MMIS Provider System Replacement Project

Requirements Management Plan

Version 1.1

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Note: This is a sample document.

Document Revision History

Version	Date	Author	Notes
1.0	Jan. 31, 2020	Charles Goolsby	Initial version
1.1	Feb. 1, 2021	Charles Goolsby	• Provider Replacement use case diagram added • Glossary added
1.2	Mar. 9, 2021	Charles Goolsby	Traceability model diagram updated

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1 Introduction

This document presents the requirements management plan (RMP) for the State's implementation of its Medicaid Management Information System (MMIS) provider enrollment management module, the "Provider Replacement Project." The solution shall replace the State's legacy provider application and is an integral part of the State's Medicaid Management Information System Replacement program. The program is sponsored by the State's Department of Health and Human Services (DHHS).

2 Intended Audience

The Provider RMP is designed to guide business analysis activities in requirements development and requirements management for the Provider project. All of the stakeholders who are to be engaged in the business analysis process are intended to be consumers of this document.

Stakeholders include the following:

State Government Stakeholders:

- The Business
    - HHS leadership
    - Business Product Owner
    - Business unit leaders
    - Business unit staff
    - User Acceptance Testers

- Information Technology
    - Project Managers
    - Solution Architects

Federal Stakeholders

- Centers for Medicare and Medicaid Services (CMS)
    - CMS MMIS Certification auditors (review staff)
    - CMS certification contractors

Vendors:

- Module implementation vendor team
    - Project Managers
    - Business Analysts
    - Technical implementors
    - System / System Integration Testers

3 Assumptions

The following list represents assumptions that will be required to support the Provider project's business analysis activities:

1. Business analysts shall be provided with access to the legacy provider system, and associated legacy systems that are integrated with the existing Provider solution, including training/user manuals, and standard operating procedure (SOP) documentation
2. Business analysts shall be provided with access to legacy system functional documentation
3. Business analysts shall be provided with access to legacy system technical documentation, including technical manuals, administrator manuals and the system's database schema
4. Business analysts shall be provided with access to all required business stakeholders for participation in individual joint application requirements (JAR), Joint Application Design (JAD) and individual interview requirements elicitation sessions.

