training Plan* are met:

- Provide business function and technical training on CA-MMIS operations specifically directed to verify Xerox and Xerox subcontractor staff can adequately perform their required responsibilities
- Provide business function and technical training on applications/systems to verify Xerox and Xerox subcontractor staff can adequately perform their required responsibilities
- Provide training to Xerox and Xerox subcontractor staff on the PMM to facilitate effective and efficient utilization of enterprise project management processes

2.2.2.1 Staff Training Monitoring Approach

Staff training monitoring activities focus on reviewing and analyzing data related to staff training activities. On a semi-annual basis, QM conducts reviews of staff training documentation and activities, analyzes the effectiveness of the training based on the reviews, and recommends corrective actions, where necessary, to the Xerox Training Operations Manager to improve the quality and outcome of staff training.

2.2.2.2 Staff Training Monitoring Inputs

The inputs to this process include:

1. Contract commitments – CRFP or SOW and amendments, NTP, and DXD
2. Contract and project schedules (i.e., work plans)
3. Training calendars
4. *Operations Training Plan*
5. Training evaluation forms
6. Identified weaknesses in training (e.g., resulting from Program and Contract Compliance reviews)
7. Transition, Replacement, and Enhancement plans
8. QA review schedule
9. Standards, templates, and procedures

2.2.2.3 Staff Training Monitoring Process Steps

Key staff training monitoring activities include:

1. Identify data sources for quality monitoring
    a. Review training calendar to identify a sample of courses offered during the review cycle
    b. Obtain a sample of OILs and SDNs for policy changes that could impact training and training materials
    c. Obtain metrics on individual staff performance related to a sample of offered training classes
2. Schedule reviews
3. Conduct reviews
    a. Validate the process used to develop training material aligns with the process outlined in the *Operations Training Plan*

b. Validate that training evaluation forms are offered and collected at the end of each training session as defined in the *Operations Training Plan*

c. Review training materials and course offerings impacted by the sampling of OILs and SDNs

d. Review metrics on individual staff performance related to the sampling of offered training classes

4. Analyze review results
   a. Identify possible trends (e.g., evaluate call center monitoring forms)
   b. Validate training materials conform to policy
5. Publish review results
   a. Compile review information and analysis into a semi-annual report

2.2.2.4 Staff Training Monitoring Outputs

The outputs and reports stemming from this process include:

1. Updated staff training work products based on quality review findings
2. Updated deliverables, work products, and process documentation
3. Recommended corrective actions – actions documented to address identified deficits and/or to prevent the identified deficit from occurring in the future
4. Semi-Annual Staff Training Review Status Report – consolidated report reflecting the staff training review activities and analysis conducted during the reporting period
5. Updated risks, action items, and issues with corrective actions, and plans to monitor, control, and sustain performance improvements and control procedures
6. Updated work plan activities

2.2.2.5 Staff Training Monitoring Metrics

The QM Analyst collects metrics developed during the performance of the staff training review process. These metrics are used to determine whether a process is working as designed or the corrective action/mitigation is performing as intended. These metrics include the quantity of sampled classes, OILs, and SDNs and reports on discrepancies. QM defines new metrics to be measured and reported prior to each system enhancement and replacement system implementation. Following are some samples of metrics related to staff training monitoring:

- Competency Testing (Pre and Post Training)
- Manager Evaluation (Post Training)
- Increased operational efficiency
- Customer Satisfaction (Survey on key behavior indicators on competencies)
- Customer Service Skills
- Problem Determination and Resolution
- Application of Training (% of training used)

2.3 Contract Compliance

2.3.1 Contract Compliance Monitoring

The main purpose of the contract compliance monitoring function is to support the overall compliance of the CA-MMIS Contract. Metrics are defined, collected, and analyzed to facilitate the monitoring of DHCS' Contract requirements and deliverables. The primary objective of QM metrics is to specify the measures that are used while monitoring the effort and success of specific quality activities. These metrics are reported to the CA-MMIS Project Leadership and used in the analysis of key CA-MMIS performance indicators and overall quality, including quality at the process level.

2.3.1.1 Contract Compliance Monitoring Approach

Xerox promotes a contract management approach that uses a collaborative assessment and monitoring of the Xerox responsibilities by monitoring and auditing the performance through proper use of reporting processes and systems. Contract compliance activities focus on gathering data and measuring metrics that represent SLAs defined and agreed upon by DHCS and Xerox. QM's approach to contract compliance monitoring is based on "descriptive statistics and analysis." QM conducts several layers of data validations to confirm Cognos provides accurate information to users (please refer to Appendix L. for a description of the monthly SLA reporting process). In addition, QM Contract Compliance Analysts (CCAs) compare the results of monthly SLA reports with historical information to find areas for improvement, strengths in operations, potential anomalies, and processes, which require adjustments to achieve the required service level (including identified weaknesses in staff training).

2.3.1.2 Contract Compliance Monitoring Inputs

The inputs to this process include:

1. Contract commitments – CRFP, NTP, or SOW and amendments
2. Claim processing cycle time reports
3. SG system downtime reports
4. SG System transaction processing timeliness reports
5. Field Office Automation Group (FOAG) reports
6. Telephone Service Center (TSC) monthly statistics reports
7. EPC and PS aging reports
8. Provider Relations Unit (PRU) Ad Hoc compliance processing reports
9. FOAG SLA formula validation worksheet
10. Response-Time Analysis Report (RS-O-300) validation worksheet

2.3.1.3 Contract Compliance Monitoring Process Steps

2.3.1.3.1. Define SLAs

DHCS and Xerox jointly define the SLA metrics for inclusion in the QMP and Cognos. SLAs are quantifiable measurements, agreed to beforehand, that reflect the critical success factors of the CA-MMIS Contract. These will be comprised of the

compiled/approved SLA list, which is currently being defined. Please refer to Appendix H. for the list of these SLAs. As part of process improvement, QM routinely validates metrics and improves the process, as needed.

2.3.1.3.2. Gather Data

QM gathers the necessary data for reporting using data sources and reports from the Electronic Document Management System (EDMS), eReports, SharePoint, SG, and e-mails. QM also gathers and saves impact bulletins, impact statements, and ticket information as they relate to systems and subsystems to use to validate the SG system downtime reports and SG system transaction processing timeliness reports. This information is saved on a secured drive.

2.3.1.3.3. Validate Data

QM uses a multi-level validation process; there is a validation activity at each step in the process. For example, there are two concurrent efforts for data entry into an SLA Data Entry Validation Worksheet. This is followed by validation of the Cognos report against original data sources.

2.3.1.3.4. Analyze SLAs

QM generates and provides an SLA analysis report to the Xerox Executive Team on a monthly basis to assist in operations decision making. The Executive Summary is split into the following sections:

1. Overall – this section reports the “Not Met” for the current month and the previous month
2. Improved SLAs (Did Not Meet Last Month and Met This Month) – this section reports the SLAs that improved in the current month from the previous month
3. Missed by a Small Margin – this section reports the SLAs that were missed by a small margin (this is discretionary)
4. Didn't Meet the Target, but Improved – this section reports the total number of SLAs that did not meet the target, but improved in the current month
5. Didn't Meet the Target and Declined Compared to the Last Month – this section reports the SLAs that did not meet the target and got worse compared to the previous month

Preliminary SLA measures are monitored by the COGNOS Team and are analyzed by QM Contract Compliance Analysts at least once a month and before the end of the month to support Operations in achieving the appropriate SLAs.

2.3.1.4 Contract Compliance Monitoring Outputs

SLAs are reported in Cognos. QM uses Cognos to collect metrics and build reports and queries for statistical analysis and reporting of overall contract compliance. Cognos is a collaborative tool used to report performance standards and provides the user with a set of reporting capabilities and access to information needed to make smart business decisions. Reporting with Cognos delivers a single, Web-based solution for the following components of the reporting lifecycle:

- User-customized views of defined information
- Creation of workable plans and monitoring of actual performance against target
- Self-service reporting, enabling business users to get the information they need quickly and easily without relying on IT

- Measurement of SLAs or operational performance
- Report lifecycle
- Core repository for performance measures and operational metric data

Cognos provides Intelligence Dashboarding solutions help to monitor, measure, and manage corporate performance. Dashboards provide at-a-glance, factual, and timely views of business performance.

2.3.1.5 Contract Compliance Monitoring Metrics

The contract compliance monitoring reports contain the major SLAs, which include a set of metrics for the entire CA-MMIS Contract. Please refer to Appendix H. for the list of these SLAs.

SLAs are provided through a Cognos metrics report, which includes metrics for Claims Processing Cycle Times, PROs, System Downtimes, Transactions Processing Timeliness, PS and EPC SLAs, and other operations and system metrics that are measured, analyzed, and reported to DHCS (described in previous sections). QM analyzes SLAs on a monthly basis and provides the Xerox Management with an internal report that highlights areas for improvement and SLA progress compared to the previous month.

2.3.2 Problem Correction Process

The problem correction process is used to identify and track PSs and EPCs identified by either the DHCS or Xerox staff in response to problems related to CA-MMIS Operations, including emergency fixes. The CCA uses the PCS tracking tool (ClearQuest) to manage, monitor, and track the problem correction process in accordance with the timeframes outlined in the Contract for PSs and EPCs.

2.3.2.1 Problem Statement Process Approach

The CCA uses the PCS to receive, process, track, and report on PSs issued by DHCS and contractor staff. This data is analyzed by the PS owner to determine root causes, allowing for recommendations to departments on CAPs where appropriate. QM's approach to the problem correction process is based on focusing on "corrective action," not just "corrections." This means QM assists Operations and SG in not only documenting and tracking corrections and fixes in the systems, but also monitoring the progress of identifying the root cause of the problems and implementing and documenting appropriate CAPs.

2.3.2.2 Problem Statement Process Inputs

The inputs to this process include:

1. DHCS requests to issue a PS via phone calls, e-mails, or meetings
2. Xerox requests to issue a PS via phone calls, e-mails, or meetings
3. Identified eFixes are entered and tracked in ClearQuest

2.3.2.3 Problem Statement Process Steps

1. Receive PS Notification – the QM CCA receives either an e-mail notice via ClearQuest or an e-mail to the QM PS e-mail inbox that there is a PS requiring verification and/or entry into ClearQuest

2. Review and verify PS – the QM CCA reviews the PS for completion and verifies the required information
3. Communicate Exceptions – the QM CCA returns the PS to the responsible department for resolution
4. Triage PS – SG triages the PS for validity and assigns a project manager and subsystem if one was not entered in the PS
5. Assign PS to DHCS – DHCS reviews the PS in ClearQuest and completes the DHCS required fields (including a priority level)
6. Notify EPMO/CM to schedule the PS – the CCA notifies EPMO/Change Management that the PS is ready for scheduling
7. Review Interim Response (IR) – the CCA reviews the IR for completion and verifies the required information
8. Assign IR to DHCS – DHCS reviews and approves the IR in ClearQuest. SG prepares a CAP in ClearQuest
9. Review CAP – the CCA reviews the CAP for completion and verifies the required information
10. Assign CAP to DHCS – DHCS reviews and approves the CAP in ClearQuest. SG prepares the coding/testing. DHCS reviews and approves the coding/testing. SG prepares a Correction Notice (CN) in ClearQuest
11. Review CN/Completion Notice (CM) – the CCA reviews the CN/CM for completion and verifies the required information
12. Assign CN/CM to DHCS – DHCS reviews and approves the CN/CM in ClearQuest
13. Close PS – the CCA closes the PS and updates ClearQuest

2.3.2.4 Problem Statement Process Outputs

The outputs stemming from this process include:

1. Implemented PS systems changes
2. Closed PS
3. Updated PS documents in ClearQuest

2.3.2.5 Problem Statement Process Metrics

The table below outlines the metrics associated with each of the SLAs. The table reflects the metrics, target, how to measure, and reports for each of the SLAs associated with PS, IR/CAP, CN, and CM.

Table 6: Problem Statement Process Metrics

Metrics	Target	How to Measure	Reports
Close Problem Statements within 180 days	50%	Reporting that is pulled from ClearQuest	Monthly SLA Report
Close Problem Statements within 365 days	100%	Reporting that is pulled from ClearQuest	Monthly SLA Report
Input PSs onto the online PCS and submit Contractor generated PSs/EPC to the Department within five days	5 Days	Reporting that is pulled from ClearQuest	TBD

Metrics	Target	How to Measure	Reports
Interim Response 15 days of issuance of the PS (If the PS relates to a potential overpayment situation, the Contractor shall provide an interim response to the Department within five State Workdays days of the PS)	15 Days	Reporting that is pulled from ClearQuest	TBD
Corrective Action Plan 30 days of issuance of the PS	30 Days	Reporting that is pulled from ClearQuest	TBD
Correction Notice/Completion Notice 20 days of the actual implementation date	20 Days	Reporting that is pulled from ClearQuest	TBD

2.3.2.6 Erroneous Payment Corrections Approach

The CCA uses the PCS to receive, process, track, and report on EPCs issued by DHCS and contractor staff. This data is analyzed by the EPC owner to determine root causes, allowing for recommendations to departments on CAPs where appropriate. QM's approach to the process is based on focusing on "corrective action," not just "corrections." This means QM assists Operations and SG in not only documenting and tracking corrections and fixes in the systems, but also monitoring the progress of identifying the root cause of the problems and implementing and documenting appropriate CAPs.

2.3.2.7 Erroneous Payment Corrections Inputs

The inputs to this process are as follows:

1. DHCS requests to issue an EPC via phone calls, e-mails, or meetings
2. Xerox requests to issue an EPC via phone calls, e-mails, or meetings
3. Identified eFixes entered and tracked in ClearQuest

2.3.2.8 Erroneous Payment Corrections Process Steps

1. Receive EPC Notification – the QM CCA receives either an e-mail notice via ClearQuest or an e-mail to the QM PS e-mail inbox that there is an EPC requiring verification and/or entry into ClearQuest
2. Review and verify EPC – the QM CCA reviews the EPC for completion and verifies the required information
3. Communicate Exceptions – the QM CCA returns the EPC to the responsible department for resolution
4. Triage EPC – SG triages the EPC for validity and assigns a project manager and subsystem if one was not entered in the EPC
5. Assign EPC to DHCS – DHCS reviews the EPC in ClearQuest and completes the DHCS required fields (including a priority level)
6. Notify EPMO/CM to schedule the EPC – the CCA notifies EPMO/CM that the EPC is ready for scheduling
7. Review Interim Response (IR) – the CCA reviews the IR for completion and verifies the required information

8. Assign IR to DHCS – DHCS reviews and approves the IR in ClearQuest. SG prepares a CAP in ClearQuest
9. Review CAP – the CCA reviews the CAP for completion and verifies the required information
10. Assign CAP to DHCS – DHCS reviews and approves the CAP in ClearQuest. SG prepares the coding/testing. DHCS reviews and approves the coding/testing. SG prepares a CN in ClearQuest
11. Review Completion Notice (CM) – the CCA reviews the CM for completion and verifies the required information
12. Assign CM to DHCS – DHCS reviews and approves the CM in ClearQuest
13. Close EPC – the CCA closes the EPC and updates ClearQuest

2.3.2.9 Erroneous Payment Corrections Outputs

The outputs stemming from this process are as follows:

1. Implemented EPC system changes
2. Implemented EPCs
3. Closed EPCs
4. Updated EPC documents in ClearQuest

2.3.2.10 Cross-pollination between PSs and EPCs

Some PSs and EPCs can cross-pollinate. This occurs when a problem has been corrected and claims have been affected. The PS will need to be closed to an EPC and the EPC will reprocess the claims that were affected by the problem.

2.3.2.11 Erroneous Payment Corrections Process Metrics

The table below outlines the metrics associated with each of the SLAs. The table reflects the metrics, target, how to measure, and reports for each of the SLAs associated with EPC, IR/CAP, CN, and CM.

Table 7: Erroneous Payment Corrections Process Metrics

Metrics	Target	How to Measure	Reports
Close Erroneous Payment Corrections within 120 days	80%	Reporting that is pulled from ClearQuest the PCS tool	Monthly SLA Report
Close Erroneous Payment Corrections within 365 days	100%	Reporting that is pulled from ClearQuest the PCS tool	Monthly SLA Report
Input EPC onto the online PCS and submit Contractor generated EPC to the Department within five (5)	5 Days	Reporting that is pulled from ClearQuest the PCS tool	TBD

2.3.3 Interrelationship among Incidents, eFixes, Defects, and Problem Statements

Incidents, eFixes, and defects are issues that can result in a PS. The table below illustrates the cross-population of each of these issues.

Table 8: Interrelationship among Incidents, eFixes, Defects, Problem Statements, and Erroneous Payment Corrections

Document	Description	Interrelationship	Related Plan
Incident	An incident is the occurrence of an unplanned interruption to or reduction in quality of service to any IT service. The CA-MMIS Help Desk manages incidents. Incidents are managed in accordance with the *CA-MMIS Incident Management Procedures Manual* through several steps including: recording the basic details of the incident, alerting the responsible support group as necessary, and beginning the procedures for handling a service request.	An incident can result in a PS	CA-MMIS Incident Management Procedures Manual
eFix	eFixes are used to correct program and system failures outside normal State business hours. In such cases, DHCS is notified of the required change on the first State workday after the change and documentation is provided to DHCS within five State workdays after the change has been completed.	The eFix and supporting documentation are entered into ClearQuest as a Problem Statement after the eFix's closure and DHCS is notified that the PS and supporting documentation are ready for review.	Systems Group Organization and Procedures Manual (L.1, L.5)
Defect	A defect is an error, flaw, failure, or fault in an application or system component identified in the System Integrated Test or Acceptance Test environment that produces an incorrect or unexpected result.	If the defect exists in production, it becomes a Problem Statement. The Problem Correction System (PCS) is used to track and maintain PSs.	Defect Management Plan
Problem Statement (PS)	A PS is initiated by DHCS or Xerox in response to a problem identified in the CA-MMIS applications production environments. PSs identify possible system and/or procedural problems that may result in corrections and modifications to CA-MMIS	If the defect exists in production, it becomes a Problem Statement. The Problem Correction System (PCS) is used to track and maintain PSs.	Quality Management Plan (Section 2.3.2)
Erroneous Payment Correction (EPC)	An EPC is a systematic correction of identified erroneous payments in CA-MMIS.	A PS may result in an EPC to rectify over or under payments made to providers as a result of a system problem.	Quality Management Plan (Section 2.3.2)

The CCA uses the PCS tracking tool to manage, monitor, and track the problem correction process in accordance with the timeframes outlined in the Contract for PSs.

eFixes are used to correct program and system failures outside normal State business hours. In such cases, DHCS is notified of the required change on the first State workday after the change and documentation is provided to DHCS within five State workdays after the change has been completed. The eFix and supporting documentation are entered into ClearQuest as a Problem Statement after the eFix's closure and DHCS is notified that the PS and supporting documentation are ready for review.

Incidents are managed in accordance with the *Incident Management Plan* through several steps including: recording the basic details of the incident, alerting the responsible support group as necessary, and beginning the procedures for handling a service request. The following steps should be taken during management of an incident:

1. Categorize the incident
2. Communicate resolution action(s) such as defining priority, providing initial support (incident details, finding quick resolution)
3. Close or route the incident to a specialist support group and inform the user
4. Apply the solution and confirm resolution and closure with the Client
5. Enter a Service Center ticket through the CA-MMIS Help Desk
6. Enter data into ClearQuest and track/resolve through the defect management process

Defects or problems in production are documented in a PS. The ClearQuest defect ID will be included in the Service Center ticket for cross-referencing purposes. The following are steps pertaining to defect management:

1. Verify the defect is valid and complete (this includes verifying that the defect does not already exist in ClearQuest)
2. Submit a new defect with sufficient information to recreate the defect or to analyze the potential cause of the problem
3. Triage the submitted defect and assign to the Defect Review Board (DRB)
4. Review and assign the defect to a Senior Test Analyst
5. Resolve the defect
6. Schedule the defect
7. Retest
8. Verify the retest and close the defect

2.4 Quality Improvement

2.4.1 Process Improvement

2.4.1.1 Process Improvement Approach

Continuous process improvement is a key component of QM and is essential to remaining an innovator in the healthcare marketplace. The continuous process

improvement approach is designed to address aspects of the project activities and responsibilities.

Continuous process improvement activities occur throughout the life of the CA-MMIS Contract. Their purpose is to:

1. Improve processes used in client engagements
2. Improve the technical solutions being delivered to the client
3. Instill a culture of quality within the organization

On a periodic basis, QM recommends improved quality measurements to DHCS for consideration based on quality review results, process improvement analysis, or other trending patterns. QM process improvements are conducted by adopting the DMAIC model as defined in Section 1. The DMAIC model incorporates continuous process assessments by quantitatively measuring process performance.

Xerox QM's processes incorporate continuous assessments of potential exceptions and inefficiencies while identifying opportunities for improvement. Additionally, QM assesses outcomes of performance reporting, data analysis, and trending results to identify improvement opportunities and monitor the outcomes of implemented process improvements.

Upon completion of monthly reporting cycles, QM meets with the DHCS staff to review performance outcomes and collaborate on improvement strategies and recommendations. In some cases, additional data may be collected to validate the current state, perform RCA and recommend corrective actions. Once recommendations have been identified and agreed upon, QM works with the DHCS and appropriate Xerox leaders to develop the improved process steps and implementation strategies. Upon implementation of improvement efforts, results will be periodically reviewed to verify the improvement efforts are sustained and the Program's efficiency and responsiveness is maintained.

2.4.1.2 Process Improvement Inputs

Improvement ideas can come from a range of sources, including the following:

1. Perform Program Compliance reviews and identify deficits and observations
2. Gather training evaluations
3. Gather information during meetings/discussions with CA-MMIS work groups and customers
4. DHCS expectations, recommendations, requirements, or CAPs
5. RCA of selected PSs and EPCs
6. Deficit/defect trend analysis
7. Risk and issue analysis
8. Contract staff suggestions
9. Technological advancements
10. Updated industry standards or governmental legislation

2.4.1.3 Process Improvement Steps

When potential improvement opportunities are identified via the sources listed above, the steps described below must be taken.

2.4.1.3.1. Record Opportunity

Regardless of the source, process improvement opportunities come in the following form:

- **R**ecommendations
- **I**ssues
- **F**indings
- **R**emedies

The Process Improvement Analyst updates the Process Improvement Tool (PI tool) on SharePoint with the Process Improvement Recommendations, Issues, Findings, Remedies (PRIFR) assimilated from the sources listed in Section 2.4.1.2

2.4.1.3.2. Define the Problem

The objective of the Define stage is to define the problem that needs to be resolved or to identify an improvement opportunity. RCA goes through two levels.

- First, the Process Improvement Analyst analyzes the process improvement findings by researching various sources (e.g., EDMS, PCRS, QRST, QM review reports, discussions with Subject Matter Experts [SMEs]) and reviewing documents in SharePoint.
- Next, the Process Improvement Analyst maps the problem with domains defined in California DHCS Medi-Cal MITA SS-A (May 2008). The mapping document is accessible to QM Team members on the QM local shared drive.

2.4.1.3.3. Measure and Analyze the Problem

In the Measure stage, the PRIFR Team further explores the problem by collecting metrics at various steps of the as-is process. The team identifies metrics collection points and collects data from each step of the process. The team then analyzes the existing process to get a better understanding of the size and frequency of the problem.

During the Analyze stage, the team consolidates the information gathered and determines the causes of the problem. In the case of an improvement opportunity, factors that support or influence a new process are determined. The analysis includes daily decisions and activities, as well as loop-backs when the process has to go in reverse to obtain missing information.

With the help of SMEs, the team determines the scope of the impact, cost, time, and resources required for the process improvement initiative.

2.4.1.3.4. Develop a Process Improvement Proposal

The Process Improvement Analyst documents the initial analysis results in the QM Process Improvement Initiative Proposal (QM PIP) and submits the QM PIP to the QM Director for approval. Depending on the scope, complexity, and business implications, the QM Director prioritizes the process improvement initiative and directs the Process Improvement Analyst to submit the proposal to DHCS. The QM PIP is documented with the following information.

a) Background

- Process Improvement Trigger
- RCA
- Contract Reference

b) Process Improvement

- Process Improvement Scope As-is process
- Benefits
- Assumptions/Risks
- Constraints
- Tools
- Estimation of Schedule, Cost, and Effort
- Resource Requirement

c) Improvement Approach

- Problem Definition (What do we need to resolve? Improve?)
- As-is Process Measure (What is the current situation?)
- Analysis (What caused the problem? Or what are we not doing right? What is the impact on business if the process is not improved? What are the costs and resource requirements for process improvement?)
- QM Process Improvement (proposed solution/improvement)
- Continuous Process Improvement and Control (How do we keep doing it right and communicate improvement efforts?)

d) Appendix

2.4.1.3.5. Implement Improvement

The QM Director or Xerox senior management in coordination with EPMO will assign process improvement team members, as applicable, to the process improvement initiative. Depending on the scope of the process improvement initiative, the team is comprised of SMEs from other departments. Each process improvement initiative has one owner. In order to create consistency throughout process improvement initiatives, process improvement progress report activities conducted by team members, regardless of their departments, are coordinated by the QM Process Improvement Analyst under the direction of the QM Director.

The assigned owner oversees the definition and execution of an implementation plan. Depending on the complexity of the improvement, the plan may be just a few steps or a complex implementation plan. The owner is responsible for the following:

- The improvement is implemented on time and within budget
- Obstructions to deployment are addressed quickly and escalated when necessary
- On-going processes proceed with minimal disruption
- Improvements are communicated to the appropriate stakeholders

2.4.1.3.6. Control the Process

The process improvement team will develop an SOP detailing process steps and procedures to implement the new process. The Responsible, Accountable, Consulted, Informed (RACI) chart is used to develop a Transfer Plan to hand over the new process to the original process group. The Transfer Plan will include continuous process monitoring metrics to assist in determining whether the process behaves as expected.

2.4.1.4 Process Improvement Outputs

The outputs and reports stemming from this process include:

1. Implemented improvements in the Contract's documentation, processes, procedures, and/or products
2. PRIFR Quarterly Report
3. Suggestions communicated to the EPMO for CCB consideration

The Process Improvement Analyst submits the *Quarterly PRIFR Report* to the QM Director once each quarter, by the seventh day of the quarterly month. The *Quarterly PRIFR Report* is updated with the status of the new processes, including Process Control Metrics that resulted over the quarter and contains the following sections:

1. Process Control Metrics are represented in both tabular form and applicable graphs
2. Trend Analysis of Process Improvement Initiatives against SLA requirements if any
3. Best Practices identified during the reporting period
4. EPMO's Process Improvement Tracker (PIT) tool is updated with Process Improvement Initiative information at regular milestones, as required by EPMO's PIT tool guidelines. The PIT tool is located on the SharePoint site:

   https://cammis.sp.acs-inc.com/cammis/Lists/PIT/Open.aspx

   https://cammis-sp.psd.dhs.ca.gov/cammis/Lists/PIT/Open.aspx

2.4.1.5 Process Improvement Metrics

The Process Improvement Analyst collects metrics developed during the DMAIC Control stage. These metrics are used to determine if the new process is performing as intended. The Process Improvement Initiative metrics include the following basic metrics.

Table 9: Process Improvement Metrics

Metric	What is measured	Verification	Report
Performance	Process is performing as intended	Sample results are verified for accuracy	Quarterly PRIFR Report
Reliability	Process does not have unforeseen downtime	Applications related to the processes are available and working	Quarterly PRIFR Report
Usability	Process is easy to use	End users are trained	Quarterly PRIFR Report
Data availability	Process inputs are available	Input data verified for availability	Quarterly PRIFR Report

Metric	What is measured	Verification	Report
Effectiveness	Process is the right process	Processes are evaluated to determine they are meeting the needs for which they are established	Quarterly PRIFR Report

Other metrics are defined to monitor the entire process improvement process. Metrics collected from this process include:

- Number of Continuous Process Improvement (CPI) opportunities identified this period by CA-MMIS functional area/domain
- Number of CPI opportunities implemented this period by functional area/domain

These measures are also reported in the *Quarterly PRIFR Report*.

2.4.2 Ad Hoc Reporting and Special QA Studies

2.4.2.1 Ad Hoc Reporting and Special QA Studies Approach

Ad Hoc Reporting and Special QA Studies are key components of QM; they are essential in understanding and identifying trends and anomalies, and in verifying that newly implemented and existing policies and procedures are working as designed. Special QA Studies and Ad Hoc Reporting are designed to address aspects of the contract's activities, responsibilities, and DHCS concerns.

Special QA Studies occur twice per year, as directed by DHCS, throughout the life of this Contract. The purposes of these studies are to:

1. Identify trends and non-conformances with established or newly implemented policies, procedures, and processes
2. Identify root causes of non-conformances and propose a corrective action or a mitigation plan to remedy identified non-conformances
3. Minimize errors and re-work, and improve efficiency, accuracy, and quality of the contract's activities

Contractually, DHCS may request QM to perform up to two Special QA Studies per year based on areas of concern resulting from provider feedback, quality review results, and other trending patterns. Additionally, QM performs Ad Hoc Reporting as requested, based on the aforementioned areas of concern and suggestions from other areas within the contract.

QM Special QA Studies and Ad Hoc Reporting are conducted using "descriptive statistics and analysis" as the main approach to conduct the special studies and generate ad hoc reports. With this approach, QM gathers specific operational data from different data sources and reports, as needed for the purpose of a specific study, and tries to find measures that quantitatively describe the main features of the collected data. QM conducts analysis to find trends, patterns, and anomalies in those operational measures. Usually, these data are gathered during a PIR phase to monitor the behavior of a newly implemented system or process. Comparing the results of the study with historical data and operational knowledge assists QM in finding potential issues at the early stage of implementation so it can be acted upon and resolved as quickly as possible. Additionally, QM may use the "inferential statistics" approach with the intention of extrapolating the conclusion to the entire population based on a sampled behavior.

Upon completion of the Special QA Study or Ad Hoc reporting, QM will meet with DHCS staff and/or appropriate Xerox leaders to review the outcome and collaborate on improvement strategies and recommendations. Once recommendations have been agreed upon, QM will work with DHCS and Xerox leaders to develop the improved process steps, implementation strategies, and sustainment efforts to improve the contract's efficiency and responsiveness.

2.4.2.2 Ad Hoc Reporting and Special QA Studies Inputs

Ad hoc reporting inputs can come from a variety of sources within the Contract as well as from DHCS. Special QA Studies come through requests from DHCS. Inputs to this process include:

1. DHCS requests, requirements, expectations, and recommendations
2. Information gathered during meetings/discussion with CA-MMIS work groups as well as the customer
3. Descriptive statistics and analysis of data gathered from a data mining tool and existing CA-MMIS reports
4. Deficit/defect trend analysis
5. Project staff suggestions
6. Technological advancements and updated industry standards and governmental legislation/regulation

2.4.2.3 Ad Hoc Reporting and Special QA Studies Process Steps

When QM receives an ad hoc reporting request or a request for a Special QA Study, the following steps are followed:

1. Review the ad hoc reporting or Special QA Study request
2. Communicate the ad hoc reporting methodology with the requester or develop and submit a Special QA Study
3. Perform the ad hoc reporting or Special QA Study request

2.4.2.4 Ad Hoc Reporting and Special QA Studies Outputs

1. Special QA Study Report detailing non-conformance identified, RCA, corrective action/mitigation plans, and sustainment plans for DHCS (per request)
2. For the ad hoc reporting request, arrange a meeting with the requester and present findings using a dashboard or report to present the results

2.4.2.5 Ad Hoc Reporting and Special QA Studies Metrics

The Special Ad Hoc QA Analyst collects metrics developed during the performance of the ad hoc reporting or Special QA Study process. These metrics are used to determine whether a process is working as designed or the corrective action/mitigation plan is performing as intended. As explained in previous sections, these metrics are used to find statistical anomalies in post-production operations statistics. QM defines new metrics to be measured and reported prior to each system enhancement and replacement system implementation. The following table presents metrics that are measured and reported to monitor the proper implementation of HIPAA 5010 system enhancement.

Table 10: Phase II HIPAA 5010 Metrics

Metrics	Measurement Frequency	Reporting	Description	Purpose
CMC Paid and Denied	Weekly	HIPAA 5010 Phase II Dashboard	Weekly count of paid and denied Computer Media Claims (CMCs) by claim type (The Monday date is the date of payment for paid and denied claims on SURS data).	Finding anomalies in paid denied ratio per claim type
CMC Paid Amount by Claim Type	Weekly	HIPAA 5010 Phase II Dashboard	Weekly total of the paid amounts by claim type. In addition, the average payment per claim is also calculated using the paid claim count from sheet 3A and paid amount total on this table.	Finding anomalies in total and average paid months per claim type
CMC Denied Claims by RAD codes	Weekly	HIPAA 5010 Phase II Dashboard	Count and total percentage of denied claims for the specific Remittance Advice Detail (RAD). If a specific RAD code's percentage is less than 1%, it is included in the "Other" category. The totals are sorted ascending order.	Finding anomalies in RAD codes per claim type
CMC Media Type Denied Claim Count	Weekly	HIPAA 5010 Phase II Dashboard	Media Type and claim count of the denied CMC claims for each media type for each claim type.	Finding anomalies in denied volume per media type
Provider Type Denied CMC Claim Count	Weekly	HIPAA 5010 Phase II Dashboard	Provider Type and claim count of the denied CMC claims by provider type for each claim type.	Finding anomalies in denied volume per provider type
QM Dashboard-Testing	Once (updates as test cases change)	Internal to QMO	Maps the areas where testing occurred prior to implementation and whether it is covered by the QM Dashboard.	Track the anomalies back to the source of the issue, if a defect is found.
Defect Ratios	Monthly	To Testing Team	Defect ratios measured against PSs and defects reaching production not caught through any testing efforts	To assess capability of the testing process

QM also produces metrics to control the ad hoc reporting and the Special QA Studies process.

2.4.3 Corrective Action Plan (CAP) Monitoring

2.4.3.1 CAP Monitoring Approach

CAPs are actions taken to overcome non-conformities or deficiencies in the process, system, procedure, and other areas as defined in the CA-MMIS Contract. They are designed to prevent the recurrence of non-conformities and make the processes more efficient. CAPs are initiated by DHCS through the submission of an FI letter and are approached as a problem solving activity involving RCA, definition, and implementation of the CAP by the respective CA-MMIS group(s). QM is responsible for monitoring and controlling the CAPs and reporting progress to DHCS. It is important to distinguish between these types of managerial CAPs and CAPs created as part of the PS and EPC processes, which are related to specific issues that usually deal with one department, as opposed to managerial CAPs that are much broader and at a higher level.

The CAP Development and Monitoring Process goes through a structured three-step process of initiation and defining the problem, developing a corrective action, and monitoring and controlling the CAP progress, as described in the *CAP Monitoring SOP*.

2.4.3.2 CAP Monitoring Inputs

The inputs to this process include:

1. List of open and closed risks and issues
2. Draft FI Letter (request for a CAP)
3. Formal FI Letter (formal request for a CAP)
4. CRFP, NTP
5. DHCS expectations, recommendations, or requirements
6. RCA of selected PSs and EPCs
7. Deficit/defect trend analysis

2.4.3.3 CAP Monitoring Steps

The steps below describe the major tasks that take place during a CAP monitoring activity.

2.4.3.3.1. Initiate CAP

The initiation of the CAP starts with the submission of a formal or draft CAP through a FI letter. It is DHCS' discretion to either submit a formal CAP or provide Xerox with the opportunity to review a draft before the formal submission. Submission of a draft CAP provides Xerox management a chance to better understand the scope of the CAP and the genesis of the problem, resulting in better preparation for responding to a formal CAP. The function of determining the department responsible for the CAP comes under the EPMO governance. Additionally, EPMO identifies corrective actions within FI letters and delegates them to CA-MMIS teams for implementation.

2.4.3.3.2. Draft CAP

DHCS requests a CAP from Xerox through a draft CAP letter. For this purpose, Xerox provides the *Request for CAP template* to verify the CAP FI Letter from DHCS contains the necessary information for Xerox to start analyzing the CAP. Once EPMO receives a draft CAP from DHCS, the first step is to send the CAP to QM and Xerox Executive Management for review. EPMO and QM analyze the contractual requirements defined for the CAP. EPMO, QM, and Xerox Executive Management compare the new CAP to ongoing/existing CAPs or other similar initiatives. QM schedules a meeting with EPMO, Xerox Executive Management, and other Xerox Team members to review the scope of the CAP and develop a work plan to respond to the CAP.

Xerox Executive Management, QM, and EPMO representatives meet with DHCS counterparts to discuss and understand the scope of the problem and initial findings of the CAP draft. Below are sample questions to be addressed in the meeting. If it is agreed that the draft CAP is an essential business need, DHCS will release an FI letter to formally submit the CAP. If the discussion results in not going forward with the CAP, QM communicates the decision to Xerox Executive Management and maintains records of meeting minutes and communication items.

2.4.3.3.3. Define CAP

If the discussion results in going forward with the CAP, DHCS formally submits the CAP through an FI letter. EPMO reviews the CAP letter and assigns it to the responsible Xerox Executive Management for further CAP processing. Upon receipt of the formal FI letter, EPMO assigns the CAP Point of Contact (POC) and e-mails the CAP development and implementation expectations guidelines to the CAP POC.

If required, QM sets up a meeting with the CAP POC to go over the *CAP Response Template* and *CAP Monitoring Report Template*. Expectations of timely submission guidelines are emphasized to the CAP POC as these documents provide performance data for regular reporting to DHCS. QM maintains a list of CAPs initiated since AOO.

2.4.3.3.4. Develop CAP

The CAP Team reviews the FI letter and performs further analysis to develop a CAP using the *CAP Response Template*. QM assists the CAP Team in filling out the template, liaises with DHCS, and provides clarification on CAP requirements. The CAP Team submits the draft CAP response to Xerox Executive Management for approval. If need be, Xerox Executive Management will revise the CAP. If the CAP Team anticipates a delay in response time, they reach out to EPMO who will assist the team in drafting a request for extension with DHCS. The CAP response is routed to QM for document quality deliverable review. Upon completion of the QM review, the CAP POC submits the final version to EPMO for submission to DHCS.

DHCS provides their decision of approval/disapproval of the CAP response through a formal A letter. EPMO routes the response to Xerox Executive Management, QM, and the CAP POC. If disapproved, the CAP POC will address DHCS' comments outlined in the A letter and resubmit the CAP response to DHCS via EPMO.

2.4.3.3.5. Monitor and Control CAP

QM plays a key role in tracking the CAP status from initiation to closing. For this purpose, QM maintains a CAP list, which includes a list of CAP FI letters. The CAP list is updated with the CAP status, including when the FI letters are submitted. QM regularly reviews

the weekly *Project Health Report* and Issue reports and extracts information about current CAP progress.

The CAP list is updated as and when the CAP status changes. The CAP list is made accessible to EPMO and Xerox Executive Team on the SharePoint. The CAP POC leads the CAP effort by defining CAP tasks and identifying responsible team members to perform the tasks. The assigned team members perform the tasks and report progress to the CAP POC and QM. The CAP POC continuously monitors the progress of action items and is responsible for reporting the status to QM on a weekly basis. CAPs assigned to QM or administered and implemented by QM are monitored by EPMO to maintain the autonomy of the monitoring process.

2.4.3.4 CAP Monitoring Outputs

The outputs and reports stemming from this process include:

1. CAP Monitoring dashboard
2. An updated list of CAPs and their progress
3. An updated list of correspondence between Xerox and DHCS related to CAPs

2.4.3.5 CAP Monitoring Metrics

The Process Improvement Analyst collects metrics for the CAP Monitoring process during the process of managing the CAPs. These metrics are published internally and presented by the QM Director to the DHCS Contracting Officer during regular weekly meetings.

Table 11: CAP Monitoring Metrics

What is Measured	Metrics	Measurement Analysis
CAP in-progress Duration	Planned Number of days for CAP Number of Days Delayed Number of Days Remaining	Effect of the task duration that affects CAP start and end dates. Understand if CAPs are moving at the required pace.
CAP Start and End dates (Plan vs. Actual)	Plan Start and Actual Start Plan End and Actual End	Average number of days of deviation from plan to actual dates.
CAP Status	Initiated – CAP FI A Letter received from DHCS Submitted – CAP Response submitted by Xerox Disapproved – DHCS disapproves CAP Response Conditionally Approved – DHCS approves CAP subject to certain conditions to be met Approved – Final approval from DHCS after conditions are met	CAP status gives an idea of the CAP approval rate.

What is Measured	Metrics	Measurement Analysis
Task Status per CAP	Total Number of Tasks per CAP Number of Tasks Due in 30 Days Number of Past Due Tasks Number of Tasks Remaining	Tasks that are being completed on time. Best practices from tasks completed on time. Risks and lessons learned from tasks that are delayed.

2.5 System/Software Quality Management

The intent of conducting software quality reviews is to verify the product meets the requirements, process steps have been taken as defined, and process improvement opportunities have been identified. Quality reviews start at the beginning of the project, and continue during each workflow of the software development approach from planning through post-implementation as described in detail in below. After the Replacement System is installed in production, Program Compliance, Contract Compliance, and Quality Improvement processes effectively monitor, control, report, and improve the quality of the Replacement System Operations as defined in Sections 2.1– 2.4.

Four teams conduct the software quality reviews that contribute to the overall project quality:

- SR Functional Team: Conduct peer reviews and participate in various testing efforts as described in the *Master Test Plan* and *Peer Review Plan*
- SRQT: Conduct work product and process internal QC reviews as described in Section 2.6 of this plan
- EPMO QSG: Conduct periodic compliance audits of standards (including Institute of Electrical and Electronics Engineers (IEEE), SDLC, PMBOK, CMMI, and adherence reviews) as described in the Section 2.7 of this plan
- QMO SQM: Conduct periodic reviews throughout the steps of the *SDA* with a focus on the quality of the applications as described in this section. In addition, the MITA Framework adherence will be tracked through the MITA metrics scorecard that is developed for each SR Phase

These teams report directly or indirectly to the QM Director. The QM Director is responsible for orchestrating these teams in a way that creates synergy among teams and improves overall quality.

While each of these reviews has a different primary focus and is conducted from a different viewpoint, there are overlaps between the objectives of reviews conducted by each team. Combined the reviews fulfill the following goals:

- Verify the process of defining the hardware and software architecture, components, modules, interfaces, and data for the Replacement System to satisfy that specified requirements are being implemented as described in the *Software Development Approach, Technical Architecture Plan (TAP), Implementation Plan,* and iteration plans
- Establish metrics used to measure various aspects of quality throughout the SR workflows (the specific metrics will be developed and baselined as part of the Detailed Design Review)

- Define the formal technical reviews that control software progress through the SDA workflows and into production
- Verify the quality of work products and artifacts created during each SDA workflow step and post-implementation
- Monitor the SR Functional Team activities for timeliness of the operations and quality of product during each SR phase

Throughout the SDA workflow processes, there are several quality checks and balances and several quality tasks that need to be conducted by different teams. We have combined the IEEE 730™-2002 (IEEE Standard for Software Quality Assurance Plans) structure with the steps described in the SDA to define the quality reviews throughout the SDA workflow processes. The table below illustrates the relationship between IEEE 730™-2002 minimum requirements for a typical software quality plan and the SDA workflows.

Table 12: Relationship between IEEE 730 ™ 2002 Minimum Requirements and SDA

SDA Workflow / IEEE 730™-2002 Minimum Requirements	4.6.2.1 Software specifications review (SSR)	4.6.2.2 Architecture design review (ADR)	4.6.2.3 Detailed design review (DDR)	4.6.2.4 Verification and validation plan review	4.6.2.5 Functional audit	4.6.2.6 Physical audit	4.6.2.7 In-process audits	4.6.2.8 Managerial reviews	4.6.2.9 Software configuration Mgt plan review (SCMPR)	4.6.2.10 Post-implementation review
Planning				Addresses through DQA and Deliverable				Addresses through EPMO QSG Periodical audits		
Requirements Analysis	✓									
Solution Analysis		✓								
Detail Design			✓							
Configuration, Modification, and New Development							✓		✓	
System Testing					✓					
Readiness Testing					✓	✓	✓			
Implementation										
Post Implementation						✓				✓

2.5.1 Planning Review

The Software Development Methodology (SDM) Planning Review Workflow includes activities to define the overall project schedule, establish management controls, verify availability of appropriate resources, and establish communication protocols among CA-MMIS stakeholders. This workflow is particularly important, as it sets the stage for the entire System Replacement project and related activities. As a result, having adequate checks and balances in the steps of this process flow is crucial. The QMO, SRQT, and the EPMO QSG each have a role in planning the review process. The interrelationship between these teams is explained in Section 1.2. The table below is a sample of each team's contribution in this process.

Table 13: Planning Workflow – Sample Team Contributions

#	Planning Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute *Project Start-up Procedure*				R		S	
2	Determine requirements documentation to be created during the Requirements Analysis Workflow.		R		R			
3	Complete crosswalk of Contractual obligations to SPARK-ITS® baseline deliverables and work products.		R			R	R	
4	Tailor SDM Workflow procedures template for the CA-MMIS System Replacement project.				R			
5	Establish or update project governance.		R				R	
6	Develop templates and standards, and establish assumptions for contractual deliverables and work products not provided by the SPARK-ITS® QMS.		R		R	R		
7	Work with tool support teams to tailor the tool (IBM Rational DOORS requirements management tool, IBM Rational testing tools) usage models and procedures.							
8	Import the initial set of requirement traces into DOORS.	R			R		S	
9	Update the *Master Data Conversion and Cleanup Plan.*		R		R	R		
10	Tailor Microsoft® SharePoint® (SharePoint) site.					R		
11	Update CA-MMIS *Architecture Plan (AP)* and initiate procurement activities.		R		R	R		
12	Start *Technical Architecture Description (TAD).*				R			
13	Create and gain DHCS approval of the *Master Implementation Plan.*		R		R	R		
14	Start work on the draft *CA-MMIS Replacement System Phase Implementation Plan*				R			
15	Create and gain DHCS approval of the *Master Decommissioning Plan.*		R		R	R		
16	Start work on *Phase Decommissioning Plan.*				R			
17	Create and gain DHCS approval of the *Certification Readiness Plan.*		R		R	R		
18	*Security and Confidentiality Plan* template as approved by DHCS.							
19	Develop and obtain approval of the *Privacy Plan.*		R		R	R		
20	Update *Replacement System Training Strategy/Plan*, *Business Change Management Plan*, and related materials.		R		R	R		
21	Orient Xerox development staff.		TM	R			S	

#	Planning Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
22	Execute the Workflow Closure Procedure.			R			S	R

Legend

R **Required Review**

S **Sampled Review**

TM **Staff Training Monitoring**

2.5.2 Requirements Analysis Review

2.5.2.1 Requirements Analysis Review Process

The Requirements Analysis Workflow includes activities for defining, documenting, and approving the requirements that represent the scope of the CA-MMIS System Replacement project. The primary deliverable resulting from this process is the *Requirements Specification Document (RSD)*. The *RSD* is reviewed internally by the SRQT before submission to the QMO and is also reviewed by the QMO QA Team and EPMO QSG, as defined in the *Deliverables Management Plan*. This includes verifying that the functional, non-functional, and non-software requirements are developed or managed as described in the *Requirements Management Plan*.