4 Solution Scope

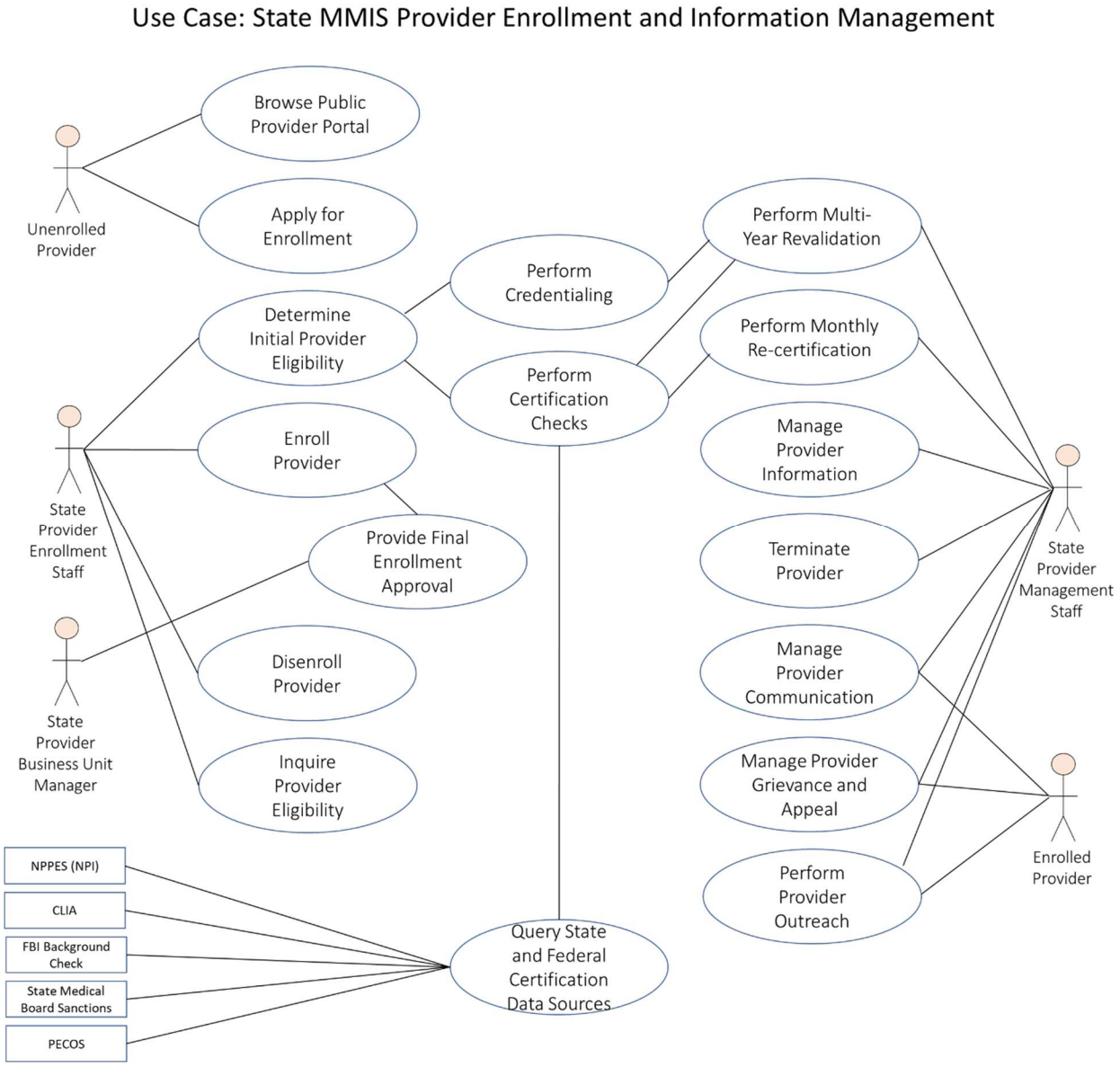

Figure 1 – State MMIS Provider Replacement Scope

The Provider Replacement Project shall implement all of the functionality that CMS requires for the Provider Enrollment and Provider Management modules of the State's MMIS enterprise solution, as defined in Medicaid Information Technology Architecture (MITA) version 3.0.

The following MITA 3.0 business processes shall be implemented int the Provider Replacement solution:

6 Eligibility and Enrollment Management
- 6.2 EE Provider Enrollment
  - 6.2.1 EE05 Determine Provider Eligibility
  - 6.2.2 EE06 Enroll Provider
  - 6.2.3 EE07 Disenroll Provider
  - 6.2.4 EE08 Inquire Provider Information

12 Provider Management
- 12.1 PM Provider Information Management
  - 12.1.1 PM01 Manage Provider Information
  - 12.1.2 PM08 Terminate Provider
- 12.2 PM Provider Support
  - 12.2.1 PM02 Manage Provider Communication
  - 12.2.2 PM07 Manage Provider Grievance and Appeal
  - 12.2.3 PM03 Perform Provider Outreach

In addition to CMS requirements for federal regulatory compliance, the Provider Replacement system shall conform in all respects with the July 24, 2018 published version of the Medicaid Provider Enrollment Compendium (MPEC). MPEC is a component of the program integrity provisions of the Patient Protection and Affordable Care Act (PPACA).

The MPEC policy manual contains detailed sub regulatory guidance and clarifications regarding how state Medicaid agencies are expected to comply with the following federal regulations at 42 CFR §455:
- Subpart B "Disclosure of Information by Providers and Fiscal Agents,"
- Subpart E "Provider Screening and Enrollment"

5 Process

5.1 Software Development Life Cycle (SDLC)

The Provider project shall follow a hybrid SDLC, that integrates portions of both the waterfall and Agile methodologies.