The requirements for Section 4.6.2.1 (Software specifications review or SSR) of the IEEE 730™-2002 standard are covered by the activities each team (SQM, SRQT, and QSG) performs in this process, as indicated in the table below.

Table 14: Requirements Analysis Workflow – Sample Team Contributions

#	Requirements Analysis Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.				R		S	
2	Select elicitation techniques using the *Requirements Development Techniques and Guidelines*.		TM		R			
3	Establish the expected content and layout of deliverables and work products relevant to this workflow				R			
4	Work with DHCS to identify DHCS SMEs and user representatives for elicitation workshops.							
5	Work with DHCS to schedule requirements elicitation and validation workshops with identified DHCS stakeholders.			R				

#	Requirements Analysis Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
6	Review contractual documentation and CA-MMIS work products (legacy system documentation, policies, manuals, California MITA SS-A, etc.)							
7	Review and prioritize contractual commitments or features. Allocate each requirement to an application/function	R		R			S	
8	Update existing or draft new use cases or process flows where contractually obligated requirements align with existing use cases or business processes	R		R			S	
9	Draft *Requirements Specification Document*	R	R		R		S	
10	Prepare, rehearse, and conduct requirements elicitation workshops to clarify, validate, review, or better understand the requirements. Demonstrate baseline application functionality to gain DHCS agreement to proposed solutions relative to the requirements.	R	R		R		S	
11	Update *Requirements Specification Document* and *use cases* based on requirements elicitation workshop discussions and findings.		R		R	R		
12	Develop *Data Element Dictionary*.	R			R	R	S	
13	Trace requirements and validate traceability is complete and accurate.		R		R	R	S	
14	Conduct validation workshops with DHCS to review and refine *use cases* or *process flows*, *Requirements Specification Document*, Requirements Traceability Matrix (*RTM)*, and preliminary *Data Element Dictionary*.	S			R			
15	Review, deliver, and obtain DHCS approval of *RSD* and *use cases* or *process flows*. Once approved, the *RSD* and related work products are placed under configuration control as specified in the *Configuration Management Plan*		R		R	R	S	
16	Draft *User Acceptance Test (UAT) Plan*, including acceptance criteria for completion of UAT				R			
17	Write initial UAT cases to specify which functional requirements should be tested. Further risk and feasibility analysis are performed when additional test scripts are created in subsequent workflows	S			R			
18	Identify end-user (provider, claims submitter, fiscal agent operations staff) learner groups and training needs per learner group.		TM					
19	Validate and deliver *RTM* with traces through the end of the Requirements Analysis Workflow.				R			

#	Requirements Analysis Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
20	Continue work on draft of *CA-MMIS Replacement System Phase Implementation Plan*		R		R	R		
21	Update *Certification Readiness Plan*		R		R	R		
22	Update draft of *Phase Decommissioning Plan*		R		R	R		
23	Execute the *Workflow Closure Procedure*.			R			S	
24	Gather lessons learned from this workflow to apply for future workflows.	R			R		S	R

2.5.2.2 Business Rules Extraction Review

This review is held to assure the adequacy of the Business Rules Extraction (BRE) process. The BRE process per the Business Rules Extraction Plan includes the following steps:

1. Define the rule in standard, non-technical (business) language.
2. Review the rule with SMEs for the particular area and with operations staff as needed for content.
3. QA the rule for standardization of language.
4. Provide the rule to DHCS for review in Rule Validation Review sessions.
5. Correct and Submit for final approval.
6. Load to the CA-MMIS Business Rule Repository in the DOORS toolset.

Each of these steps is subject to review by QMO SQT or periodic audits by EPMO QSG.

2.5.3 Architecture Design Review (ADR)

The purpose of this review is to evaluate the technical adequacy of the preliminary design of the software as depicted in the *Architecture Plan*. SQM attends technical architecture design, Configuration, Modification, New Development, and formal review meetings as necessary. Additionally, SQM reviews peer review records gathered by the SR functional Team and SRQT, as defined in the *Software Development Approach (SDA)*, to verify adherence to the approved plans. SQM reviews samples of the following artifacts to verify the steps are taken as described in the *Architecture Plan.*

- Information Architecture artifacts (including Data Management Strategy, Conceptual Data Model (CDM), Logical Data Model (LDM), and Data Standards Table)
- Technical Architecture Artifacts (including Conceptual Technical Architecture Model, Business Services, Technical Services, Application Architecture, Technical Capability Matrix, Technology Standards, and Solution Sets)
- Application Architecture (including Enterprise Service Bus (ESB) and access channels, Service management engine, Service gateways and mediators, Business

Services, Technical Services, Performance Management, Service Interoperability, Security and Privacy)

2.5.4 Solution Analysis Review

During the Solution Analysis Workflow, Xerox validates and/or updates the alignment of RSD requirements with the baseline applications. This is the stage for planning iterative design, development, and testing activities. The following table shows the teams' participation to manage quality throughout this process.

Table 15: Solution Analysis Workflow – Sample Team Contributions

#	Solution Analysis Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.			R			S	
2	Establish the expected content and layout of deliverables and work products relevant to this workflow.				R	R		
3	Conduct Solution Analysis Workflow sessions of requirements artifacts. Prepare *Solution Analysis Report* using the results of the gap analysis of *RSD* requirements.	R			R		S	
4	Identify planned test method(s) for each requirement based on the type of requirement (e.g., functional vs. non-functional) and the solution analysis (matched and configuration requirements need System Integration Test (SIT), enhancements need unit testing, for example)		R		R	R		
5	Draft the *Iteration Plan*	R	R		R			
6	Conduct walkthrough of the *Solution Analysis Report– [application]* and *Iteration Plan – [application]* with DHCS SME's/management to gain buy-in and approval.	R		R				
7	Review end-user (operations staff, provider, etc.) training needs by role and develop *Learning Matrices* for necessary training modules.		TM		R			
8	Update the *UAT Plan*		R		R	R		
9	Develop preliminary UAT cases to align with functionality outlined in the *Iteration Plan – [application]* and approved requirements deliverables and work products	R		R	R		S	
10	Draft *System Test Plan*		R		R	R		
11	Continue work on draft of *CA-MMIS Replacement System Phase Implementation Plan*		R		R	R		
12	Update *Certification Readiness Plan*		R		R	R		
13	Update draft of *Phase Decommissioning Plan*		R		R	R		

#	Solution Analysis Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
14	Execute the *Workflow Closure Procedure*.			R			S	
15	Gather lessons learned from this workflow to apply for future workflows.	R			R		S	R

2.5.5 Detail Design Review (DDR)

Detail Design is the first of three iterative workflows of the SR SDLC (Detail Design Configuration, Modification, and New Development; and System Testing). The primary output of the Detail Design Workflow is the Design Specification Document (DSD), which describes in detail the user interface pages, application interfaces, reports, letters, business logic, edits, and business rules. In addition, Detail Design is when the metrics are developed and baselined. The table below shows the quality reviews conducted by SRQT and SQM teams during the detail design phase.

Table 16: Quality Reviews Conducted by SRQT and SQM Teams during the Detail Design Phase

Solution Identifier	Design Effort	Quality Effort
Match	No additional design for those features is needed until regression testing begins	• SRQT reviews the process of regression testing • SQM reviews the result of regression testing
Configuration	Use design workshop sessions to review system lists, reference codes, and other features that must be configured to align with DHCS' requirements. Copy existing application documentation into deliverables and work products and update as necessary to align with DHCS requirements. Notate configuration changes that are required to align the application with DHCS requirements. Xerox technical staff configure and test configured item to validate DHCS requirements are met.	• SRQT and SQM analysts attend the design workshops as needed and review the result of regression testing and verify alignment of application and DHCS requirements • SRQT reviews the documentation and deliverables and work products created by the SR Functional Team during the Configuration
Modification	Use design workshop sessions to review to create or modify the existing design documentation to align with DHCS requirements. Note variances between the application baseline and the changes made for DHCS so Xerox technical staff can focus the technical design, coding, and testing efforts on identified changes	• SRQT and SQM analysts attend the design workshops as needed and review the alignment of application and DHCS requirements • SRQT reviews the documentation and deliverables and work products created by the SR Functional Team during the Modification

Solution Identifier	Design Effort	Quality Effort
Enhancement	Uses DSD templates to document enhancements and illustrate relationships between the enhancements and existing functionality. Conducts design workshops with DHCS to review and update DSD documentation and prepares test cases for development activities	• SRQT and SQM analysts attend the design workshops as needed • SRQT reviews the DSD documentation and test cases

The QMO, SR, and EPMO each have a role in the DDR process, as illustrated in the table below.

Table 17: Detail Design Workflow – Sample Team Contributions

#	Detail Design Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.			R			S	
2	Establish the expected content, layout, and delivery mechanism of deliverables and work products relevant to this workflow				R			
3	Review the project's critical decisions process in the *Technical Architecture Description* specific to design decisions, including decisions to purchase software components for the solution.	R			R			
4	Draft the *DSD* artifacts in preparation for design review workshops (including conversion specifications).				R			
5	Conduct multiple design review workshops for each functional area to review and update *DSD* artifacts.	S			R		S	
6	Confirm initial classifications of application changes as defined in the *Solution Analysis Report– [application]*:	R	R	R	R	R	S	
7	Perform final walkthrough of the functional area's *DSD* with the functional team and determine an approach to fill gaps.	S		R			S	
8	Update DOORS with list of *DSD* artifacts as a "design index."		R		R	R		
9	Project developers and architects participate in peer reviews on the *DSD* and related design artifacts such as the *LDM*, *Data Element Dictionary*, Security Matrix, *TAD*, and, if present, P*rototype – [application]*, for correctness, completeness, feasibility, and adherence to project standards.		S		R		S	

#	Detail Design Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
10	In the final design workshop, perform a final walkthrough of the functional area's *DSD* with the DHCS.	R		R			S	
11	Obtain DHCS approval of the functional *DSD* artifacts (in the final iteration of each functional area). Once approved, the *DSD* is placed under configuration control as specified in the appropriate configuration rule.	R		R			S	
12	Complete tailoring of *Unit Test Plan – [application]*. Note that unit testing is required for code changes or functionality affected by code changes.		S		R			
13	Continue tailoring of *System Test Plan* and begin developing *system test cases* for functionality being configured, modified, or enhanced.		R		R	R		
14	Continue development of *UAT cases*		S		R			
15	Tailor the *Parallel Test Plan* and begin developing *parallel test cases*.		R		R	R		
16	Update DOORS with test case artifacts		S		R			
17	Update the *Business Continuity/Disaster Recovery Plans*		R		R	R		
18	Complete and gain DHCS approval of the *CA-MMIS Replacement System Phase Implementation Plan*	R	R		R	R	S	
19	Update *Certification Readiness Plan*		R		R	R		
20	Update and gain DHCS approval of the *Phase Decommissioning Plan*		R		R	R		
21	Establish and baseline metrics used to measure various aspects of quality throughout the SR workflows	R	R		R	R		
22	Begin development of training modules for end-users, providers, and other identified learner groups		TR					
23	Execute the *Workflow Closure Procedure*.			R			S	
24	Gather lessons learned from this workflow to apply to future workflows.	R			R		S	R

2.5.6 Verification and Validation Plan Review

Process verification audits are used to confirm that work is progressing in accordance with defined processes and procedures, and high-quality work products that meet the expectations of the State are delivered. Members of the EPMO QSG validate process compliance by performing periodic process audits and reviews. The process audits and reviews confirm quality performance, adherence to documented processes and

procedures, and compliance to mandated industry standards, as well as identify potential process improvements. The details of the EPMO QST verification process are explained in Section 2.7.

2.5.7 Configuration, Modification, and New Development Review

The Configuration, Modification, and New Development workflow includes configuring, modifying, and/or coding the solution according to the specifications in the Detail Design workflow to configure or modify development artifacts (including code and scripts) instead of starting the technical design and development from scratch. Quality reviews in this workflow are illustrated in the table below.

Table 18: Configuration, Modification, and New Development Workflow – Sample Team Contributions

#	Configuration, Modification, and New Development Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.			R			S	
2	Build out or confirm build-out of integrated development and test environment(s) according to the *CA-MMIS Replacement System Phase Implementation Plan.*	R						
3	Review the *DSD* and develop *Technical System Design – [application]* for modifications and enhancements to prepare for coding and configuration.	R			R			
4	Plan and conduct peer and technical review between functional team and technical staff to confirm the alignment of technical design and standards with *DSD* artifacts and functional requirements.	R			R		S	
5	Begin configuration, modification, and development with consideration of *DSD*, *Technical System Design – [application]*, and available test plans, test cases, and converted data.	R						
6	Plan for and conduct peer reviews of code (individually or in walkthroughs as indicated in the *Quality Management Plan*), confirming developed code aligns to applicable coding standards.			R			S	
7	Complete Unit Test Checklist for newly developed or modified development artifacts and complete unit test results.	R		R			S	
8	Complete development-integration checklists for newly developed or modified development artifacts and complete development-integration test results.	R		R			S	

#	Configuration, Modification, and New Development Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
9	Resolve discovered defects and log defects in CQ.	R		R			S	
10	Perform regression testing after integrating application changes.	R		R			S	
11	Meet with DHCS after integration testing, review the *Prototype - [application]* against defined UAT Plan and iteration test cases.	R		R			S	
12	Migrate development artifacts to the system test environment in conjunction with the processes in the *Release Management Plan*. Test deployment scripts and back-out procedures.	R		R	R		S	
13	Compare *DSD* to baseline bed of system test cases, and build or tailor system test cases to validate *DSD* specifications.	R			R		S	
14	Complete the *System Test Plan*, which includes end-to-end integration and performance.	R			R		S	
15	Build or tailor parallel test cases.	R		R	R			
16	Draft the Operational Readiness Test (ORT) Approach.		R		R	R		
17	Draft *ORT work materials (i.e., examination forms, metric measurements, meeting agendas, and SOPs).*				R			
18	Continue development of training modules and other user documentation for end-users, providers, and other identified learner groups.		TM		R			
19	Develop supplemental UAT procedures as necessary.				R			
20	Update *CA-MMIS Replacement System Phase Implementation Plan.*		R		R	R		
21	Update *Certification Readiness Plan.*		R		R	R		
22	Execute the *Workflow Closure Procedure*.	R			R			
23	Gather lessons learned from this workflow to apply for future workflows.	R			R		S	R

2.5.8 System Testing Review

The System Testing workflow consists of steps to confirm the CA-MMIS Replacement System meets system requirements and technical specifications, by testing the functionality of the system and validating the accuracy of the user documentation. The table below indicates the type of participation for each quality team involved in system testing.

Table 19: System Testing Workflow – Sample Team Contributions

#	System Testing Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.			R			S	
2	Review and update *System Test Plan* and related procedures.		R		R	R		
3	Complete *Parallel Test Plan.*		R		R	R		
4	Conduct test readiness review meeting. Review results from unit and development-integration testing; confirm system test cases are complete and sufficient to validate the design.	R			R		S	
5	Trace requirements through design to test cases.	R		R	R		S	
6	Execute system test cases per approved *System Test Plan*, using converted production data when available.	R			R		S	
7	Execute parallel test cases per approved *Parallel Test Plan*, using converted production data when available.	R			R		S	
8	Execute regression test of modified code in the system test environment; repair as needed.	R			R		S	
9	Record, monitor, and track defects resulting from test execution as described in the *Defect Management Plan.*	R			R		S	
10	Conduct Defect Review Board meeting to discuss defects, severity, resolution, and root cause.	S			R		R	
11	Assign defects for resolution, resolve defects, and execute retesting to confirm fixes.	R			R		S	
12	Analyze defects with testing and development leads/management.	R						
13	Document system test results at conclusion of system testing.				R		S	
14	Execute performance test cases per *System Test Plan* and document results in the test management tool.	R		R			S	
15	Resolve defects in performance as defined in SLAs.	R		R				
16	Update training modules, user documentation, and communications based on testing results.		TM					
17	Complete development of supplemental UAT procedures, as needed.		R			R		
18	Update RTM if needed.		R		R	R		

#	System Testing Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
19	Update *CA-MMIS Replacement System Phase Implementation Plan.*		R		R	R		
20	Update *Certification Readiness Plan.*		R		R	R		
21	Execute the *Workflow Closure Procedure*.	R		R			S	
22	Gather lessons learned from this workflow to apply for future workflows.	R			R		S	R

2.5.9 Readiness Testing Review

During the SDA Readiness Testing phase, DHCS and Xerox SR project teams execute Security Test, ORT, Unit Acceptance Test (UAT), Performance Test, and Parallel Test, as described in the *Master Test Plan*. DHCS end-user involvement increases due to the execution of UAT, as well as the ramp-up of training and communications in preparation for upcoming implementation of the CA-MMIS Replacement System. Several audits and reviews are conducted during this phase, including the following reviews:

- **Functional audit:** Verify that the requirements specified have been met before delivery of software
- **Physical audit:** Verify internal consistency of the software and its documentation, and their readiness for release
- **In-process audits:** Verify the consistency of the design, including Code versus design documentation, Interface specifications (hardware and software), Design implementations versus functional requirements, Functional requirements versus test descriptions

The QMO, SRQT, and EPMO each have a role in the readiness testing review process. The table below is a sample of interactions among these teams and the contributions of each throughout this process, as described in the *SDA*.

Table 20: Readiness Testing Workflow – Sample Team Contributions

#	Readiness Testing Workflow Step Description	QMO		SRQT		EPMO QSG	
		SQM	QA	Process Review	Work Product Review	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.	S		R		S	
2	Review and update the test plans and procedures for the test levels to be executed this workflow.	S		R			
3	Confirm and/or update the test environment(s) necessary for the planned test levels.	R					

#	Readiness Testing Workflow Step Description	QMO		SRQT		EPMO QSG	
		SQM	QA	Process Review	Work Product Review	Process Compliance	Process Improvement
4	Execute UAT.	R		R		S	
5	Execute parallel test cases per approved *Parallel Test Plan.*	S		R		S	
6	Execute security test.	S		R		S	
7	Log defects as they are identified using the *Defect Management Plan.*	S		R		S	
8	Conduct Defect Review Board meeting to discuss defects, severity, resolution, and root cause.			R		S	
9	Assign defects for resolution, resolve defects, and execute retesting to confirm fixes.	R		R		S	
10	Analyze defects with testing and development leads/management	R				S	
11	Submit UAT results to DHCS or receive a letter from DHCS indicating completion/approval of UAT results.		S	R	R		
12	Submit Parallel Test results to DHCS.		S		R		
13	Confirm establishment of the physical environment.	R				S	
14	Execute ORT checklists and resolve defects as outlined in the *Defect Management Plan*.	R		R		S	
15	Deliver operational readiness test results to DHCS.		S		R		
16	As testing reveals the need to enhance the system or modify previously approved documentation, follow the project's *Change (Control) Management Plan*, *Configuration Management Plan, Release Management Plan*, and related procedures.		R		R		
17	Update traceability matrix with links to test cases.			R		S	
18	Update *user documentation* (online help, work instruction wikis, etc.) and Training Materials based on defect resolution.		S	R		S	
19	Conduct training for end-users participating, UAT, and ORT activities.		S			S	
20	Determine staffing and other transition activities that are needed for post-implementation support.	R				S	
21	Update *CA-MMIS Replacement System Phase Implementation Plan.*		R		R		
22	Update *Certification Readiness Plan.*		R		R		
23	Completion and turnover of Completed Documentation and Policy Manuals.		R		R		

#	Readiness Testing Workflow Step Description	QMO		SRQT		EPMO QSG	
		SQM	QA	Process Review	Work Product Review	Process Compliance	Process Improvement
24	Completion and turnover of *Hardware and Software Configuration Manual.*		R		R		
25	Conduct Operational Recovery/Disaster Recovery Test.	R			R	S	
26	Confirm staff and stakeholders (DHCS and Xerox staff) are trained and ready to use the system.		S			S	
27	Execute the *Workflow Closure Procedure*.			R		S	
28	Gather lessons learned from this workflow to apply for future workflows.	R		R		S	R

2.5.10 Implementation Review

During the Implementation workflow, Xerox confirms business operations and system users are trained and ready for implementation, and the necessary steps have been taken before the CA-MMIS Replacement System software is deployed into the production environment. It is vital to confirm the Replacement System is operating as required after the deployment. Due to the criticality of steps in this workflow, several concurrent checks are conducted by the QMO, SRQT, and EPMO, as illustrated in the following table.

Table 21: Implementation Workflow – Sample Team Contributions

#	Implementation Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.			R			S	
2	Update *CA-MMIS Replacement System Phase Implementation Plan.*		R		R	R		
3	Update Replacement System Documentation (*Technical System Design – [application]*) leveraging the previously approved *DSD* and *Technical System Design – [application]* where needed.		R		R	R	S	
4	Execute *CA-MMIS Replacement System Phase Implementation Plan* and report on progress at regular intervals.	R	R	R		R	S	
5	Promote code to the production environment.	R		R				
6	Validate successful move to the production environment by executing selected regression test cases.	R		R			S	
7	Update *Certification Readiness Plan.*		R		R	R		

#	Implementation Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
8	Execute the *Workflow Closure Procedure*.			R			S	
9	Gather lessons learned from this workflow to apply for future workflows.	R			R		S	R

2.5.11 Post-implementation Review

As part of Program Compliance Reviews, QMO measures and monitors several operational metrics which will be available during the Replacement System Operations as well as after the implementation of enhancement projects. The metrics are referenced in Section 2.1 of this document. QMO also may design and implement specific operational dashboard for the purpose of finding anomalies during the post implementation. Please refer to Section 2.4 for examples of post-implementation dashboards for HIPAA 5010 Phase I and Phase II. The table below shows samples of steps taken by each quality team during the post-implementation workflow:

Table 22: Post-Implementation Workflow – Sample Team Contributions

#	Post Implementation Workflow Step Description	QMO		SRQT		EPMO QSG		
		SQM	QA	Process Review	Work Product Review	Deliverable Management	Process Compliance	Process Improvement
1	Execute the *Workflow Kickoff Procedure*.			R			S	
2	Execute *Post Implementation Plan* to transition from CA-MMIS System Replacement to CA-MMIS Operations.	R		R			S	
3	Update *Certification Readiness Plan.*		R		R	R		
4	Provide ongoing support to DHCS and review project outcomes and metrics for future process improvements.	R		R	R			
5	Update *Post Implementation Review Report.*				R			
6	Execute *Project Shutdown Procedure* and close individual phase portion of the project.	R		R			S	
7	Execute the *Workflow Closure Procedure* for phase I, II, III.	R		R			S	
8	Gather lessons learned from this workflow to apply for future workflows.	R			R		S	R

2.5.12 Decommissioning Review

SQM conducts planned reviews of the *Master Decommissioning Plan* WBS and related activities (as described in the *Master Decommissioning Plan* and related schedules) to verify:

- Contractual obligations have been fulfilled and milestones are achieved in a timely manner as scheduled
- Necessary written approvals for the associated work is taken from the appropriate workgroup as defined in the *Master Decommissioning Plan*
- Positioning of legacy system component application code and data is completed as planned and per *Master Decommissioning Plan*
- Data migration and conversion processes have been completed as planned
- Application component retention requirements as defined in the CRFP are fulfilled
- Required tests have been completed (including regression testing) as described in the *Master Test Plan*

2.5.13 Metrics

2.5.13.1 Overview of Metrics

Throughout the life of the CA-MMIS Contract, various project teams take measurements and collect and analyze quantifiable data at different levels, in areas across the project. From these measurements, the teams create metrics that serve specific purposes. The purpose of a metric can vary depending on the type of data from which it is constructed or the needs of the end user of the metric. Xerox is committed to working collaboratively with DHCS counterparts to revise, update, and expand these metrics through appropriate workgroups.

From a quality perspective, the goal of metrics collection is to provide data that facilitates quality control activities for project teams and QMO activities, including the identification of process improvement opportunities. In addition, the use of metrics reduces subjectivity in the assessment of the quality of processes and products by providing a quantitative basis for making decisions. Metrics are analyzed to allow project teams to evaluate their processes so that they are achieving their desired results as well as identify areas for process improvements. In some cases, the data is analyzed for trends to detect potential anomalies. In other cases, expectations related to the timing and frequency of metrics collection and analyses have been defined in advance based on past experience, internal standards, or industry standards. Metrics are analyzed using different methods and tools and techniques including Trend analysis, variance analysis, Pareto diagrams, histograms, RCA, and other statistical methods as appropriate.

This section provides information about two categories of metrics that are collected and analyzed and the ways in which those metrics are used. Metrics are divided into the following:

- Project Management Metrics: These metrics are collected and analyzed throughout the SDLC processes and at various times and frequencies depending on the specific process in place. Project Management metric data is used to evaluate if a project is meeting its targets and to identify areas needing additional project management focus
- Software Development Metrics: In order to measure the software quality attributes, an appropriate set of software metrics shall be identified. The purpose of software

metrics is to make assessments throughout the software life cycle as to whether the software quality requirements are being met

- MITA Scorecard Metrics: To monitor the adherence to the MITA standards QM measures the progress of the project toward meeting the MITA maturity levels for Business Architecture, Information Architecture, and Technical Architecture

Each of these areas has a specific set of metrics that are used for management and quality purposes. The metrics used for internal quality control and QM can vary widely across project areas. The metrics may vary across time; they should be refined and adjusted as processes are changed and improved.

2.5.13.2 Metrics Development Methodology

Understanding the complexity of the CA-MMIS contract and the phased approach to the System Replacement, we have applied the IEEE Standard for a Software Quality Metrics Methodology 1061-1998. Xerox predicts several rounds of reviews are required in each iteration phase to update the Software Development and Project Management quality metrics. As a result, Xerox implements a systematic approach to establishing quality metrics and identifying, implementing, analyzing, and validating the process and product software quality metrics. This approach is comprised of five steps:

1. Establish quality requirements including determining the list of quality requirements and Quantify each quality factor (where possible). This step also includes the process to baseline the metrics (baselines will be established using various methods including previous experience and industry standards).
2. Identify quality metrics which are comprised of performing a cost-benefit analysis, adjust the metrics set as necessary, and obtain the commitment to the metrics set.
3. Implement the software quality metrics, which includes defining the data collection procedures, prototyping the measurement process, and collecting the data and calculating the metric values.
4. Analyze the metrics results.
5. Validate the quality metrics.

The table below presents a list data item description for each metric per IEEE Standard for a Software Quality Metrics Methodology 1061-1998.

Table 23: Data Item Description for each IEEE Standard for a Software Quality Metrics Methodology 1061-1998 Metric

Item	Description
Name	Name given to the data item.
Metrics	Metrics associated with the data item.
Definition	Straightforward description of the data item.
Source	Location of where the data item originates.
Collector	Entity responsible for collecting the data.
Timing	Time(s) in life cycle at which the data item is to be collected. (Some data items are collected more than once.)
Procedures	Methodology (e.g., automated or manual) used to collect the data.
Storage	Location of where the data are stored.
Representation	Manner in which the data are represented, e.g., precision and format.

Item	Description
Sample	Method used to select the data to be collected and the percentage of the available data that is to be collected.
Verification	Manner in which the collected data are to be checked for errors.
Alternatives	Methods that may be used to collect the data other than the preferred method.
Integrity	Person(s) or organization(s) authorized to alter the data item and under what conditions.

2.5.13.3 Project Management Metrics

Project Management metrics are used as indicators of project performance. These indicators provide information about and insight into some of the factors that can influence the successful completion of the project. The metrics that serve as indicators of project progress come from the core management disciplines.

- **Schedule Metrics**: Data is collected regarding actual-versus-expected completion dates for both major and minor milestones
- **Action Items Metrics**: Data is collected regarding the action items and their status in the project level which includes following samples:
  - Count of action items by workgroup aged 30 days or older
  - Due date composition metric (count of action items opened during the past period, this period, one week out, two weeks out, three weeks out, four weeks out, greater than four weeks out)
  - Count of action items by status (open or closed)
- **Issues Metrics**: An issue is a question or a problem that must be resolved or answered in order for project work to be continued or completed. For this reason, issues must be monitored closely so that they do not jeopardize project milestones. Below are sample of issue metrics:
  - Count of Issues by workgroup aged 30 days or older
  - Due date composition metric (count of issues opened during the past period, this period, one week out, two weeks out, three weeks out, four weeks out, greater than four weeks out)
  - Count of issues by status (open, pending, resolved)
- **Risk Metrics**: Metrics used for the evaluation of the Risk Management process are defined in the *Risk Management Plan* and collected, analyzed, and reported by the SR Functional Team. The EPMO QSG Team periodically audits the internal Risk Management process to validate that the process is being followed and that metrics are being collected and analyzed in accordance with the defined process. Below are samples of risk metrics:
  - Count of risks by domain, project, workgroup/team, and severity level
  - Count of risks by status (e.g., open, closed, cancelled)
- **Change Request Metrics**: The goal of collecting the Change Request (CR) metrics is to support the analysis and reporting of not just CRs, but also the CR process itself. The EPMO QSG Team periodically audits the CM process to confirm that the process is being followed and that metrics are being collected and analyzed in accordance with the defined process

These metrics are gathered and analyzed by the EPMO and will be included in the QMO metrics reports to be submitted to DHCS (following the CA-MMIS contract Governance process).

2.5.13.4 Software Development Metrics

Below are software-specific metrics that are gathered by the SRQT and analyzed and reported by the SQM. Baseline metrics will be established at the initiation of each workflow in collaboration with DHCS and appropriate functional leads.

2.5.13.4.1. Incident and Defect Tracking Metrics

Software incidents and defects are monitored at various levels within the CA-MMIS Contract. Team members and team leaders use views of ClearQuest to assist them in responding appropriately to incidents that have been identified (used by the CA-MMIS Help Desk). SRQT monitors incident and defect volumes and resolution rates as indicators of the expected quality of software under development. Please refer to Section 2.6.2.5 for a sample of defect metrics.

2.5.13.4.2. Size and Complexity Metrics

Metric data that relates to the size and complexity of software components (e.g., units, program modules, sub-systems) is collected in the development phases of the CA-MMIS Contract. Assumptions about system size and complexity, as well as assumptions related to areas that are influenced by those factors, are made during planning.

2.5.13.4.3. Requirement Metrics

Metrics from the requirements management process, as defined in the *Requirements Management Plan*, reflect the amount of new, changed, or deleted requirements during a given period. SR QMP Team and SQM periodically audit the Requirements Management process to confirm that the defined processes are being followed and that metrics are being collected and analyzed.

2.5.13.4.4. Software Testing Metrics

The *Master Test Plan* defines the metrics that measure the software performance and are used to report the results of the software testing process. The metrics from the Testing Team are generally related to test script coverage and execution progress and incidents or defects that are exposed during the various phases of the testing process. SR QMP Team and SQM periodically audit the testing process to confirm that the defined processes are being followed and that metrics are being collected and analyzed. A sample list of testing related metrics include the following:

- Count and percentage of test iterations execution status (passed, failed, blocked, has not been run)
- Overall Test Execution Progress priority (critical, high, moderate)
- Test scripts execution progress (executed vs. planned)

These metrics could be measured during the testing phase and are subject to analysis, including the type of analysis indicated in the table below.

Table 24: Sample of Analysis on Software Testing Related Metrics

#	Metric Analysis	Description	Purpose
1	Unit Test Coverage	Compares count of unit test defects vs. system test defects for a module/change	Demonstrates effectiveness and coverage of unit testing. Large difference signifies issues with the

#	Metric Analysis	Description	Purpose
		(Count of system test defects for that module/change – Final Count of Unit test defects)	unit testing test cases.
2	Unit Test Execution Progress	Compares count of actual unit test cases completed vs. planned unit test cases. To be measured for each test cycle to validate completion of the test cycle (Count of actual tests completed/count of total planned tests)	Measures effectiveness and timeliness of unit test process
3	Peer Review Effectiveness	Count of number of changes made to an approved unit test case during the unit test phase	Demonstrates effectiveness of peer reviews. Large number of changes indicate issues with the peer review process as a peer review should catch deficiencies in unit testing
4	System Test Coverage	Compares count/severity of system test defects vs. UAT defect vs. Production defects	Demonstrates effectiveness and coverage of system testing. Large difference signifies issues with development and testing
5	System Test Execution Progress	Compares count of actual system test scripts completed vs. planned system test scripts. To be measured for each test cycle to validate completion of the test cycle (Count of actual tests completed/count of total planned tests)	Measures effectiveness and timeliness of System Test process
6	UAT Test Coverage	Compares count of UAT test defects vs. Production defects/Roll backs for each change	Demonstrates effectiveness and coverage of UAT. Large difference signifies issues with the UAT test cases.
7	UAT Execution Progress	Compares count of actual UAT tests completed vs. planned UAT tests. To be measured for each test cycle to validate completion of the test cycle (Count of actual tests completed/ count of total planned tests)	Measures effectiveness and timeliness of UAT process

2.5.13.5 MITA Scorecard Metrics

Below are the areas where QM will monitor MITA Framework adherence, these metrics will be developed for each SR. The MITA State Self-Assessment is a key input to the MITA Scorecard Metrics. The MITA Scorecard Metrics will measure the maturity levels of key areas for each SR Phase. The culmination is the assessment of the MITA adherence upon implementation of Phase IV SR functionality.

2.5.13.5.1. Business Architecture Metrics

Business Architecture Metrics will include metrics on Business Relationship Management, Care Management, Contractor Management, Eligibility and Enrollment

Management, Financial Management, Member Management, Operations Management, Performance Management, Plan Management, and Provider Management. Each of these areas has subsets in the MITA Framework that will require metrics. The metrics will be developed in collaboration with the Organizational Change Management Team and DHCS.

2.5.13.5.2. Information Architecture Metrics

Information Architecture Metrics provide insight into the maturity level for Data Management, Data Model, LDM, and Data Standards. The metrics will be developed in collaboration with the SR Architecture Team and DHCS.

2.5.13.5.3. Technical Architecture Metrics

The Technical Architecture Metrics provides adherence to the maturity levels for Access and Delivery, Intermediary and Interface and Integration and Utility. The key objectives are referenced in the *Technical Architecture Plan* and the metrics provide insight into how these objectives are being met. The Technical Architecture Metrics will be developed in collaboration with SR Architecture Team and DHCS.

2.6 System Replacement Quality Team Internal Reviews

The SRQT is responsible for performing oversight of the internal QC reviews for the SR Functional Team. QC is a set of activities performed to detect problems during development of the replacement system and replacement system operations to verify that applications, artifacts, and processes meet the specifications and quality standards set by the organization. SRQT performs two types of reviews and audits:

- Internal Process Reviews (QC)
- Internal Work Product Reviews (QC)

2.6.1 SRQT Process Review

2.6.1.1 SRQT Process Review Approach

SRQT Analysts validate SDM process compliance by performing periodic process audits and reviews. The purpose of these reviews is to verify that the product (software) conforms and functions according to the specified technical standards, project timelines, and user business needs by verifying SDM steps are followed as described in SDA. These periodic reviews are planned and conducted on a monthly basis with the SR Functional Team. SRQT process review audit criteria include the following:

- The functional and system components are peer reviewed as described in *Software Development Approach (SDA)*
- Testing activities are performed as described in the *Master Test Plan*
- The software testing of maintenance and modification outputs is conducted in accordance with approved processes and procedures
- The follow-up reviews are performed to confirm problems have been resolved
- The system test results include verifying that they met the approved requirements and the defect management process is followed

2.6.1.2 SRQT Process Review Inputs

The inputs to this process include:

- Contract Commitments – CRFP or SOW and amendments, NTP, and DXD (if applicable)
- Contract and project schedules (i.e., work plans)
- *Document Management Plan*
- Standards, guidelines, templates, and procedures
- Stakeholder Analysis
- Peer review checklist – varies per SDM artifact
- Artifacts including test plans, expected test results, and test scripts/cases
- System or deployment documentation
- *SDA* and other plans (*Architecture Plan*, *Master Test Plan*, *Master Data Conversion and Cleanup Plan*, etc.)

2.6.1.3 SRQT Process Review Steps

The main purpose of the QRST process review is to identify situations, occurrences, and deficiencies where SR Functional Team processes do not meet schedules and/or accuracy standards, to report those problems, deficiencies, and proposed solutions to the SR Project Director and QMO, and to monitor correction of the problems and deficiencies in a timely manner. The SRQT analysts assigned by SR PMO monitor the performance of the SR cross-functional teams and verify that the steps of software development methodology are followed as explained in *Software Development Approach (SDA).*

Regular SRQT reviews are conducted by a designated SRQT representative and the results are reported to the SR leadership team and QMO internally, including the process non-compliances or areas for improvement identified during the audits and/or reviews. The metrics identified, measured, and captured by the SRQT will be evaluated and reviewed by QMO Software Quality Analysts to verify compliance of processes. The reports on process compliance and need for improvements (intended to be shared with the leadership team) will help the leadership team in sponsoring continuous process improvement activities.

2.6.1.4 SRQT Process Review Outputs

The outputs and reports stemming from this process include:

- SRQT Process Review Report
- Updated work products based on the review findings
- Process changes and updated process documentation
- Corrective Actions – Actions documented to address identified deficits and/or to prevent the identified deficit from occurring in the future
- Updated risks, action items, and issues with corrective actions and plans to monitor, control, and sustain performance improvements and control procedures as defined by the *Risk Management Plan*, *Issue Management Plan*, *Action Item Management Plan*, *Change (Control) Management Plan*, and QM and EPMO Process Improvement sections of this document
- Workflow lessons learned and recommended best practices
- Schedule for follow-up review

2.6.1.5 SRQT Process Review Metrics

SR quality metrics are collected by SRQT and reported to the QMO. Metrics are developed and assessed by both teams and suggestions for improvements are jointly developed. The improvement suggestions are documented by the EPMO SQG or QM Process Improvement Team as appropriate.

2.6.2 SRQT Work Product Review

2.6.2.1 SRQT Work Product Review Approach

The artifacts created by the SR Functional Team are controlled by SRQT before the submission to EPMO and QMO to verify artifacts meet the required specifications and quality standards. This includes a minimum second verification of content and artifact template and is performed by a team member other than the resource that creates or changes the document. The documentation for this review is maintained with the SR Project Management Office (SR PMO) project documentation and is subject to EPMO QSG audits and QMO reviews.

2.6.2.2 SRQT Work Product Review Inputs

The inputs to this process include:

1. Contract Commitments – CRFP or SOW and amendments, NTP, and DXD (if applicable)
2. Contract and project schedules (i.e., work plans)
3. *Document Management Plan*
4. Standards, templates, and procedures
5. Stakeholder Analysis
6. List of code standards (if applicable) for the type of product (Java, COBOL, .Net).
7. Business Requirements related to the product
8. Program Specifications
9. Data Mapping/Maps, depending on the type of product (conversion or input, etc.)
10. List/explanation of testing procedures to be used to test the product (how this product will be tested)
11. Test scripts with actual and expected results for each test condition AND the correlation of each test condition to the business requirement it is supposed to satisfy
12. Test results

2.6.2.3 SRQT Work Products and Deliverables Review Process Steps

Using pre-established criteria/metrics, the SRQT analysts verify work products and deliverables against CRFP or SOW and amendments, NTP, and DXD requirements by following below steps:

1. Verify, validate, and monitor deliverables and work products to confirm the requirements for quality and scope of work are being fulfilled

2. Validate that the deliverables and work products conform to the specified standards and requirements including the policy and procedures

2.6.2.4 SRQT Work Products and Deliverables Review Outputs

The outputs and reports stemming from this process include:

1. Updated work products based on the review findings
2. Updated deliverables, work products, and process documentation
3. Corrective Actions – Actions documented to address identified deficits and/or to prevent the identified deficit from occurring in the future
4. Updated risks, action items, and issues with corrective actions, and plans to monitor, control, and sustain performance improvements and control procedures
5. Updated work plan activities
6. Workflow lessons learned and recommended best practices
7. Verification/Certification form signed by SRQT representative and Development Managers
8. Monitor the project schedule and verify the timely submission of the deliverable and work products

2.6.2.5 SRQT Work Products and Deliverables Review Metrics

SR quality metrics are collected by SRQT and reported to the QMO for verification before submission to DHCS and in accordance with contract requirements. Metrics are assessed by both teams and suggestions for improvements are jointly developed. The improvement suggestions are documented by the EPMO SQG or QM Process Improvement Team as described in Section 2.4 and 2.7. Examples of metrics for SRQT reviews include:

1. Peer reviews conducted vs. scheduled
2. Defects by SDM Phase, module, project release, and code release
3. Defects by Role and Team
4. Defect Trend – count by defect category/severity/type over time
5. Defect Aging/Turnaround – by team, module
6. Defect elasticity – reopens over time

2.7 EPMO Process Compliance and Improvement

2.7.1 EPMO Process Compliance

2.7.1.1 EPMO Process Compliance Approach

Members of the EPMO QSG validate process compliance by performing periodic process audits and reviews. Quality reviews and audits include those performed to validate compliance with mandated industry standards such as CMMI, IEEE, and ISO as they

apply to the PCRS plans (PMBOK) and SDLC methodology. The approach also describes the process used to verify and validate project management processes are executed as documented within the various plans included in the PCRS and SDLC methodology and System Replacement QA processes. The approach also describes the method used for identifying, monitoring, and measuring process improvement opportunities. The EPMO QSG also identifies the measures/metrics maintained, how the findings and measures are reported, and how the associated artifacts are stored. Audits and reviews are identified and scheduled by the EPMO Quality and Standards Lead or designee and communicated to the assigned analyst for completion.

2.7.1.2 EPMO Sampling Method

Due to the number of available data objects (such as issues, risks, SDNs, etc.), some audits and reviews will require selecting a subset of the data available (sample size). Similarly, when a sample size is required, a sample selection is needed to determine which of the data objects to include in the audit/review. When performing an audit, one step is to determine if multiple data objects should be included in audit for review. For example, an in-process audit of a single deliverable from start to finish would require just that one deliverable; whereas, an audit of the *Issue Management Plan* and the associated process would require selection of many issues from the issue list on SharePoint. The sample size must be determined prior to performing the audit. For the audits and reviews performed by the EPMO QSG, the sample size will be selected using the criteria noted below.

- 1-10 data objects = 100% sample size
- 11-50 data objects = 50% sample size using a defined selection criteria (every other item, random selection, judgmental selection, etc.)
- 51-100 data objects = 33% sample size using a defined selection criteria (every 3rd item, random selection, judgmental selection, etc.)
- 101-1000 data objects = 10% sample size using a defined selection criteria (every 10th item, random selection, judgmental selection, etc.)
- 1001+ data objects = Using a statistically valid method which provides a significant sample size with a 95% confidence level with a 4% confidence interval

Once the sample size is determined, the next step is to determine which methodology will be used to select the data objects. Various sampling methods are used by the EPMO QSG. The specific method selected will be as assigned by the EPMO Quality and Standards Lead (or designee) or based upon the auditor's experience.

Random sampling is the purest form of probability sampling. Each member of the population has an equal and known chance of being selected. To determine which "random" objects will be selected, the QSG will use the Excel calculation "=RANDBETWEEN(1,x)" where "x" represents the total number of available data to select. This is repeated until the total number of items is selected by the program.

Systematic sampling is often used instead of random sampling. It is also called an Nth name selection technique. After the required sample size has been calculated, every Nth record is selected from a list of population members. As long as the list does not contain any hidden order, this sampling method is as good as the random sampling method. Its only advantage over the random sampling technique is simplicity.

Stratified sampling is a commonly used probability method that is more effective than random sampling because it reduces sampling error. A stratum is a subset of the population that shares at least one common characteristic. Examples of stratums might be workgroups, domain leads, status, or severities. The auditor first identifies the relevant

stratums and their actual representation in the population. Random sampling is then used to select a sufficient number of subjects from each stratum.

Judgment sampling is a common nonprobability method. The auditor selects the sample based on judgment. For example, an auditor may decide to draw the entire sample for Issues from one workgroup even though the population includes the workgroups.

Quota sampling is the nonprobability equivalent of stratified sampling. Like stratified sampling, the auditor first identifies the stratums and their proportions as they are represented in the population. Then convenience or judgment sampling is used to select the required number of subjects from each stratum. This differs from stratified sampling, where the stratums are filled by random sampling.

2.7.1.3 EPMO Process Audits Inputs

The inputs to this process include:

1. EPMO Audit Plans (including schedules)
2. Sampling methodology
3. Documented processes and procedures
4. Mandated industry standards
5. Audit scorecards and checklists

2.7.1.4 EPMO Process Audits Process Steps

Key activities in the EPMO process compliance area include:

- Planning Audits
- Develop/customize the audit scorecard template
- Perform audit
- Communicate findings, recommendations, and potential improvements
- Follow up and Close audit
- Report the results

2.7.1.4.1. Planning Audits

The Quality Reviews and audits are performed by EPMO's QSG. As noted above, these reviews and audits are limited specifically to project management processes as documented in the PCRS plans and the SDLC methodology as well as the mandated industry standards identified within each of the plans. The EPMO Team may also, from time to time, perform ad hoc audits or reviews of other functional areas to validate CMMI Level 2 compliance.

It is expected that each of the individual plans identifies ways to monitor quality; the purpose of the EPMO QSG audits and reviews are to validate the tasks and activities are executed as documented within the plans. Additionally, it is expected that each of the individual plans identifies the measures and metrics appropriate for that plan. Validation that the measures and metrics are collected and reported as documented is conducted by SQM. In summary, responsibility for verifying and monitoring quality and compliance to associated industry standards lies with each of the individual plan owners; whereas it is the responsibility of the EPMO QSG to confirm those tasks and activities are executed as documented in those plans. The audit schedule is in the EPMO project schedule. The

PCRS plans and SDLC methodology must be audited at least once a year to validate compliance.