- Significant parts of the business analysis and requirements development work shall take place using a waterfall approach. The end-to-end definition of solution requirements shall be elaborated, verified and validated early in the project.
- Subsets of requirements shall be provided to the development and quality assurance testing teams, to support agile scrum implementation, organized by two-week development sprints.

- System/system integration (SIT) and user acceptance testing (UST) shall occur both at the end of each development sprint, and as tests of the fully integrated solution at the end of the Provider project.

5.2 CMS certification

The CMS certification process for MMIS replacement solutions provides up-to 90% reimbursement of each MMIS modular solution's design, development and implementation (DDI) costs incurred by the state. To qualify, CMS requires states to follow the Medicaid Enterprise Certification Life Cycle (MECL).

The MECL provides requirements for:

- Required document deliverables
- Extensive test results
- Detailed requirements traceability matrices (RTMs)
- Participation in several CMS certification review conferences
    - Project Initiation Milestone Review
    - Operational Milestone Review(s)
    - MMIS Certification Final Milestone Review(s)

The Provider project shall comply with all CMS MECL requirements for state Medicaid agencies (SMAs) and MMIS module solution vendors.

5.3 COTS Requirements

The Provider project is planned for implementation as a commercial off the shelf (COTS) solution. CMS encourages states to implement COTS-based MMIS solutions as a cost-effective approach to delivering solutions with a minimum of risk. These solutions are largely pre-built to manage a large portion of the functionality that the State may require. The State's unique requirements may be configured into the base solution or may be accommodated with custom programming.

COTS solutions require unique approaches to requirements definition.

Technical requirements of the customer's existing environment.

The project's business analysts must:

- Become subject matter experts (SMEs) in the base COTS solution, including:
    - Navigation
    - User Interfaces
    - Workflows
    - Reporting
    - Data structures
- Perform Fit Gap analysis
    - (to identify the level of the solution's alignment to the business need)
- Define the interfaces needed to other solutions in the customer's platform
- Identify both customer and vendor solution technical requirements, to ensure the COTS solution's compatibility with the customer's technical (installation) environment

- Requirements related to the vendor's Software as a Service (SaaS) environment (if applicable)

This diagram provides an overview of the procurement and business analysis processes that are typically used to implement COTS software solutions for State MMIS replacement projects.

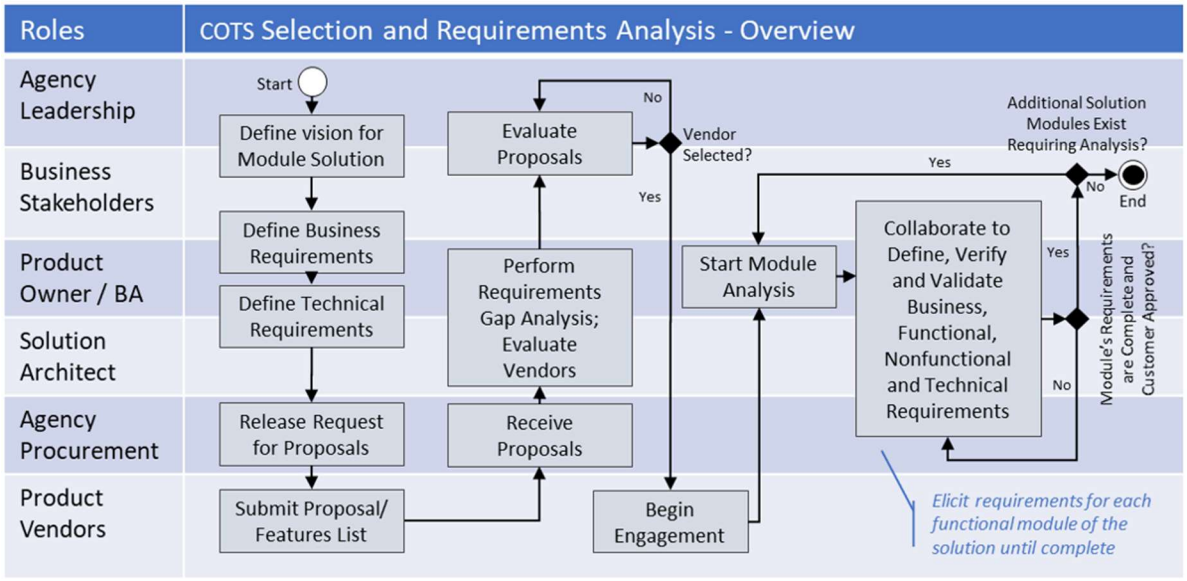

Figure 2 - COTS SDLC Overview

The COTS requirements definition process supports the configuration or custom coding needed to meet the requirements that the customer's stakeholders have defined for the solution.

5.4 Deliverables

The State's project team shall assemble the following requirements documentation in support of the Provider project:

Pre-project deliverables:

- Requirements Management Plan (this document)
- HHS Leadership's vision statement for the project (charter)
- Request for Proposal (RFP) requirements
- Contract and Statement of Work (SoW) requirements

Project deliverables:

- High-level, end-to-end as-is process definition
  - Includes use case, activity and context diagrams
- For each functional module of the proposed solution:
  - Initial assumptions (use case, activity and context diagrams)
  - Stakeholder business requirements
    - Includes decomposition of Leadership's vision
    - This requirements category may include agile epics and user stories

  - Federal and State regulatory requirements
  - Decomposition of business requirements:
    - Functional requirements
    - Nonfunctional requirements
    - Technical requirements
    - User Interface design prototypes

    Note: These artifacts will be organized into:
    - Traced electronic records in the project's automated requirements tool
    - A business requirements document (BRD)
    - A Functional (and nonfunctional) requirements document (FRD)
- Requirements Traceability Matrices (RTMs)
  - The structure of each RTM shall include the following:
    - RFP, contract and SoW requirements
    - Approved business requirements
    - Approved functional and nonfunctional requirements
    - System / System Integration test cases, test results and defects
    - User Acceptance Testing (UAT) test cases, test results and defects
  - Note: The above structure aligns with CMS expectations for MMIS solution RTMs

5.5 Requirements Tools

The State shall maintain all requirements, test cases, test results and defects data in the approved requirements tool.

Data stored within the tool shall include the following:

- RFP/Contract/SoW requirements
- Business requirements
- Functional requirements
- Nonfunctional requirements
- Technical requirements
- System / System Integration (SIT) test cases
- SIT test results and defects
- User acceptance test (UAT) cases
- UAT test results and defects

Forward and backward traceability shall be maintained across the above-listed hierarchy.

RTM files in Microsoft Excel format shall be required as deliverables to CMS. The State business analyst team shall generate the required RTM files from the project's requirements management tool.

The following table presents the RTM format that CMS typically requests to support MMIS certification.

RFP Requirements	Business Requirements	Functional Requirements	Nonfunctional Requirements	SIT Test Cases / Results	Open SIT Defects	UAT Tests / Results	Open UAT Defects
RFP Req. 1	BR 1.1	FR 1.1.1	NFR 1.1.1	SIT-TC 1.1.1.1 - Passed	SIT-OD 1.1.1.1.1	UAT_TC 1.1.1.1 - **Passed**	
RFP Req. 1	BR 1.2	FR 1.2.1	NFR 1.2.1	SIT-TC 1.2.1.1 - Passed		UAT_TC 1.2.1.1 - **Failed**	**UAT-OD 1.2.1.1.1**
RFP Req. 2	BR 2.1	FR 2.1.1	NFR 2.1.1	SIT-TC 2.1.1.1 - Failed		UAT_TC 2.1.1.1 - Failed	
RFP Req. 2	BR 2.2	FR 2.2.1		SIT-TC 2.2.1.1 - Passed		UAT_TC 2.2.1.1 - Failed	UAT-OD 2.2.1.1.1
RFP Req. 2	BR 2.3	FR 2.3.1		SIT-TC **2.3.1.1** - Failed	SIT-OD **2.3.1.1.1**	UAT_TC 2.3.1.1 - Passed	
RFP Req. 2	BR 2.4	FR 2.4.1	NFR 2.4.1	SIT-TC **2.4.1.1** - Passed		UAT_TC 2.4.1.1 - Passed	