2.7.1.4.2. Develop/customize the audit scorecard template

The first step is to develop/customize the audit scorecard template for the process to be audited. The *_Audit Scorecard Template - PCRS Process* Excel workbook is edited and updated to include the process steps and industry standards identified within the audited plan/process. The process steps should be documented on the *Process Audit Results* worksheet, while tasks necessary to comply with the mandated industry standard should be documented on the *Compliance to Standards* worksheet.

Upon completion of the audit scorecard customization, a scorecard Peer Review is conducted by an EPMO Process Compliance Improvement (PCI) Analyst to validate the accuracy and completeness of the scorecard.

2.7.1.4.3. Perform audit

The next step is to perform the audit. The EPMO Auditor conducts an audit interview with the Plan/Process Owner or an appointed representative for the purpose of collecting information through a series of questions and observations. The interview is the basis for collecting and interpreting information in the audit. The audit can also include observation of a process from beginning to end or reviewing a sample of records or documents that were created as a result of following the process under review.

The purpose of the interviews, observations, and records reviews is to collect evidence and information that pertains to the efficiency and effectiveness of a process and the quality of a product or service. Each step of the plan or process is verified by direct observation of the performance of the process or by direct observation of the resulting product of the process. Computer screen captures are most often used to collect direct evidence of the completion of process steps. EPMO Auditors are trained in CA-MMIS security protocols to eliminate the possible capture of Personally Identifiable Information/Protected Health Information (PII/PHI) information.

The EPMO Auditor notes the evidence of conformance for each task and its location on the scorecard. The scorecard tabulates and calculates the metrics for both the process steps and compliance with standards by calculating the number of expected results against those that are marked as executed, not executed, not applicable, a deviation, or an exception.

As with the first step (creating the scorecard), the results of the audit are submitted to an EPMO Analyst for Peer Review. Comments from the Peer Review are then documented in a Peer Review form, reviewed, and addressed by the EPMO Auditor before moving on to the next step.

2.7.1.4.4. Communicate findings, recommendations, and potential improvements

The next step includes notification of the audit findings and results to EPMO management, the Plan/Process Owner, and the Process Improvement Analyst (PIA), as necessary. The EPMO Auditor sends the notification by e-mail. The notification includes the overall scores for the audit as well as a list of non-conformances and a list of potential process improvements that were identified during the course of the audit.

The process owner is invited to request a follow-up meeting to discuss the results and respond to specific findings if there are questions regarding the validity of those findings. If findings are found to be in error and the Plan/Process Owner can provide evidence to

warrant a change, this will be the appropriate point in the audit process to make those changes.

Once the Plan/Process Owner is satisfied with the results of the audit, any non-conformances and process improvements are forwarded to the PIA, and the Plan/Process Owners will coordinate with the PIA to plan and implement the necessary changes.

2.7.1.4.5. Close audit

The EPMO Auditor updates the audit scorecard in SharePoint to reflect any final changes that resulted from meetings with the Plan/Process Owner and to note that the audit is closed. The EPMO Auditor also confirms that the Audit Results, Audit Peer Review, and Audit Artifacts are properly stored in the appropriate SharePoint folders.

2.7.1.4.6. Report the results

Once the audit has been completed, the results are reported at the EPMO Advisory Group meeting. The audit results can also be shared with others upon request.

2.7.1.5 EPMO Process Audits Outputs

The outputs and reports stemming from this process include:

1. Updated *Audit Scorecard* based on the results of the audit interviews
2. Updated *Peer Review Form* based on peer review of *Audit Scorecard*
3. E-mail to the EPMO QSG Lead with a summary of the results of the audit
4. E-mail to the Plan/Process Owner with a summary of the results of the audit
5. E-mail to the PIA with a summary of the results of the audit plus a summary of the non-conformances and process improvement opportunities that were identified during the course of the audit

Audit scorecards, results, metrics, reports, and associated artifacts are stored in the CA-MMIS project repository on SharePoint:

CA-MMIS Home > Workgroup > EPMO > Proc_Comp_and_Impr > PCI Reports

2.7.1.6 EPMO Process Reviews Inputs

Reviews are performed on an ad hoc basis when requested by EPMO management or a process owner.

2.7.1.7 EPMO Process Reviews Process Steps

2.7.1.7.1. Develop/customize the review scorecard template for the process to be reviewed

The first step is to develop/customize the review scorecard template for the process to be reviewed. The *Review Scorecard Template - Meetings* Excel workbook is edited and updated to include the process steps identified within the reviewed plan/process. (Note that industry standards are not part of a process review.)

The process steps should be documented on the *Process Review Results* worksheet. Upon completion of the review scorecard customization, a scorecard Peer Review is not required.

2.7.1.7.2. Perform review and document findings in the review scorecard

The second step is to perform the review. The review can include observation of a meeting or other activities that follow a process from beginning to end or the reviewing a sample of records or documents that were created as a result of following the process under review. The purpose of the interviews, observations, and record reviews is to collect evidence and information that pertains to the efficiency and effectiveness of a process and the quality of a product or service. Each step of the plan or process is verified by direct observation of the performance of the process or by direct observation of the resulting product of the process.

The EPMO Auditor will note the evidence of conformance for each task as a Yes or No on the scorecard. The scorecard tabulates and calculates the metrics by calculating the number of expected results against those that are marked as Yes, No, or N/A.

As with the first step (creating the scorecard), the results of the review do not require an EPMO Analyst for Peer Review.

Process reviews are intended to provide quick insight and feedback into the effectiveness and efficiency of a process. Process reviews can also identify opportunities for improvement that can result in Process Improvement activities.

2.7.1.7.3. Communicate findings and recommendations to process/plan owner via e-mail

The third step includes notification of the review findings and results to the Plan/Process Owner and the PIA, as necessary. The EPMO Auditor sends the notification by e-mail. The notification includes the score for the review as well a list of potential process improvements that may have been identified during the course of the review.

2.7.1.7.4. Provide feedback to EPMO Reviewer

The Plan/Process Owners are invited to request a follow-up meeting to discuss the results and respond to specific findings if there are questions regarding the validity of those findings. If findings are found to be in error and the Plan/Process Owner can provide evidence to warrant a change, this will be the appropriate point in the review process to make those changes.

2.7.1.7.5. Update Review Scorecard in SharePoint with process/plan owner feedback

Once the Plan/Process Owner is satisfied with the results of the review, any process improvements are forwarded to the PIA. The Plan/Process Owners coordinate with the PIA to plan and implement the necessary changes.

2.7.1.8 EPMO Process Reviews Outputs

The outputs and reports stemming from this process include:

1. Updated *Review Scorecard* based on the results of the reviews
2. E-mail to the Plan/Process Owner and PIA with a summary of the results of the review

Review scorecards, results, metrics, reports, and associated artifacts are stored in the CA-MMIS project repository on SharePoint:

CA-MMIS Home > Workgroup > EPMO > Proc_Comp_and_Impr > PCI Reports

2.7.1.9 EPMO Process Compliance Metrics

The EPMO QSG analyzes the data and metrics to determine if enough time and resources are allocated to the audits/reviews and makes associated recommendations as appropriate. The audit/review results are also analyzed to determine if specific functional areas should be audited/reviewed more or less frequently based upon the number and priority of nonconformities. The audit and review metrics provide measurements on the following statistics:

- Number of audits/reviews started as scheduled vs. started late
- Number of audits/reviews completed as scheduled vs. completed late
- Number of nonconformities (by audit)
- Percent of nonconformities (by audit)
- Number and percentage of nonconformities (by process/department)

2.7.2 EPMO Process Improvement

2.7.2.1 EPMO Process Improvement Approach

The Process Improvement Approach is designed to identify and track Process Improvement activities that can improve the project's progress. Process Improvement activities are assigned to an individual or group with a clear description of the activity and the recommended steps to improve the current process. The centralized tracking of process improvement activities increases effectiveness by removing the need for multiple staff to keep individual lists of recommended steps. Centralized tracking also verifies that no duplicate process improvement activities are created and open activities can be closed out once the recommended steps have been implemented. If a Process Improvement activity owner change occurs, centralized tracking allows the new owner to complete the activity where the previous owner left off.

2.7.2.2 EPMO Process Improvement Inputs

The inputs to this process include but not limited to:

1. Process Audit results
2. Identified/requested process improvement opportunity
3. Priority Level guidelines

2.7.2.3 EPMO Process Improvement Process Steps

Key activities in the EPMO process improvement area include:

- Identification
- Analysis
- Implementation
- Ongoing Monitoring

2.7.2.3.1. Identification

Several methods are available to identify process improvements. These methods include interviewing Workgroup/Domain Leads to gather input regarding Lessons Learned for each stage of the project, conducting internal CMMI Level 2-related assessments, and performing process audits. Once a process improvement is identified, the EPMO-PCI Analyst informs the PIA of an area of opportunity. Additionally, the EPMO PIA proactively identifies process improvements by attending meetings, reviewing areas/materials (for example, monitoring the weekly progress/metric reports looking for trends), or soliciting process improvements from individual CA-MMIS Team members.

2.7.2.3.2. Analysis

When a potential process improvement activity is identified, the process owner works with the PIA to determine if the process improvement activity is valid. Once validated, the process owner creates a concise statement of the area of improvement and the recommended steps to close the process improvement activity. The PIA then reviews the statement of the area of improvement and the recommended steps to close the process improvement activity. The PIA identifies the process improvement activity owner and works with the owner to determine a priority level and appropriate due date using the following priority level guidelines:

1 – High priority: Inhibits accurate execution of critical processes or has other negative impact to project processes/activities – To be completed within 30 business days
2 – Medium priority: Inhibits accurate execution of noncritical processes/activities – To be completed within 60 business days
3 – Low priority: Provides a more effective/efficient execution of an existing process – To be completed in 90 business days or next scheduled plan update

2.7.2.3.3. Implementation

Process Improvement Log

The PIA enters the process improvement activity into the Process Improvement Log. The Process Improvement Log is the repository used to track process improvement activities. Stakeholders with access to SharePoint can review the contents of the Process Improvement Log.

Coordination with the Process Improvement Activity Owner

The PIA meets with the identified process improvement owner to discuss the process improvement activity. During the meeting, the PIA reviews the following:

- Description of the process improvement activity
- Priority level
- Recommendations for improvement
- Implementation date

2.7.2.3.4. Ongoing Monitoring

The PIA works with the process improvement owner to monitor and control the process improvement activity through its lifecycle by reviewing process improvement activities on a weekly basis and updating the Process Improvement Log accordingly.

Process Improvements are reviewed to determine if:

- The priority has changed
- Improvement activities are relevant, accurate, and up-to-date
- Improvement activities have been implemented as stated
- Artifacts need to be added to the log

During the monitoring phase, the PIA updates the Process Improvement Log.

As long as the process improvement activity is open, the PIA and owner are expected to continue to manage and monitor the process improvement activity through closure, unless the process improvement activity is transferred to another owner. If the process improvement activity is reassigned, it is the responsibility of the previous owner to notify the new process improvement owner and provide them with any requested documentation.

During the monitoring process, if implementation activities do not progress as expected/needed, the PIA may escalate the concern by opening an Issue or Risk and following that process. This step in the process will involve identifying appropriate stakeholders and implementing a plan for resolution.

2.7.2.4 EPMO Process Improvement Outputs

The outputs and reports stemming from this process include:

1. Process Improvement Tracker Log
2. Quarterly Metrics included in the PCI Quarterly Report

2.7.2.5 EPMO Process Improvement Metrics

The PIA analyzes the data and metrics to determine if enough time and resources are allocated to the implementation of process improvements to reduce nonconformities and improve processes. Resulting recommendations may include providing additional training of specific functional areas/activities or hiring/purchasing additional resources.

The process improvement metrics provide measurements on the following statistics:

- Number of identified process improvements
- Status of process improvement implementation
- Percentage of owners who have responded
- Number of process improvements implemented
- Percentage of process improvements implemented
- Number of process improvements completed by the implementation date
- Number of process improvements overdue
- Percentage of on-time vs. late process improvement implementations
- Number of process improvement activities implemented in a period
- Percentage of identified process improvements by source (Lesson Learned, Process Audits, CMMI assessment)
- Percentage of identified process improvements by functional area (QM, SG, EPMO, etc.)

3. Roles and Tools

This section identifies the roles, responsibilities, tools, and training necessary to operate QM effectively in support of the Contract. Organizational accountability for the QM Team is structured around the DHCS' requirement for an operationally independent team.

3.1 Roles and Responsibilities

The table below reflects some of the staff roles that should be involved in the QM activities and deliverables/work products. Please see Appendix D. for the current QM Organization Chart.

Table 25: Roles and Responsibilities

Role	Role Description and Actions
Executive Director	• Oversees the development of a project-wide QM Plan and monitors the execution of the plan to confirm managers and staff are meeting the objectives of the plan • Reviews the Monthly QM Performance Report • Participates in Monthly Project Status Meetings
Quality Management Director	• Reports to the Executive Director • Maintains overall responsibility of QM and QM-related activities • Maintains a direct line of communication with DHCS relative to QM matters • Interviews, hires, mentors, coaches, and oversees the QM Team • Responsible for the QM activities including quality planning, contract compliance, program compliance, and quality improvement activities • Oversees start-up and installation of QM functions including assignments and workload of QM staff • Oversees review and reporting of QM activities for *Monthly Project Status Report* • Monitors the status of identified defects, errors, and corrective actions • Participates in escalation activities and the continuous process improvement leadership activities • Facilitates meetings between stakeholders and controlling entities to resolve defects and complete corrective actions • Monitors set-up and operation of the QM Tools • Oversees creation of the *Monthly QM Performance Report* and reviews it with the DHCS and Xerox Team • Facilitates review and approval of QM deliverables and work products (e.g., *QMP*, *QAPSM*) with DHCS • Reviews non-QM project deliverables and work products in the agreed upon timeframe and provides feedback to EPMO in accordance with the QM Deliverable Review Process • Receives notification from EPMO on project deliverables and work products submitted to DHCS • Manages the day-to-day activities performed by the QM Contract Compliance Analysts

Role	Role Description and Actions
	• Assigns and monitors contract compliance activities • Participates in backlog, project controls, and contingency plan monitoring
QM Deliverables Lead	• Works with EPMO on the schedule of deliverables and work products • Collaborates with EPMO on the deliverable schedule, deliverable expectation specifications, posting of review results in the project repository, and overall deliverable review process • Coordinates and participates in review of project deliverables and work products prior to submission to DHCS • Documents comments and returns to deliverable author • Updates QM documentation, manuals, and process flows as required
QM Deliverables Analyst	• Reviews the quality of project deliverables and work products in accordance with deliverable expectations and best practices and provides feedback to QM Lead and/or QM Director via standard QM Checklist • Works with the EPMO on the schedule of deliverables and work products • Collaborates with EPMO on the deliverable schedule, deliverable expectation specifications, posting of review results in the project repository, and overall deliverable review process • Coordinates and participates in review of project deliverables and work products prior to submission to DHCS • Documents comments and returns to deliverable author • Updates QM documentation, manuals, and process flows as required • Participates in and reviews CA-MMIS contract staff training, including monitoring staff training effectiveness and supporting the Training Team in preparation of training documentation and DHCS/Xerox staff training
QM Program Compliance Lead	• Overall responsibility for the program compliance activities performed by the QM PCAs • Manages the day-to-day activities performed by the PCAs • Participates in interviewing, hiring, mentoring, coaching, and training QM staff • Establishes QM status reporting • Participates in establishing and ongoing QM reviews • Participates in testing activities • Facilitates set-up of QM Tools • Assigns and monitors program compliance activities • Participates in backlog, project controls, and contingency plan monitoring
QM Contract Compliance Analyst	• Identifies areas or items to focus on process improvement, makes recommendations to DHCS, and performs the agreed upon process improvements • Conducts analysis of functional and technical processes and makes recommendations on improving those processes through the methodical application of industry standard techniques (e.g., RCA, cause and effect diagrams) • Reviews and measures the performance of each organizational area within the CA-MMIS contract against pre-defined requirements, including internal standards • Reports deficiencies in work products, schedule, and other issues related to the performance of the Xerox Team • Acts as an SME in understanding contract requirements, performance measures, SLAs, and Cognos operation • Works with EPMO on contract activity tracking • Reports contract compliance activities/results to QM Lead to be compiled into the *Monthly QM Performance Report* • Maintains current knowledge of changes to the contract

Role	Role Description and Actions
	• Makes continuous and routine measurements of the contract work performed by the vendor(s) in order to determine their compliance with documented performance standards • Structures approach according to the precepts of the MITA sub-business area of Administrative Management and supported by automated reporting • Employs a contract management approach which promotes a collaborative assessment and monitoring of system development responsibilities • Assists in preparing the Monthly QM Performance Report • Participates in backlog, project controls, and contingency plan monitoring
QM Program Compliance Analyst	• Reviews and measures outputs and processes from the CA-MMIS applications for the different program areas against pre-defined requirements. Some of the techniques applied may include statistical analysis, automated processing reviews and audits, and staff reviews and interviews • Reports program compliance activities/results to QM Lead to be compiled into the *Monthly QM Performance Report* • Reviews existing program compliance reports and makes recommendations for improvements • Reviews and analyzes statistical metrics collection • Develops an approach to monitor and report on program areas • Reviews and reports on the quality of the PRO activities • Conducts data sampling and develops assessments to document findings • Identifies and notifies appropriate parties of erroneous payments correction work requiring attention • Identifies and notifies appropriate parties of required adjustments work requiring attention • Assists in preparing the Monthly QM Performance Report • Participates in backlog, project controls, and contingency plan monitoring
Special Ad Hoc QA Studies Analyst	• Identifies areas or items to focus on process improvement, makes recommendations to DHCS, and performs the agreed upon process improvements • Conducts analysis of functional and technical processes and makes recommendations on improving those processes through the methodical application of industry standard techniques (e.g., RCA, cause and effect diagrams) • Maintains overall responsibility for conducting and completing special ad hoc QA studies requested by DHCS • Develops ad hoc studies template and approach methodology • Reports status of his/her findings of the studies via the *Monthly QM Performance Report* and to DHCS as requested • Provides statistical and data mining knowledge for special studies to the QM Team
Process Improvement Analyst	• Identifies areas or items to focus on process improvement, makes recommendations to DHCS, and performs the agreed upon process improvements • Conducts analysis of functional and technical processes and makes recommendations on improving those processes through the methodical application of industry standard techniques (e.g., RCA, cause and effect diagrams) • Conducts process improvement assessments and document findings, reviews with the affected team • Coordinates implementation of approved process improvements with the affected team

Role	Role Description and Actions
	• Reports process improvement status as part of the QM status reporting activities • Maintains list of possible process improvement projects that might result from areas such as problem notices, special ad hoc studies, identified trends, reports, and other project related activities • Monitors CAP activities and reports on the progress of CAPs
QM Business Analyst	• Provides primary analytical and data analysis support to the QM Teams (e.g., program and contract compliance, process improvement, quality planning and deliverables/work products, special ad hoc studies) • Updates QM documentation, manuals, and process flows as required • Understands the CA-MMIS business requirements to assist in contract and program compliance data analysis and reporting
QM Clerical Analyst	• Performs administrative and office support functions for the QM, EPMO, and Testing organizations including meeting note scribing, copying, filing, mailings, document creation, and ordering supplies • Schedules and coordinates meetings • Serves as administrative contact for the QM, EPMO, and Testing organizations, routing and responding to calls and inquiries, and creating presentation packages • Assists in preparing or updating status reports, deliverables, work products, and data reports
System/Software QM Lead	• Manages review activities conducted by System/Software QM Analysts on SDM and SDLC processes and work product deliverables in accordance with the *QMP* and reports the results to the QM Director on a regular basis • Conducts trend analysis of SDM and SDLC processes findings report by System/Software QM Analysts and escalates the defects, issues, and risks to the QM Director • Collaborates with SRQT and SR functional team, gathers, analyzes, and reports the required metrics to the QM Director on a regular basis • Reviews the results of the metrics report and analyzed data and makes recommendations on improving SDM and SDLC processes and systems/software to the QM Director • Collaborates with SRQT and EPMO QSG Analysts on the process reviews and audits, as assigned by the QM Director • Has overall responsibility for the activities performed by the System/Software QM Analysts • Manages the day-to-day activities performed by the System/Software QM Analysts • Participates in interviewing, hiring, mentoring, coaching, and training System/Software QM Analysts and other QM staff as assigned by the QM Director • Collaborates with QM Program Compliance and QM Deliverables Leads to improve and expand the quality reviews and QM monitoring and reporting systems • Participates in testing activities as defined in the *Master Test Plan* and as assigned by the QM Director • Facilitates the set-up of QM Tools • Participates in backlog, project controls, and contingency plan monitoring
System/Software QM Analyst	• Reviews the quality of project processes and work product deliverables in accordance with the *QMP* and provides feedback to System/Software QM Lead • Collaborates with SRQT and EPMO QSG Analysts on the process reviews and audits, as assigned by the System/Software QM Lead • Participates in process and software quality review activities as assigned

Role	Role Description and Actions
	by the System/Software QM Lead • Conducts analysis of SDM and SDLC processes as defined in the *QMP* and escalates any defects, issues, and risks to the System/Software QM Lead • Collaborates with SRQT and the SR functional team, gathers, analyzes, and reports the required metrics as described in the *QMP* • Reviews the results of the metrics report and analyzed data and makes recommendations on improving SDM and SDLC processes to the System/Software QM Lead • Supports the SRQT analysts, SR Functional team members, and Test Team members in conducting root cause analyses of recurring defects as assigned by the System/Software QM Lead • Participates in testing activities as defined in the *Master Test Plan* and as assigned by System/Software QM Lead
CA-MMIS Directors	• Confirms appropriate QM activities occur throughout their respective areas and teams on the project • Reviews project quality status, including defects and corrective action items
CA-MMIS Team Member (CA-MMIS Stakeholders, DHCS Contract Monitoring Staff, Takeover Project Staff, Members of Xerox Staff, and Other CA-MMIS Users)	• Identifies potential quality deficits • Participates in executing corrective action work • Notifies Project Managers of anticipated changes in the deliverable or corrective action schedule • Notifies appropriate QM Team member when corrective work is completed

To complete the activities and processes in this Plan, the following responsibilities must be assumed by one or more individuals.

- **Executive Management Team** — Responsible for reviewing the Quality Management Status Report and resolving escalated quality issues
- **Senior Management Team** — Responsible for reviewing the Quality Management Status Report, overseeing corrective action as needed, resolving escalated quality items, and ensuring resolution timelines are met
- **Project Manager** — Responsible for documenting and submitting quality management items for escalation and resolution. Oversees the execution of the project and delivery of the solution to the client
- **QM Director**— Executes, monitors, and controls Contract QA activities on a day-to-day basis
- **EPMO QSG Analyst** — Reviews project to verify QA activities are executed according to standards and documentation is complete; works with the EPMO to implement selected continuous improvement opportunities

3.2 Training

The QM Director confirms the QM Team is trained for CA-MMIS-related QM activities and tasks and that orientation in the purpose, activities, and responsibilities of QM is provided

to the CA-MMIS Contract Team. The training tasks begin during the Takeover Phase and are delivered throughout the life of the contract.

Relevant training courses include the following:

- Quality Management Overview — Describes the QM components and how they apply to Contract staff
- Continuous Process Improvement — Training will provide users with a method for analyzing how work is currently being done and then identifying ways in which processes can be improved upon to do the job more efficiently and effectively on an ongoing basis
- Document QA Reviews — Training prepares users to identify, schedule, prepare for, and conduct document QA reviews. It also covers how to analyze deficits and publish review results
- Process QA Reviews — Training prepares users to execute a QA review including how to prepare for, perform, establish process review findings and monitor deficit resolution
- Peer Review Training — Training covers the different types of peer review and benefits of each, how to conduct peer reviews, and how to use the metrics collected to improve processes

3.3 Tools

The QM Director, or designee, assigns a QM Team member to act as the QM Tool Trainer to deliver training to DHCS users for QM-automated tools. The primary tools used to support QM activities for the CA-MMIS Contract and DHCS are summarized in the table below.

Table 26: QM Tools

Tool	Description
CA-MMIS	The certified California Medicaid Management Information System developed under federal guidelines, for the development and operation of California Medicaid processing and information retrieval.
Cognos Metrics Manager (Cognos)	A commercial-off-the-shelf (COTS) tool configured to accept contract-required or DHCS-required data sources for users to build queries and on-demand reporting for statistical analysis and metrics collection for contract and program compliance oversight and management. QM Staff and DHCS will have appropriate access to the Cognos Metrics Manager
Electronic Document Management System (EDMS)	This system captures, stores, and manages digitally imaged claims payment records. The EDMS consolidates document management capabilities into a single solution. This includes claims and document scanning, Optical Character Recognition (OCR), storage and retrieval, and online storage and retrieval of reports.
IBM Rational ClearQuest Requirements Tracking and Problem Correction System (PCS) Tool	A COTS tool configured to allow users to enter and document, monitor, review, and track Contract Requirements, EPCs, PSs, defects through to problem resolution, and corrective action planning

Tool	Description
Microsoft Office Excel	Used to track checklists, quality reviews, and schedules
Microsoft Office Project 2007	Establishes Contract Management activities in the project work plan
Microsoft Office Word	Used to produce templates, deliverables, work products, procedures, and other documentation
Microsoft Visio	Used to develop process workflow diagrams
Microsoft Windows SharePoint Portal Server	Xerox tool that features an integrated approach to CA-MMIS document management. This Web-based document management solution is used for sharing and storing contract artifacts
QM PCRS Database	The Provider Contact Review System (PCRS) database is used for monitoring qualitative standards related to PRO activities, such as Telephone Calls, Correspondence, Research, Claims Assistance Room (CAR), Training, and On-Site Visits.
QM QRST Database	The Quality Review and Support Team (QRST) database is used for: • Downloading and performing weekly payment data reviews • Recording exceptions from other QM reviews • Sending exceptions to Front End (Key Data Entry (KDE) and Claims Departments • Generating the Trending Report and trending graphs
QM Team Secure (T Drive)	Used to store QM data with PHI data, and PHI documentation
QM-developed Tools	This includes databases, checklists, forms, logs, SOPs, job aids, templates, and reports
Sample Size Calculator	The Sample Size Calculator is used to determine a sample size in order to get results that reflect the population as precisely as needed. The determined confidence interval and confidence level are selected/entered into the calculator to obtain the sample size. (http://www.gmi-mr.com/solutions/sample-size-calculator.php)

4. Quality Assurance

This section includes milestones and verification steps to oversee the effective execution of Quality Management.

4.1 Milestones

This section identifies milestones related to the approval, training, and monitoring of the *QMP*. The milestones listed below must be included in the project schedule.

- The *Quality Management Plan* is reviewed with DHCS via a Plan Walkthrough
- The *Quality Management Plan* is reviewed by the EPMO
- The *Quality Management Plan* is reviewed by the QM Team
- The *Quality Management Plan* is approved by the DHCS
- Updated material from the approved *QPM* will be provided to Training for inclusion in the PCRS training materials

4.2 Verification Steps

Verification steps are tasks or oversight processes executed to confirm that the approach referenced in this document is adhered to throughout the Contract. The table below describes the applicable verification steps and associated frequency.

Table 27: Verification Steps

Verification Steps	Frequency
Document QM review of the deliverables and work products associated with this topic and listed in the DXD.	As documents are completed and/or delivered.
Process QM review of the execution of this topic.	At least annually

5. Definitions

This section lists definitions and acronyms specifically applicable to this document.

Table 28: Definitions

Term/Acronym	Explanation/Expansion
ADR	Architecture Design Review
AEVS	Automated Eligibility Verification System
AOO	Assumption of Operations
ATG	Automated Transaction Generator
BRE	Business Rules Extraction
CalPos	California Point of Service
CA-MMIS	California Medicaid Management Information System
CAP	Corrective Action Plan
CAR	Claims Assistance Room
CCA	Contract Compliance Analyst
CCB	Change Control Board
CDM	Conceptual Data Model
CIF	Claim Inquiry Form
CM	Change Management
CM	Completion Notice
CMC	Computer Media Claim
CMMI	Capability Maturity Model Integration
CMS	Call Management System
CMS	Centers for Medicare and Medicaid
CN	Correction Notice
COTS	Commercial-off-the-Shelf
CPI	Continuous Process Improvement
CR	Change Request
CRFP	Conformed Request for Proposal
CSU	Correspondence Specialist Unit
DDR	Detailed Design Review
DHCS	Department of Health Care Services
DMAIC	Define, Measure, Analyze, Improve, and Control
DQA	Document Quality Assurance
DRAMS	Drug Rebate Analysis and Management System
DRB	Defect Review Board
DSD	Design Specification Document
DXD	Deliverable Expectation Document
EDMS	Electronic Data Management System
EPC	Erroneous Payment Correction

Term/Acronym	Explanation/Expansion
EPMO	Enterprise Project Management Office
ESB	Enterprise Service Bus
FI	Fiscal Intermediary
FOAG	Field Office Automation Group
HIT/HIE	Health Information Technology/Health Information Exchange
IEEE	Institute of Electrical and Electronics Engineers
IR	Interim Response
ISO	International Organization for Standardization
KDE	Key Data Entry
KPI	Key Performance Indicator
LDM	Logical Data Model
MA	Metrics Measurement and Analysis
MCWeb	Medi-Cal Website (MCWeb)
MITA	Medicaid Information Technology Architecture
MPL	CA-MMIS SRP Master Product List
MQMPR	Monthly Quality Management Performance Report
NOA	Notice of Action
NTP	Narrative Technical Proposal
OCR	Optical Character Recognition
OIL	Operating Instruction Letter
OLCC	On-Line Claim Correction
OPUS	Online Pharmaceutical Update System
ORT	Operational Readiness Test
PA	Process Area
PCA	Program Compliance Analyst
PCI	Process Compliance Improvement
PCRS	Provider Contact Review System
PCS	Problem Correction System
PHI	Protected Health Information
PIA	Process Improvement Analyst
PII	Personally Identifiable Information
PIR	Post Implementation Review
PIT	Process Improvement Tracker
PM	Project Management
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMM	Project Management Methodology
PMP	Project Management Plan
POC	Point of Contact
PPQA	Process and Product Quality Assurance
PRIFR	Process Improvement Recommendations, Issues, Findings, Remedies
PRO	Provider Relations Operation

Term/Acronym	Explanation/Expansion
PRU	Provider Relations Unit
PS	Problem Statement
PTN	Provider Telecommunication Network
QA	Quality Assurance
QAPSM	*Quality Assurance Procedures and Standards Manual*
QC	Quality Control
QM	Quality Management
QMO	Quality Management Organization
QMP	*Quality Management Plan*
QM PIP	QM Process Improvement Initiative Proposal
QMS	Quality Management System
QRST	Quality Review and Support Team
QSG	Quality and Standards Group
RACI	Responsible, Accountable, Consulted, Informed
RAD	Remittance Advice Detail
RAIS	Rebate Accounting and Information System
RAU	Research Analyst Unit
RCA	Root Cause Analysis
RFP	Request for Proposal
RTM	Requirements Traceability Matrix
RUM	Report User Manual
SAR	Service Authorization Request
SD	System Development
SDLC	Software Development Life Cycle
SDM	Software Development Methodology
SDN	System Development Notice
SEI	Software Engineering Institute
SEPG	Software Engineering Process Group
SG	Systems Group
SIT	System Integration Test
SLA	Service Level Agreement
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SOW	Statement of Work
SPBU	Small Provider Billing Unit
SPG	Special Processing Guideline
SQM	System/Software Quality Management
SRP	System Replacement Planning
SS-A	State Self-Assessment
SR	Service Request
SR	System Replacement
SR PMO	SR Project Management Office
SRQT	System Replacement Quality Team

Term/Acronym	Explanation/Expansion
SSR	Software Specifications Review
TA	Transaction Authority
TAR	Treatment Authorization Requests
TSC	Telephone Service Center
TUT	TAR Update Transmittal
UAT	Unit Acceptance Test
Xerox	Xerox State Healthcare, LLC

6. Risks and Mitigation Strategies

During the Initiate phase of each project, project managers should perform a risk assessment of their functional areas and document identified risks for risk management and documentation of mitigation strategies, as described in the *Risk Management Plan*.

QM anticipates some potential risks, which may impact QM's ability to achieve its stated goals and objectives. QM has prepared contingency plans to avoid, mitigate, or reduce the potential impact of these risks as described table below.

Table 29: QM Anticipated Risks and Contingency Plans

Anticipated Risk	Contingency Plan
Human Resource (Staffing)	• Assign and train at least one backup per position • Expand cross-training activities and use cross-trained analysts • Hire temporary staff or borrow staff from other departments, if needed
Delays in System/Reports Availability	• Reprioritize work loads • Use alternative systems to pull the necessary data for reviews • Develop a QM review calendar • Plan internal deadlines
Issues with QM Database and Tools	• Use QM forms and Excel logs, and continue the manual process until the systems are available • Migrate to more robust technology and tools for QM

7. Process Changes

7.1 Business Changes

Please refer to the *Business Change Management Plan* for information related to how business changes are managed and implemented.

7.2 Technical Changes

Management of and changes to configuration items are documented in the *Change (Control) Management Plan*. Management of and changes to non-configuration items are documented in the *Document Management Plan*. Please refer to the applicable plan for information related to how technical changes are managed and implemented.

Appendices

A. Required Content

The following items in the content of this document may not be changed without approval from the group level governance organization. There must be a significant reason to remove the content identified below, and an alternate practice must be identified to replace the baseline content in order to satisfy CMMI® and *PMBOK Guide* requirements.

Table 30: *CMMI*® and *PMBOK Guide* Required Content

Content Requirement	Plan Reference
Plan for quality management activities. (CMMI PPQA GP2.2)	2.1.4.1 Quality Planning 2.1.4.2 Schedule Quality Reviews 2.2.1.3.1. Identify Deliverables and Work Products for Quality Review 2.2.3.2 Schedule Quality Reviews 2.3.1.3.1 Define SLAs
Objectively evaluate the designated performed processes against the applicable process descriptions, standards, and procedures. (CMMI PPQA SP1.1) Objectively evaluate adherence to project processes. (CMMI GP2.9)	2.2.1.3.3. Prepare for DQA Reviews 2.2.1.3.4. Conduct Quality Reviews
Objectively evaluate the designated work products and services against the applicable process descriptions, standards, and procedures. (CMMI PPQA SP1.2)	2.2.1.3.3. Prepare for DQA Reviews 2.2.1.3.4. Conduct Quality Reviews
Communicate quality issues and verify resolution of noncompliance issues with the staff and managers. (CMMI PPQA SP2.1)	2.1.5 Program Compliance Outputs 2.2.1.3.6. Publish DQA Review Results 2.3.1.4 Contract Compliance Monitoring Outputs 2.3.2.4 Problem Correction Process Outputs 2.4.1.4 Process Improvement Outputs 2.4.2.4 Ad Hoc Reporting and Special QA Studies Outputs

Content Requirement	Plan Reference
Establish and maintain records of the QA activities. (CMMI PPQA SP2.2)	2.1.5 Program Compliance Outputs 2.2.1.3.6. Publish DQA Review Results 2.3.1.4 Contract Compliance Monitoring Outputs 2.3.2.4 Problem Correction Process Outputs 2.4.1.4 Process Improvement Outputs 2.4.2.4 Ad Hoc Reporting and Special QA Studies Outputs
Establish the policy for QA management activities. (CMMI PPQA GP2.1)	Appendix G: Comparison of CMMI Level 2 and ISO 9001:2008 Standards
Provide resources for quality management activities. (CMMI PPQA GP2.3)	3.1 Roles and Responsibilities Appendix D: QM Organization Chart
Assign quality management responsibilities. (CMMI PPQA GP2.4)	3.1 Roles and Responsibilities Appendix D: QM Organization Chart
Train staff on quality management activities, as required. (CMMI PPQA GP2.5)	3.2 Training
Monitor and control the quality management process. (CMMI PPQA GP2.8)	4.2 Verification Steps
Quality control metrics and measurements (A Guide to the Project Management Body of Knowledge (*PMBOK® Guide*) — Fourth Edition)	2.1.6. Program Compliance Metrics 2.2.1.5 Document Quality Assurance Metrics 2.3.1.5 Contract Compliance Monitoring Metrics 2.3.2.5 Problem Correction Process Metrics 2.4.1.5 Process Improvement Metrics 2.4.2.5 Ad Hoc Reporting and Special QA Studies Metrics
Quality checklists (*PMBOK® Guide* — Fourth Edition)	See *Program Compliance Review Checklist* *See Document Quality Assurance Review Checklist*
Deliverables and validated deliverables (*PMBOK® Guide* — Fourth Edition)	2.2.1 Document Quality Assurance
Defect repair review and recommendations (*PMBOK® Guide* — Fourth Edition)	See *Master Test Plan*
Validated defect repair (*PMBOK® Guide* — Fourth Edition)	See *Master Test Plan*

Content Requirement	Plan Reference
Quality Metrics. (PMBOK® Guide — Fourth Edition)	2.1.6. Program Compliance Metrics 2.2.1.5 Document Quality Assurance Metrics 2.3.1.5 Contract Compliance Monitoring Metrics 2.3.2.5 Problem Correction Process Metrics 2.4.1.5 Process Improvement Metrics 2.4.2.5 Ad Hoc Reporting and Special QA Studies Metrics
Inspection tools. (PMBOK® Guide — Fourth Edition)	3.3 Tools
The *QMP* provides input to the overall project management plan and must address quality control, quality assurance and continuous process improvement for the contract. (*A Guide to the Project Management Body of Knowledge (*PMBOK® Guide*) — Fourth Edition*)	

B. Referenced Documents

The following documents are referenced in or were used in the development of the *Quality Management Plan*.

Table 31: Referenced Documents

Referenced Document	Document Location	Version - Date
Architecture Plan	CA-MMIS Home > Home > Latest Versions - Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 06/12/2012
Audit Scorecard Template	CA-MMIS Home > Home > EPMO > Proc_Comp_and_Impr > Audits and Reviews	
Business Change Management Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 05/15/2012
Business Rules Extraction Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 04/05/2012
CA-MMIS Documentation Standards	CA-MMIS Project Portal > Reference > Industry and Project Standards	
CA-MMIS Incident Management Procedures Manual	CA-MMIS Home > Home > Library > Manuals > Infrastructure Manual > Incident Management	
CA-MMIS Replacement System Phase Implementation Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	
CA-MMIS SRP Master Product List (MPL)	CA-MMIS Project Portal > System Replacement > Draft Deliverables and Work Products > Workgroup: SR Planning > Project Phase: Phase I	06/29/2012
CAP Monitoring Report Template	CA-MMIS Home > Home > Quality > CAP SOP and Bi-weekly Status Reports > CAP Templates	
CAP Monitoring SOP	CA-MMIS Home > Home > Quality > CAP SOP and Bi-weekly Status Reports > CAP SOP and Presentation	
CAP Response Template	CA-MMIS Home > Home > Quality > CAP SOP and Bi-weekly Status Reports > CAP Templates	
Certification Readiness Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 05/07/2012

Referenced Document	Document Location	Version - Date
Change (Control) Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V3.0 – 04/17/2012
Communication Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V3.0 – 04/26/2012
Configuration Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 – 03/26/2012
Data Element Dictionary	CA-MMIS Home > Home > Reference > Documents downloaded from LiveLink > Data Element Dictionary	
Defect Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions - Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 - 04/24/2012
Master Decommissioning Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.4 – 04/20/2012
Defect Management	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 - 04/24/2012
Deliverables Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V2.0 - 02/16/2012
Design Specification Document (DSD)	CA-MMIS Home > Home > Reference > CA-MMIS Templates > SPARK-ITS > System Development Templates	In progress
Document Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 – 03/13/2012
Governance Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V2.0 - 01/20/2012
Hardware and Software Configuration Manual	CA-MMIS Home > Home > Library > Manuals > Secure Manuals > SGO080 Hardware Software Configuration Manual	V.003 – 07/13/2012

Referenced Document	Document Location	Version - Date
Issue Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V3.0 – 12/22/2011
L Series	CA-MMIS Home > Home > Latest Versions - Approved/Conditionally Approved > L.2.a, L.2.b, L.3 System Development Life Cycle (SDLC) Methodology	V1.0 – 06/06/2011
Master Data Conversion and Cleanup Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V2.0 – 05/01/2012
Master Decommissioning Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.4 – 04/24/2012
Master Implementation Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 04/11/2012
Master Test Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 04/12/2012
Monthly Deliverable Review Report	CA-MMIS Project Portal	
Operations Training Plan	CA-MMIS Project Portal > Deliverables > Latest Versions - Approved/Conditionally Approved > A.4.(e) CA-MMIS Training Plan for Ongoing Contract Operations	V1.0 – 02/17/2012
Parallel Test Plan	CA-MMIS Home > Home > Reference > CA-MMIS Templates > SPARK-ITS > System Development Templates	In progress
Peer Review Plan	CA-MMIS Home > Home > Reference > CA-MMIS Templates > SPARK-ITS > System Development Templates	In progress
Phase Decommissioning Plan	CA-MMIS Home > Home > Reference > CA-MMIS Templates > SPARK-ITS > System Development Templates	In progress
Privacy Plan	CA-MMIS Home > Home > Reference > CA-MMIS Templates > SPARK-ITS > System Development Templates	In progress
Project Health Report	Xerox SharePoint	
Project Management Plan Overview	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V2.0 - 03/27/2012
QM Deliverable Review SOP	CA-MMIS Project Portal > Workgroup > Quality > QM Deliverable Analysts - Knowledge Transfer	

Referenced Document	Document Location	Version - Date
QM Requirements	CA-MMIS Project Portal > Workgroup > Quality > QM Requirements	
QM Standard Operating Procedures (SOPs), Policies, and Manuals	CA-MMIS Project Portal	
Quarterly PRIFR Report	CA-MMIS Project Portal	
Release Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V2.0 – 03/19/2012
Replacement System Training Strategy/Plan	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > System Replacement Deliverables	V1.0 – 05/29/2012
Requirements Development Techniques and Guidelines	System Replacement > Draft Deliverables and Work Products	
Requirements Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 – 06/13/2012
Requirements Specification Document (RSD)	CA-MMIS Home > Home > Reference > CA-MMIS Templates > SPARK-ITS > System Development Templates	In progress
Risk Management Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V3.0 - 12/23/2011
Security and Confidentiality Plan	CA-MMIS Home > Home > Latest Versions - Approved/Conditionally Approved > Security Deliverables	V2.0 – 02/03/2012
SPARK-ITS Styles using Microsoft Word	CA-MMIS Project Portal > Reference > CA-MMIS Templates > SPARK-ITS	
Software Development Approach	CA-MMIS Home > Home > Latest Versions - Approved/Conditionally Approved > System Replacement Deliverables	
System Development Lifecycle (SDLC) Methodology	CA-MMIS Project Portal > Deliverables > Latest Versions – Approved/Conditionally Approved > L.2.a, L.2.b, L.3 System Development Lifecycle (SDLC) Methodology	V1.0 – 06/06/2011
Systems Group Organization and Procedures Manual	CA-MMIS Project Portal > Deliverables > Latest Versions - Approved/Conditionally Approved > L.1, L.5 - SG Procedure Manual	V1.0 – 06/06/2011
System Test Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 – 03/15/2012

Referenced Document	Document Location	Version - Date
Technical Architecture Plan (TAP)	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 – 03/15/2012
User Acceptance Test (UAT) Plan	CA-MMIS Project Portal > Deliverables > Deliverables > Latest Versions – Approved/Conditionally Approved > A.2(a) Project Control and Reporting System Methodology and Procedures	V1.0 – 03/15/2012
California Department of Health Care Services (DHCS) – California Medicaid Management Information System (CA-MMIS) Request for Proposal (RFP)	California MMIS Project Portal > CRFPNTP > CAMMIS Conformed RFPO	
Xerox CA-MMIS Narrative Technical Proposal (NTP)	California MMIS Project Portal > CRFPNTP > CAMMIS Narrative Technical Proposal	
Software Engineering Institute (SEI)/Carnegie Mellon's Capability Maturity Model Integration (CMMI) for Development	CA-MMIS Home > Reference > Industry and Project Standards > CMMI Reference Materials	V1.3 – November 2010
A Guide to the Project Management Body of Knowledge (PMBOK Guide) – Fourth Edition	www.pmi.org	
Centers for Medicare and Medicaid Services (CMS) Medicaid Information Technology Architecture (MITA) Toolkit	CA-MMIS Home > Home > Reference > Industry and Project Standards > CMS MITA	
California DHCS Medi-Cal MITA State Self-Assessment (SS-A) from May 2008	CA-MMIS Project Portal	

C. Applicable Standards

As mandated by Exhibit E, Provision 57 of the RFP, the *Quality Management Plan* meets or exceeds the industry standards and guidelines noted in the table below. Additionally, the PMM maps to CMMI Level 2.