Beige-shaded columns include the unique identifier plus the full text of each requirement

Blue-shaded columns list unique identifiers for 1-to-many related items, that may be located by CMS external to the RTM Excel file

Figure 3 – Requirements Traceability Model Example – Tabular View

This diagram describes the requirements artifacts and traceability needed to generate project RTM files.

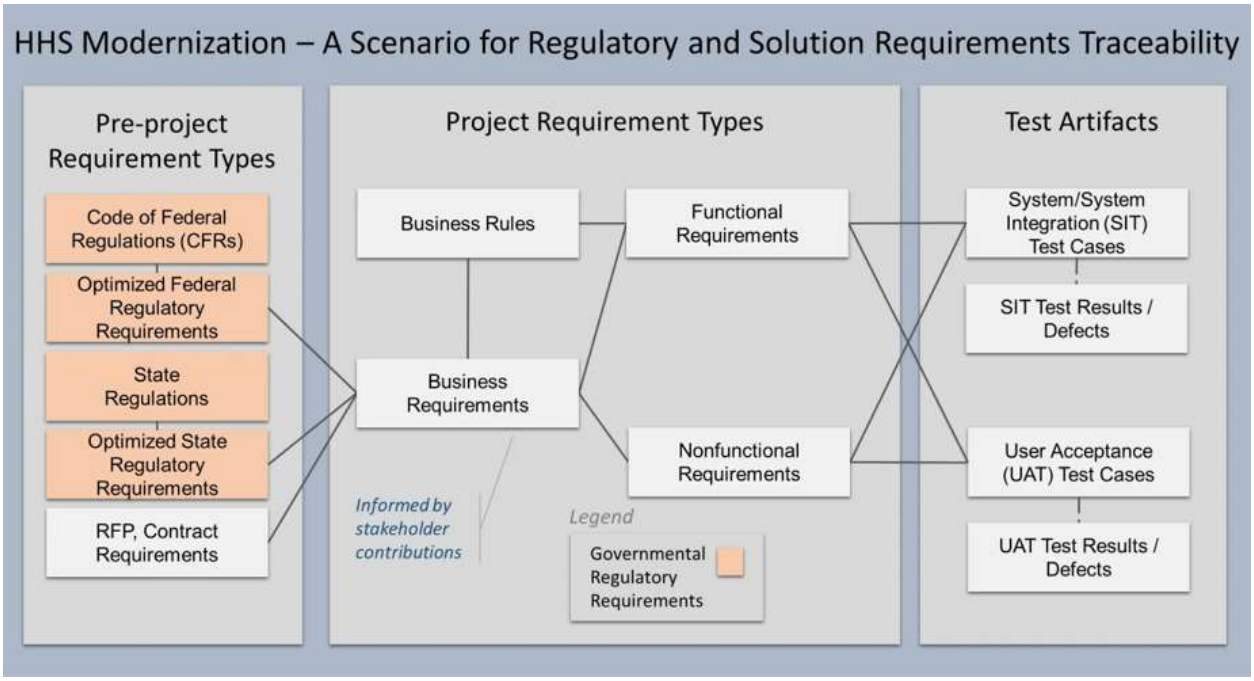

Figure 4 – Requirements Traceability Model

Note: It is not anticipated that technical requirements will be represented in the requirements traceability matrix.

The project's business analyst team shall be responsible for managing the artifacts and the traceability links that are stored in the project's requirements management tool.

Administration of the requirement s tool (e.g., configuration, user management) shall be performed by TBD State resources.

5.6 Requirements Research and Elicitation

The project's business analyst team shall engage in a structured process to research, analyze, verify and validate requirements for the proposed solution.

For each functional component of the proposed solution, the business analyst team shall:

- Research, analyze and document the functionality of the legacy *As Is* solution
- Research, analyze and document the functionality of the *To Be* solution
- Research, analyze and document applicable regulatory requirements
- Facilitate requirements elicitation sessions with business and technical stakeholders
- Document applicable business, functional and technical requirements
- Solicit requirements approval from stakeholders; remediate rejected requirements
- Solicit 'final' approval for the component's functionality from the lead business stakeholder

The following activity and use case diagrams describe this process.

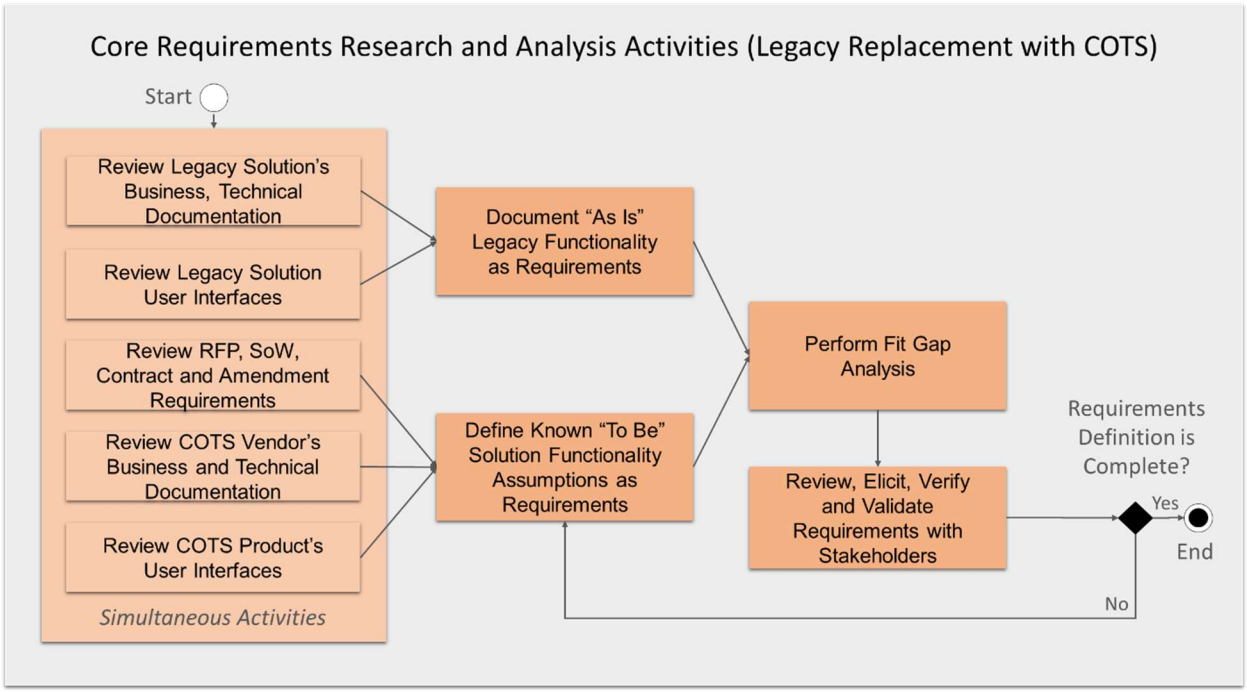

Figure 5 – Requirements research, analysis and elicitation

Stakeholder engagement during this process usually involves one or more JAR sessions. The project business analyst team will document and follow-up on all open questions and action items that result from individual and JAR session discussions with the project stakeholder community.

This diagram presents the requirements research and stakeholder elicitation activities as a business use case diagram.