Table 32: Applicable Standards

Industry Standard / Guideline
Project Management Body of Knowledge (PMBOK)
IEEE 1058-1998 IEEE Standard for Software Project Management Plans
Best Practices for the Project Management Office of the Office of Systems Integration (OSI) located at: www.bestpractices.osi.ca.gov/sysacq/projectoffice.aspx
ISO 9001:2008 Quality Management Systems – Requirements
Medicaid Information Technology Architecture (MITA) located at: http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidInfoTechArch/index.html?redirect=/MedicaidInfoTechArch/

D. QM Organization Chart

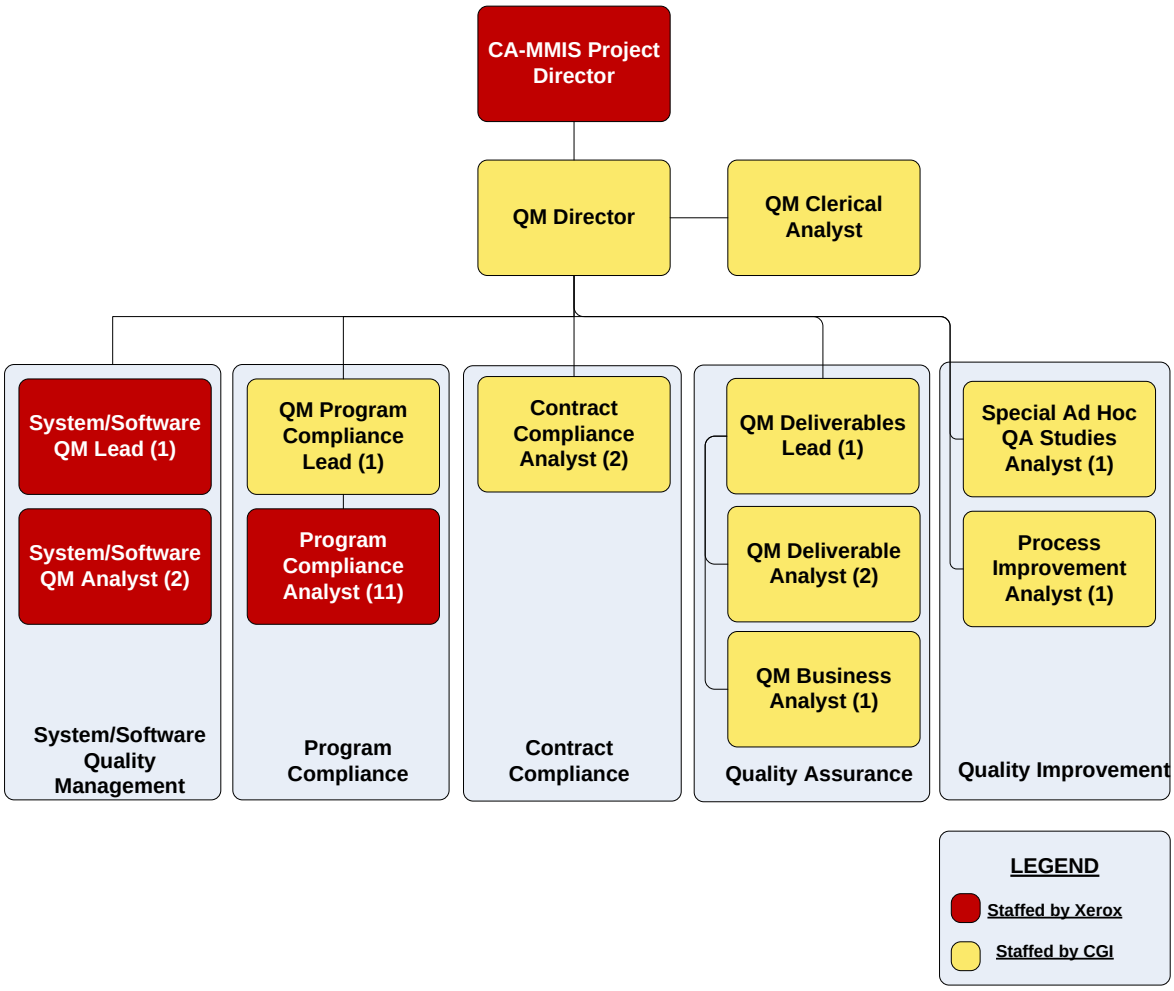

Figure 5: QM Organization Chart

E. Quality Review and Support Team (QRST) Metrics

Table 33: Quality Review and Support Team (QRST) Metrics

Review	Review Purpose/ Description	Sample Review Frequency	Sample Size	Report Frequency	Report Name
Payment Data Review	This is a review of adjudicated claims payment data to verify payments are accurate prior to the submission of the payment files, detect errors in payments that are not detected by normal processing, identify possible erroneous payments, evaluate CA-MMIS function and performance, monitor possible fraudulent billing and changes in billing practice, and monitor policy deficiencies.	Weekly: Monday – Tuesday noon	Statistical Valid Random Sample with a confidence level of 95%	Weekly: Every Friday for the same review week	*Weekly Payment Data Review Report*
180 Day Aged Claim Review	This is a review of claims that have aged over 180 days, including the reasons for the excessive aging, the proposed solutions to prevent further aging, and the corrective actions. The 150 Day Aged claim report is extracted every Monday. Claims over 180 days are identified and sent to the Claims Department for research and response. Review analysis is reported on following Friday.	Weekly	Entire Population	Weekly: Every Friday for the previous review week	*Weekly 180 Day Aged Claim Report*
Appeals Processing Accuracy Review	This review validates appeals decisions along with the processing of the associated claims. Providers can submit appeals for adjustment of overpayment, underpayment, denial, or correction of claim data as long as they meet the appeals timeliness guidelines. If approved, the appeals are submitted for processing. QM reviews both the appeals and the associated claims.	Weekly	140 per month/35 per week	Monthly	*Monthly Quality Management Performance Report (MQMPR)*
Appeal Processing Accuracy Review (Denials)	Same as above.	Weekly	20 per month/5 per week	Monthly	*MQMPR*
ATG (TXN GEN)	Claims are randomly selected by CA-MMIS for Transaction Authority (TA) that process 50% of the total claims processed by the Automated Transaction Generator (ATG). This process validates that internal processes for processing claims and ATG documents are accurate and effective.	Monthly: generated last Friday of review month	5 claims for each ATG	Monthly	*MQMPR*

Review	Review Purpose/ Description	Sample Review Frequency	Sample Size	Report Frequency	Report Name
CA-MMIS Reports Accuracy Review	This review is performed to verify/validate CA-MMIS reports in Electronic Data Management System (EDMS) against the Reports User Manual (RUM) in SharePoint for completeness and accuracy. Samples are taken from the EDMS reports index.	Monthly	50 reports	Monthly	*MQMPR*
Claims Inquiry Form (CIF) Processing Accuracy Review	This review validates that CIFs are processed based on the provider's request and in accordance with program policy and guidelines.	Weekly	160 per month/40 per week	Monthly	*MQMPR*
Cycle Time Requirements Processing Accuracy Review	Cycle Time reports are retrieved from EDMS and reviewed to verify compliance within Medi-Cal operation areas. This review is performed to identify areas within claims processing that are out of compliance and report on the associated corrective action plan for each area.	Monthly: Usually second week of the reporting month for the review (previous) month	N/A	Monthly	*MQMPR*
Data Entry Accuracy Review	This review is performed to verify the accuracy of hardcopy claims entered into the Medi-Cal processing system. The analysis of this review provides a measurement of data entry accuracy in the OCR scanner, key entry, and different modes.	Weekly	200 per month/50 per week	Monthly	*MQMPR*
Manual and System Documentation Review: ATG/SPG Criteria Approval	ATG criteria (new and updates) are initiated by the Claims Department Analyst and sent to QM via e-mail. This review is performed to verify new, revised and deleted ATG criteria prior to DHCS review and entering into the CA-MMIS.	Daily or as generated	Entire Population	Monthly	*MQMPR*
Manual and System Documentation Review: Error Code Criteria Approval	Error Code criteria (new and updates) are initiated by a File Maintenance Analyst and sent to QM via e-mail. This review is performed to verify new or updates to error code criteria and Special Processing Guidelines (SPGs) accurately reflect policy as requested by DHCS.	Daily or as generated	Entire Population	Monthly	*MQMPR*
Manual and System Documentation Review: Provider Bulletin/Provider Manual	Publications are sent to QM via e-mail. This review is performed to verify new or updates to provider bulletins and/or provider manuals accurately reflect policy as requested by DHCS.	Daily or as generated	Entire Population	Monthly	*MQMPR*

Review	Review Purpose/ Description	Sample Review Frequency	Sample Size	Report Frequency	Report Name
Edit and Audit Accuracy Review	DHCS submits an FI letter requesting the four edit and four audit error codes to be reviewed. Upon receipt, QM submits a request to the SG to extract claim samples. This review consists of reviewing the edit and audit error codes to verify claims are adjudicated according to policy, procedures, and guidelines. Samples are analyzed and results are reported in the monthly report.	Monthly: generated 3rd week of review month	200 (25 claims x 8 Error codes)	Monthly	*MQMPR*
File Update Accuracy Review	OIL Implementation Notices are initiated by a File Maintenance Analyst and sent to QM via e-mail. This review is performed to validate implementation of OILs for accuracy, completeness and timeliness of file updates in accordance with the DHCS directives. This may include updates to CA-MMIS tables, Procedure File, Formulary File, Diagnosis File etc.	Daily or as generated	Entire Population	Monthly	*MQMPR*
Hard Copy Reproduction of Claims Review	Review samples are taken from the weekly payment data review samples. This review is performed to verify that paper claim images transferred to EDMS system are legible and appropriate for claims processing and capturing of the historical image.	Monthly	25	Monthly	*MQMPR*
Claims Adjudication Processing Accuracy Review: Manual Pricing	This review validates claims that have suspended for Manual Pricing edits. Paper and CMC claims suspending for Manual Pricing edits comprise claims billed with service codes that do not have prices on file, including those services that are manually priced using invoice and manufacturers' catalog pages or by-reports.	Weekly	160 per month/40 per week	Monthly	*MQMPR*
Claims Adjudication Processing Accuracy Review: Medical Review	This review validates claims that have suspended for Medical Review edits or audits. Paper and CMC claims suspending for Medical Review comprise claims billed with services that are reviewed/priced using by-report and by consultants (e.g., no price on file, surgical codes).	Weekly	160 per month/40 per week	Monthly	*MQMPR*
On-Line Pharmacy/CALPOS Review	This review is performed together with the weekly payment data review but reported under the monthly report. Samples are selected from the MR-O-342 Report. The CALPOS claims are reviewed to identify erroneous payments and inflated quantities.	Weekly	25 per week	Monthly	*MQMPR*

Review	Review Purpose/ Description	Sample Review Frequency	Sample Size	Report Frequency	Report Name
Quality of Claims Processing	Review data is provided by the respective departments via e-mail. This review is performed to monitor and measure the quantity and quality of claims operational monthly performance, as determined during internal operational reviews for Mailroom, Input Prep, Scanning, Inventory Control, Key Data Entry and Claims Adjudication.	Monthly	N/A	Monthly	*MQMPR*
Suspense Processing Accuracy Review	This review validates claims that have been overridden or denied. The claims processing subsystem routes hardcopy and electronic claims that fail established daily and weekly prepayments controls to suspense resolutions for manual examiner disposition. This process of pending claims for manual resolution is known as suspense processing of daily edits and weekly audits.	Weekly	400 per month/100 per week	Monthly	*MQMPR*
SAR Processing Accuracy Review	This review is performed to verify accuracy of SARs.	Monthly	380 per quarter	Quarterly	*MQMPR*
TAR Processing Accuracy Review	This review is performed to verify accuracy of the TARs and TAR Update Transmittal (TUT) data entered into the system by the TAR field offices. Samples are manually selected from the kTAR system.	Monthly: samples pulled at the beginning of a new month for the previous month	380 per quarter divided into 3 months	Quarterly	*MQMPR*
12 Week Payment History File	QM reviews/analyzes /PS-O-21A/21B/21C/21E reports to identify areas of possible provider and beneficiary fraud abuse.	Monthly	N/A	Monthly	*MQMPR*
Trend Analysis	This analysis summarizes the number of exceptions identified during the reviews and maintains a history of exceptions for use in the identification of process improvements.	Monthly	N/A	Monthly	*MQMPR*

F. Provider Relationship Organization (PRO) Metrics

Table 34: PRO Metrics

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
Qualitative Reviews						
Telephone Service Center (TSC) Call Monitoring Review	QM listens to and evaluates incoming phone calls using the following four categories: Greeting and Introduction, Probing and Understanding, Customer Friendly Presentation, and Closure.	Weekly	Monthly	Monthly PRO Report	Valid Sample CL=95% CI=4%	85%
Correspondence Specialist Unit (CSU) Review	QM reviews Service Requests (SR) incoming and outgoing correspondence for accuracy and completion using the following four categories: Greeting and Introduction, Probing and Understanding, Customer Friendly Presentation, and Closure.	Weekly	Weekly	Monthly PRO Report	Valid Sample CL=95% CI=4%	
On-Site Visits Staff Evaluation Review	Evaluation Forms are reviewed for accuracy and completeness, and then uploaded to the PCRS database. The Forms are used to evaluate the Provider Representatives in the following four categories: Greeting and Introduction, Probing and Understanding, Customer Friendly Presentation, and Closure.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Instructional Design and Training Delivery Evaluation Review	Evaluation Forms are reviewed for accuracy and completeness, and then uploaded to the PCRS database. The Forms are used to evaluate the Provider Trainers in the following four categories: Greeting and Introduction, Probing and Understanding, Customer Friendly Presentation, and Closure.	Monthly	Monthly	Monthly PRO Report	Entire Population	

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
Claims Assistance Room (CAR) Staff Evaluation Review	Evaluation Forms are reviewed for accuracy and completeness, and then uploaded to the PCRS database. The Forms are used to evaluate Provider Representatives in the following four categories: Greeting and Introduction, Probing and Understanding, Customer Friendly Presentation, and Closure.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Quantitative Reviews						
TSC - 17 Activities Reviewed						
Automated Eligibility Verification System (AEVS) Family Pact Transcribing Report	QM obtains the monthly AEVS F-PACT Transcribing Report from Xerox SharePoint and verifies that the received calls are transcribed within 2 State Workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	90%
Outbound Afterhours Voicemail Return	QM retrieves the QM Voicemail Report from CRM and verifies the initial request date against the contact date.	Monthly	Monthly	Monthly PRO Report	Entire Population	
TSC Control Letters	QM verifies that the TSC Weekly control letters are submitted to DHCS and are loaded into SharePoint.	Weekly	Monthly	Monthly PRO Report	Entire Population	
TSC P-Factor	QM uses the TSC Statistical report to validate that the weekly average number of TSC incoming calls that are blocked does not exceed 5%.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Abandonment Rate	QM uses the TSC Statistical report to validate that the weekly average abandon rate does not exceed 5%.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Average Wait and Hold Time	QM uses the TSC Statistical report to validate that the weekly average wait or hold times does not exceed 120 seconds.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Provider Telecommunication Network (PTN) P-Factor	QM uses the TSC Statistical report to validate that the weekly average number of PTN incoming calls that are blocked does not exceed 5%.	Monthly	Monthly	Monthly PRO Report	Entire Population	

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
Department Request for Placement of Hold Messages or Music	QM obtains email notifications located in Xerox SharePoint and validates that the request from DHCS was implemented within 24 hours.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Business Hours Outbound Voicemail Return	QM retrieves the Voicemail Report from CRM and verifies the initial request date against the contact date.	Monthly	Monthly	Monthly PRO Report	Entire Population	
CMC Submission Problems	QM retrieves the CMC Outbound Report from CRM and verifies the initial request date against the contact date.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Conlan 15 Day Acknowledgement Letter	QM reviews the Conlan Response Report and verifies the received date against the acknowledgement date.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Conlan Redirected Claims	QM validates the Redirect Claims Export from CRM and verifies that the claims were redirected within 15 calendar days of receipt of a complete claim.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Conlan Provider Notification	QM obtains the Conlan CRM Export to verify that the provider has been notified in writing by day 15 of receipt of a complete claim requesting reimbursement to the beneficiary in accordance with the Plan.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Conlan 60 Day Notification	QM obtains the Conlan CRM Export to verify that the beneficiary has been notified to provide additional information required to adjudicate the claim within 60 days of receipt of an incomplete claim.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Conlan Processes Completed Claims	QM obtains the Conlan 120 Day Report from CRM to verify the claim completion date against the claim adjudication date.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Conlan State Hearing Requests	QM obtains CRM Export for State Hearings to confirm that providers have been notified two weeks in advance of the hearing date.	Monthly	Monthly	Monthly PRO Report	Entire Population	

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
Conlan Notice of Action (NOA)	QM obtains the CRM Export for Conlan 90 Day/Notice of Action to verify that the beneficiary has been provided either a closure letter or a letter of request for additional information.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Correspondence and Research - 4 Activities Reviewed						
Correspondence 5 Day Acknowledgement	QM retrieves the Correspondence Acknowledgement Report from CRM and validates an acknowledgement letter was sent to the provider within five State workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	
CSU 15 Day Final Response	QM retrieves the CSU Response Report from CRM and validates that a final resolution was sent to the provider within 15 State workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Research Analyst Unit (RAU) Final Response	QM retrieves the RAU Response Report and validates that a written response was submitted to DHCS within five State workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Small Provider Billing Unit (SPBU)	QM retrieves the SBPU Provider List from Xerox SharePoint and validates that a minimum of 200 and a maximum of 250 providers enrolled in the SPBU program at the same time.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Provider Refund Checks and Returned Warrants - 2 Activities Reviewed						
Provider Refund Checks	QM retrieves the Provider Refund Checks and Returned Warrants Log weekly from Xerox SharePoint and validates that Provider Refund Checks were processed within 45 calendar days.	Weekly	Monthly	Monthly PRO Report	Entire Population	
Returned Warrants	QM retrieves the Provider Refund Checks and Returned Warrants Log weekly from Xerox SharePoint and validates that returned warrants were processed within 45 calendar days.	Weekly	Monthly	Monthly PRO Report	Entire Population	

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
On-Site Visits - 4 Activities Reviewed						
Provider On-Site Visit Request	QM obtains the Regional Representative's Report from CRM and validates that the visit requested by the provider was performed within 10 workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	
DHCS On-Site Visit Request	QM obtains the Regional Representative's Report and validates that the visit requested by DHCS was provided within five workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	
On-Site Visit Final Resolution	QM obtains the Regional Representative's Report and validates that the final resolution of issues was submitted to the provider within two State workdays.	Monthly	Monthly	Monthly PRO Report	Entire Population	
DHCS Requested On-Site Visit Documentation	QM retrieves the DCN updates from Xerox SharePoint and validates that documentation and files pertaining to the activities of the Provider Representatives are available within 2 State workdays of the Department's request.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Instructional Design and Training Delivery - 4 Activities Reviewed						
Annual Training Plan	QM Retrieves the Annual Training Plan from Xerox SharePoint and validates the annual training plan was available by September 1st of each year.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Training Curriculum	QM retrieves the DCN updates from Xerox SharePoint and validates that new course curriculum developed is submitted and approved by DHCS at least 60 days in advance of the scheduled training.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Training Seminars	QM uses the Medi-Cal Website (MCWeb) to validate notification of Training Seminars were posted at least 60 calendar days in advance of the training.	Monthly	Monthly	Monthly PRO Report	Entire Population	
Annual Training Plan Changes	QM validates that changes made to the training plan were submitted for approval 60 calendar days in advance of the event by using the FI letter.	Monthly	Monthly	Monthly PRO Report	Entire Population	

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
PRO Equipment and System Operations Results - 4 Activities Reviewed						
TSC Unscheduled Downtime	QM validates that the TSC system unscheduled downtime does not exceed one-half (0.5) hour in a given month for the following TSC Systems; CRM, Telephone System, Verint 360, On-Line Claim Correction (OLCC), Call Management System (CMS), and EDMS.	Daily	Monthly	Monthly PRO Report	Entire Population	
Notification of TSC Downtime	QM validates that the Department was notified of incidents of TSC downtime within 1 hour of the incident or as soon as the Contractor is aware of the interruption for the following TSC Systems; CRM, Telephone System, Verint 360, OLCC, CMS, and EDMS.	Daily	Monthly	Monthly PRO Report	Entire Population	
Notification of System Repair	QM validates that the Department was notified of the actual cause, areas impacted, measurements taken to correct the problem, and what additional measures have been put in place to prevent the problem from recurring, within 24 hours of the system repair, for the following TSC Systems: CRM, Telephone System, Verint 360, OLCC, CMS, and EDMS.	Daily	Monthly	Monthly PRO Report	Entire Population	
Notification of Planned System Interruption	QM validates that an electronic notice was provided to online users and the Department of planned system interruption, shutdown, or file non-access, at least 3 workdays prior.	Daily	Monthly	Monthly PRO Report	Entire Population	

Review Name	Review Purpose/ Description	Sample Review Frequency	Report Frequency	Report Name	Sample Size	Threshold
Additional Reviews for the Monthly Performance Report						
P-Factor Review	QM retrieves the weekly and monthly P-Factor call statistics for AEVS and PTN from Xerox SharePoint. The statistics are recorded in the P-Factor Log and forwarded to the QRST Analysts to be included in the Monthly Performance Report.	Monthly	Monthly	Monthly PRO Report	Entire Population	N/A
Provider Interaction Review	QM inputs common provider inquiries from TSC phone calls, CSU inquires, and Research inquires, On-Site Visit provider evaluations, Training provider evaluations and Seminar provider evaluations into the Provider Interaction Review Log. The Log is sent to the QRST Analysts to be included in the Monthly Performance Report.	Monthly	Monthly	Monthly PRO Report	Entire Population	N/A

G. Deliverables and Work Products to be Reviewed

Table 35: Deliverables and Work Products to be Reviewed

Deliverable or Work Product	Population	Review Frequency	Review Criteria	Output Report(s)
Legacy Procedure Manuals	G.1 manual procedures (unless excluded by FI letter)	As required	• References to “EDS” and “HP” (former contract) removed • Aligns with project documentation standards • Format, spelling, punctuation, grammar, sentence structure • Understandable	QM Comment Review Form Monthly Deliverable Review Report
Replacement System Procedure Manuals	Identified during SDLC phases and in SDNs	As required	• Aligns with project documentation standards • Format, spelling, punctuation, grammar, sentence structure • Understandable	QM Comment Review Form Monthly Deliverable Review Report
Replacement System Work Products	Listed in CA-MMIS Deliverable Tracking List	Prior to DHCS submission	• Covers contract requirements (CRFP, NTP) • Addresses DHCS walkthrough comments • Aligns with project documentation standards • Format, spelling, punctuation, grammar, sentence structure • Understandable	QM Comment Review Form Monthly Deliverable Review Report
System Development Notices (SDNs)	Sample	Monthly	• Covers SDN requirements • Impacted procedure manuals updated • Aligns with project documentation standards • Format, spelling, punctuation, grammar, sentence structure • Understandable	QM Comment Review Form Monthly Deliverable Review Report
System Enhancement Procedure Manuals	Identified during SDLC phases and in SDNs	As required	• Aligns with project documentation standards • Format, spelling, punctuation, grammar, sentence structure • Understandable	QM Comment Review Form Monthly Deliverable Review Report

Deliverable or Work Product	Population	Review Frequency	Review Criteria	Output Report(s)
System Enhancement Work Products	Listed in CA-MMIS Deliverable Tracking List	Prior to DHCS submission	• Covers contract requirements (CRFP, NTP) • Addresses DHCS walkthrough comments • Aligns with project documentation standards • Format, spelling, punctuation, grammar, sentence structure • Understandable	QM Comment Review Form Monthly Deliverable Review Report

H. Service Level Agreements

The following table presents the latest list of SLAs that are measured and reported on a monthly basis to DHCS:

Table 36: Service Level Agreements

Row	SLA ID Number	SLA Name	Target
1	OP-ACL-2G-1	Process/Adjudicate CMC & Hard Copy Claims – Monthly Average	18 Days
2	OP-ACL-2G-2	Process/Adjudicate 90% of All Claims	25 Days
3	OP-ACL-2G-3	Process/Adjudicate 99% of All Claims	75 Days
4	OP-ACL-2G-4	Process/Adjudicate 90% of CMC & Hard Copy Noncompounded Drug Pharmacy Claims	25 Days
5	OP-ACL-2G-5	Process/Adjudicate 99% of CMC & Hard Copy Noncompounded Drug Pharmacy Claims	75 Days
6	OP-ACL-2G-6	Process/Adjudicate 90% of CMC & Hard Copy Compounded Drug Claims	30 Days
7	OP-ACL-2G-7	Process/Adjudicate 99% of CMC & Hard Copy Compounded Drug Claims	75 Days
8	OP-ACL-2G-8	Process/Adjudicate 90% of LTC Claims	8 Days
9	OP-ACL-2G-9	Process/Adjudicate 99% of LTC Claims	50 Days
10	OP-ACL-2G-10	Process/Adjudicate 90% of Inpatient Hospital Claims	25 Days
11	OP-ACL-2G-11	Process/Adjudicate 99% of Inpatient Hospital Claims	75 Days
12	OP-ACL-2G-12	Process/Adjudicate 90% of Outpatient Hospital Claims	25 Days
13	OP-ACL-2G-13	Process/Adjudicate 99% of Outpatient Hospital Claims	75 Days
14	OP-ACL-2G-14	Process/Adjudicate 90% of Medical/Professional Claims	25 Days
15	OP-ACL-2G-15	Process/Adjudicate 99% of Medical/Professional Claims	75 Days
16	OP-ACL-2G-16	Process/Adjudicate 90% of DME/Hearing Aid/Transportation/Prosthetic/Orthotic Claims	25 Days
17	OP-ACL-2G-17	Process/Adjudicate 99% of DME/Hearing Aid/Transportation/Prosthetic/Orthotic Claims	75 Days

Row	SLA ID Number	SLA Name	Target
18	OP-ACL-2G-18	Process/Adjudicate 90% of Medical Review Claims	30 Days
19	OP-ACL-2G-19	Process/Adjudicate 99% of Medical Review Claims	75 Days
20	OP-ACL-2G-20	Process/Adjudicate 90% of Manually Priced Claims	25 Days
21	OP-ACL-2G-21	Process/Adjudicate 99% of Manually Priced Claims	75 Days
22	OP-ACL-2G-22	Process/Adjudicate 90% of Out-of-State Provider Claims	25 Days
23	OP-ACL-2G-23	Process/Adjudicate 99% of Out-of-State Provider Claims	75 Days
24	OP-ACL-2G-24	Process to Resolution 90% of CIFs	25 Days
25	OP-ACL-2G-25	Process to Resolution 99% of CIFs	75 Days
26	OP-ACL-2G-26	Send RTD to Provider for Claims where Required - Monthly Average	20 Days
27	OP-ACL-2G-27	Send RTD to Provider for 90% of All Claims where Required	25 Days
28	OP-ACL-2G-28	Send RTD to Provider for 99% of All Claims where Required	30 Days
29	OP-ACL-2G-29	Total Claims Held for Processing Over 30 Days	9 Percent
30	OP-ACL-2G-30	Pharmacy Claims Held for Processing Over 30 Days	9 Percent
31	OP-ACL-2G-31	LTC Claims Held for Processing Over 30 Days	9 Percent
32	OP-ACL-2G-32	Inpatient Hospital Claims Held for Processing Over 30 Days	9 Percent
33	OP-ACL-2G-33	Outpatient Hospital Claims Held for Processing Over 30 Days	9 Percent
34	OP-ACL-2G-34	Medical/Professional Claims Held for Processing Over 30 Days	9 Percent
35	OP-ACL-2G-35	DME/Hearing Aid/Transportation/Prosthetic/Orthotic Claims Held for Processing Over 30 Days	9 Percent
36	OP-ACL-2G-36	Process/Adjudicate 90% of PPM Claims	25 Days
37	OP-ACL-2G-37	Process/Adjudicate 99% of PPM Claims	75 Days
38	OP-ACL-2G-38	Process/Adjudicate 90% of CCS/GHPP Claims	25 Days
39	OP-ACL-2G-39	Process/Adjudicate 99% of CCS/GHPP Claims	75 Days
40	OP-ACL-2G-40	Process/Adjudicate 90% of LTC-SOC Claims	25 Days
41	OP-ACL-2G-41	Process/Adjudicate 99% of LTC-SOC Claims	75 Days

Row	SLA ID Number	SLA Name	Target
42	OP-ACL-2G-42	Process/Adjudicate 90% of ADHC Claims	25 Days
43	OP-ACL-2G-43	Process/Adjudicate 99% of ADHC Claims	75 Days
44	OP-ACL-2G-44	Process/Adjudicate 90% of CDP:EWC (BCEDP) Claims	25 Days
45	OP-ACL-2G-45	Process/Adjudicate 99% of CDP:EWC (BCEDP) Claims	75 Days
46	OP-ACL-2G-46	Process/Adjudicate 90% of Family PACT Claims	25 Days
47	OP-ACL-2G-47	Process/Adjudicate 99% of Family PACT Claims	75 Days
48	OP-ACL-2G-48	Adjudicate Clean Claims - Monthly Average	15 Days
49	OP-ACL-2G-49	Adjudicate Clean Claims within 30 days	90 Percent
50	OP-ACL-2G-50	Adjudicate Clean Claims within 45 days	100 Percent
51	OP-ACL-2G-51	Adjudicate Non-Clean Claims - Monthly Average	25 Days
52	OP-ACL-2G-52	Adjudicate Non-Clean Claims within 45 days	90 Percent
53	OP-ACL-2G-53	Adjudicate Non-Clean Claims within 60 days	100 Percent
54	OP-ACL-2G-54	Mail PCRs to Providers - Monthly Average	15 Days
55	OP-ACL-2G-55	Mail PCRs to Providers within 30 Days	100 Percent
56	OP-ACL-2G-56	Identify 90% of Claims on the Pending Claims History File	7 Days
57	OP-ACL-2G-57	Identify 99% of Claims on the Pending Claims History File	10 Days
58	OP-ACL-2G-58	Enter 90% of Corrected RTDs	5 Days
59	OP-ACL-2G-59	Enter 99% of Corrected RTDs	7 Days
60	OP-ACL-2G-60	Acknowledge 100% of Written Grievances	15 Days
61	OP-ACL-2G-61	Issue Written Notice for 100% of Claim Appeals Not Requiring Professional Review	45 Days
62	OP-ACL-2G-62	Issue Written Notice for 100% of Claim Appeals Requiring Professional Review	75 Days
63	HR-25FOAG-1	Initial Data Entry of Non-On-Site TARs within 1 day	80 Percent
64	HR-25FOAG-2	Initial Data Entry of Non-On-Site TARs within 2 days	99 Percent
65	HR-25FOAG-3	Complete Data Entry of On-Site TARs within 2 days	90 Percent
66	HR-25FOAG-4	Complete Data Entry of On-Site TARs within 3 days	99 Percent

Row	SLA ID Number	SLA Name	Target
67	HR-25FOAG-7	Process Non-Automated Error-Free TARs to SURGE within 5 days	90 Percent
68	HR-25FOAG-8	Process Non-Automated Error-Free TARs to SURGE within 7 days	99 Percent
69	OP-ACL-1PR-1	TSC Blocked Calls	5 Percent
70	OP-ACL-1PR-2	TSC Abandon Rate	5 Percent
71	OP-ACL-1PR-3	TSC Wait or Hold Time	120 Seconds
72	OP-ACL-1PR-4	PTN Blocked Calls	2 Percent
73	HR-SG-3	CA-MMIS Weekly Downtime Minutes	1 SLA Met
74	HR-SG-4	CA-MMIS Weekly Downtime Occurrences	1 SLA Met
75	HR-SG-5	CA-MMIS Daily Downtime Occurrences	1 SLA Met
76	HR-SG-6	AEVS Unscheduled Downtime	1 SLA Met
77	HR-SG-8	CA-EV/CMS Unscheduled Downtime	1 SLA Met
78	HR-SG-9	Process Pharmacy/DUR Transactions within 6 seconds	95 Percent
79	HR-SG-10	Process Eligibility Transactions within 2 seconds	90 Percent
80	HR-SG-11	Process Family PACT Transactions within 2 seconds	90 Percent
81	HR-SG-12	Process BCCTP Transactions within 2 seconds	90 Percent
82	HR-SG-13	Process CHDP Gateway Pre-enrollment Transactions within 2 seconds	90 Percent
83	HR-SG-14	Process CMS 1500 Transactions within 4 seconds	95 Percent
84	HR-SG-16	POS Network Unscheduled Downtime	1 SLA Met
85	HR-SG-18	Medi-Cal Internet Website Unscheduled Downtime	1 SLA Met
86	HR-SG-20	CMC Network Unscheduled Downtime	1 SLA Met
87	HR-SG-21	Close Problem Statements within 180 days	50 Percent
88	HR-SG-22	Close Problem Statements within 365 days	100 Percent
89	HR-SG-23	Implement/Resolve EPCs within 120 days	80 Percent
90	HR-SG-24	Implement/Resolve EPCs within 365 days	100 Percent
91	OP-ACL-I-1	Processing of PRU Requests within 48 hours	90 Percent

I. Comparison of CMMI Level 2 and ISO 9001:2008 Standards

Through the QM review process, quality is realized and continuously improved while meeting or exceeding the requirements for CMMI Level 2 or ISO 9001:2008 standards. As stated in Section 1. QM is required to follow the standards of the contract as directed by the EPMO. These standards state the Contract will be CMMI Level 2 compliant, as documented in the NTP.

CMMI consists of best practices applied to products and services from initial planning through continual improvement activities. At the core of each standard is the requirement of meeting and exceeding customer satisfaction. This is achieved by using CMMI as the guide to conducting in-depth quality reviews of CA-MMIS contract functions and processes.

As shown in Table 37, a crossover exists between the CMMI and ISO standards; CMMI Level 2 certification translates to ISO-9001:2008 compliance. The basis for both standards originates in well-known and accepted quality industry concepts and best practices.

CMMI Level 2 standards parallel ISO 9001:2008 standards as shown in Table 37. While CMMI focuses on improving processes in an organization, both contain the essential elements of assuring effective processes for one or more disciplines and describe an evolutionary improvement path from ad hoc, immature processes to disciplined, mature processes with improved quality and effectiveness.

Table 37: CMMI Level 2 vs. ISO 9001:2008

CMMI Standards Level 2 – Practices	ISO 9001:2008 Standards – Requirements
CMMI sets goals and specific practices to effectively monitor the maturity level and capability of managed processes, which include the following:	ISO 9001 sets standards for an effective Quality Management System (QMS), which include the following:
Institutionalize a Managed Process: • Establish an Organization Policy • Provide Resources • Assign Responsibilities • Train People • Manage Configurations	Quality Management System: • Develop Your QMS • Manage QMS Documents • Prepare Quality Manual • Control QMS Documents • Establish QMS Records

CMMI Standards Level 2 – Practices	ISO 9001:2008 Standards – Requirements
• Identify and Involve Relevant Stakeholders • Monitor and Control the Process • Objectively Evaluate Adherence • Review Status with Higher Level Management	Management Responsibility: • Show Your Commitment to Quality • Focus on Your Customer • Support Your Quality Policy • Carry Out Your QMS Planning • Establish Quality Objectives • Plan QMS • Allocate QMS Responsibility and Authority • Define Responsibilities and Authorities • Create Management Representative Role and appoint a member of the organization's senior management to this role • Support Internal Communication • Perform QMS Management Reviews • Review QMS • Examine Management Review Inputs • Generate Management Review Outputs
Project Planning Process: • Estimate Scope • Establish Estimates of Work Product and Task Attributes • Define Project Life Cycle • Determine Estimates of Effort and Cost • Develop a Project Plan (Budgets, Schedules, Risks, Resources, Knowledge and Skills, Stakeholder Involvement, and Plan for Data Management) • Obtain Commitment to the Plan	Resource Management: • Provide Required QMS Resources • Provide Competent QMS Personnel • Verify Competence of Workers affecting conformity to quality requirements • Where applicable, provide training or take other actions to achieve the necessary competence • Meet Competence Requirements • Provide Necessary Infrastructure including IT • Provide Suitable Work Environment
Project Monitoring and Control Process: • Monitor Project Against Plan (Parameters, Commitments, Risks, Data Management, Progress, and Milestone Reviews) • Manage Corrective Action to Closure (Analyze and Manage Corrective Action)	Product Realization: • Control Product Realization Planning • Control Customer-related Processes • Identify Your Unique Product Requirements • Review Customer's Product Requirements • Communicate With Your Customers • Control Product Design and Development • Plan Product Design and Development • Identify Design and Development Inputs • Generate Design and Development Outputs • Carry Out Design and Development Reviews • Perform Design and Development Verifications • Manage Design and Development Changes • Control Purchasing and Purchased Products
Requirements Management Process: • Manage Requirements • Obtain Understanding • Obtain Commitment • Manage Requirement Changes • Maintain Bi-directional Traceability • Identify Inconsistencies between Project Work and Requirements	

CMMI Standards Level 2 – Practices	ISO 9001:2008 Standards – Requirements
Supplier Agreement Management Process: • Establish Supplier Agreements (Determine Acquisition Type) • Satisfy Supplier Agreements (Execute Agreement, Monitor Supplier Processes, Evaluate Work Products, Accept the Acquired Product, Transition Products)	• Establish Control of Your Purchasing Process • Specify Your Purchasing Requirements • Verify Your Purchased Products • Control Production and Service Provision • Establish Control of Production and Service • Validate Production and Service Provision • Identify and Track Your Products throughout product realization • Protect Property Supplied by Customers including personal data • Preserve Your Products and Components • Control Monitoring and Measuring Equipment
Configuration Management Process: • Establish Baselines (Identify Configuration Items, Establish a Configuration Management System, Create or Release Baselines) • Track and Control Changes (Track Change Requests, Control Configuration Items) • Establish Integrity (Establish Configuration Management Records, Perform Configuration Audits)	
Measurement and Analysis Process: • Align Measurement and Analysis Activities (Objectives, Specify Measures, Data Collection and Storage Procedures, and Specify Analysis Procedures) • Provide Measurement Results (Collect, Analyze, Store Data and Results, Communicate Results)	Measurement, Analysis and Improvement: • Establish Monitoring and Measurement Processes • Carry Out Monitoring and Measurement Activities • Monitor and Measure Customer Satisfaction • Plan and Perform Regular Internal Audits • Monitor and Measure Your QMS Processes • Monitor and Measure Product Characteristics • Identify and Control Nonconforming Products • Collect and Analyze Quality Management Data • Make Improvements and Take Remedial Action • Improve the Effectiveness of Your QMS • Correct Nonconformities to Present Recurrence • Prevent the Occurrence of Nonconformities
Process and Product Quality Process: • Objectively Evaluate Processes and Work Products • Provide Objective Insight (Communicate and Verify Resolution to Noncompliance Issues)	

J. Capability Maturity Model Integration (CMMI)

The QM approach integrates CMMI Level 2 standards to provide DHCS exemplary quality delivery. CMMI is an approach to process and quality improvement that provides organizations with the concepts of planning, monitoring, controlling, reviewing, and executing in accordance with policy. CMMI serves as a model for CA-MMIS process improvements as well as helping to determine the capability of current processes. Xerox uses CMMI to assist in setting process improvement goals and priorities, identifying areas for process improvement, and assessing current processes. CMMI is composed of five levels, with each higher level representing an increased ability to plan and control processes.

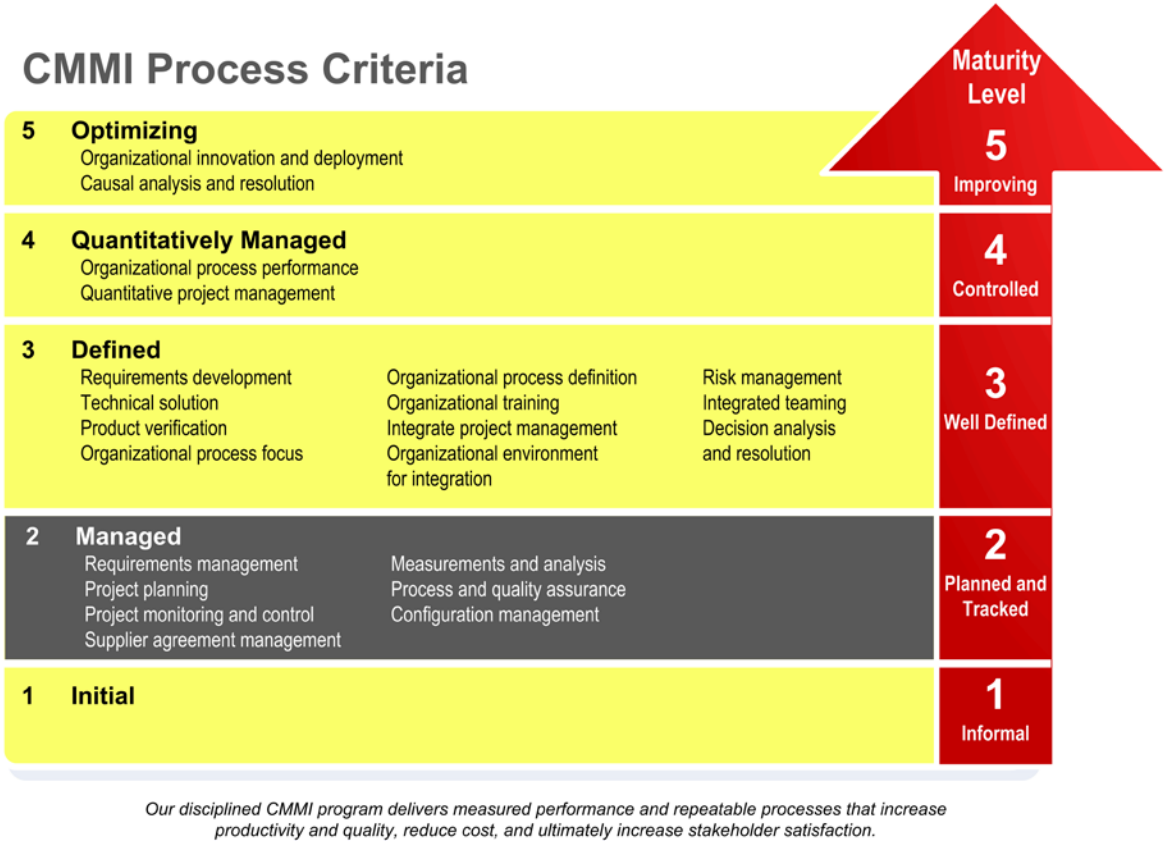

Figure 6: CMMI Process Criteria

- **Maturity Level 1, Initial** — Processes are unpredictable, ad hoc, and reactive. The organization most likely does not have a stable environment in place to support processes. Success at this level of organization is more dependent on the people than on the use of effective processes. Organizations may produce products and services that work, but often exceed the planned budget and schedule

- **Maturity Level 2, Managed** — Processes are planned, monitored, controlled, reviewed, and executed in accordance with policy. Adequate resources of skilled people are available to help produce controlled outputs. Relevant stakeholders are involved and processes are evaluated for adherence to their descriptions and revised if necessary. The status of work products is visible to management and appropriately controlled. The standards, process descriptions, and procedures can be different in each instance of the project
- **Maturity Level 3, Defined** — Processes are managed more proactively. The processes are clearly defined with purpose, inputs, entry criteria, activities, roles, measures, verification steps, outputs, and exit criteria
- **Maturity Level 4, Quantitatively Managed** — Quantitative objectives for quality and process performance are established; those objectives are used as criteria in managing projects. Performance is managed throughout the life of the projects and controlled using statistical and other quantitative methods
- **Maturity Level 5, Optimizing** — Focus on continually improving processes based on a quantitative understanding of performance needs and objectives. Quality and process objectives are revised to reflect changes in business objectives and organizational performance. Defined processes and supporting technology are targets of measurable improvement activities

CMMI provides an industry standard model for organizational improvement. It provides a best practices approach that can be used across an entire organization, which helps to eliminate barriers. CMMI serves as a model to assist in measuring the effectiveness of the deployment of methods and processes. It helps to identify areas of weakness and target areas for improvement.

K. QM Reports

The following table lists the major reports generated by several teams involved in QM activities as described in detail in Section 0Please note that this list is not an all-inclusive list.

Table 38: QM Reports

QM Process	Reference in QMP	Reports Title	Frequency	Type
2.1. Program Compliance	2.1.5. Program Compliance Outputs	180 Day Aged Claim Report	Weekly	Formal
2.1. Program Compliance	2.1.5. Program Compliance Outputs	Payment Data Review Report	Weekly	Formal
2.1. Program Compliance	2.1.5. Program Compliance Outputs	Monthly Quality Management Performance Report (MQMPR) – this report provides information on process exceptions (non-conformances), corrective actions, and/or identified trends in deficits	Monthly	Formal
2.1. Program Compliance	2.1.5. Program Compliance Outputs	Monthly Provider Relationship Organization (PRO) Report – this report provides information on noncompliance findings and corrective actions	Monthly	Formal
2.1. Program Compliance	2.1.5. Program Compliance Outputs	Treatment Authorization Request (TAR) Report	Quarterly	Formal
2.1. Program Compliance	2.1.5. Program Compliance Outputs	Service Authorization Request (SAR) Report	Quarterly	Formal

QM Process	Reference in QMP	Reports Title	Frequency	Type
2.2. Quality Assurance	2.2.2.4 Staff Training Monitoring Outputs	Staff Training Review Status Report – consolidated report reflecting the staff training review activities and analysis conducted during the reporting period	Semi-Annual	Formal
2.3 Contract Compliance	2.3.1.4 Contract Compliance Monitoring Outputs	SLA COGNOS Report	Monthly	Formal
2.3 Contract Compliance	2.3.1.5 Contract Compliance Monitoring Metrics	SLA Analysis Report	Monthly	Internal
2.4 Quality Improvement	2.4.1.4 Process Improvement Outputs	QM PRIFR Report	Quarterly	Internal
2.4 Quality Improvement	2.4.2.4 Ad Hoc Reporting and Special QA Studies Outputs	Special QA Study Report detailing non-conformance identified, RCA, corrective action/mitigation plans, and sustainment plans for DHCS	Per request	Formal
2.4 Quality Improvement	2.4.2.5 Ad Hoc Reporting and Special QA Studies Metrics	Phase II HIPAA 5010 Metric report	Weekly	Internal
2.4 Quality Improvement	2.4.3.4 CAP Monitoring Outputs	CAP Monitoring dashboard Report	Every Other Week	Internal
2.5 System/Software Quality Management	2.5.13.4.1. Incident and Defect Tracking Metrics	Incident and Defect Tracking Metrics Report	TBD	Formal
2.5 System/Software Quality Management	2.5.13.4.2. Size and Complexity Metrics	Size and Complexity Metrics Report	TBD	Formal
2.5 System/Software Quality Management	2.5.13.4.3. Requirement Metrics	Requirement Metrics Report	TBD	Formal
2.5 System/Software Quality Management	2.5.13.4.4. Software Testing	Software Testing Metrics Report	TBD	Formal

QM Process	Reference in QMP	Reports Title	Frequency	Type
2.6 System Replacement Quality Team Internal Reviews	2.6.1.4 SRQT Process Review Outputs	SRQT Process Review Report	TBD	Formal
2.6 System Replacement Quality Team Internal Reviews	2.6.2.5 SRQT Work Product Review Metrics	SRQT Work Product Review Metrics Report	TBD	Formal
2.7 EPMO Process Compliance and Improvement	2.7.1.4.6. Report the results	EPMO Process Compliance Audit	Semi-Annual	Internal
2.7 EPMO Process Compliance and Improvement	2.7.2.4 EPMO Process Improvement Outputs	EPMO Process Compliance Improvement Report	Quarterly	Internal

L. Monthly SLA Reporting Process

The following diagram shows several layers of validations and verifications (highlighted in yellow) during the QM SLA monitoring process: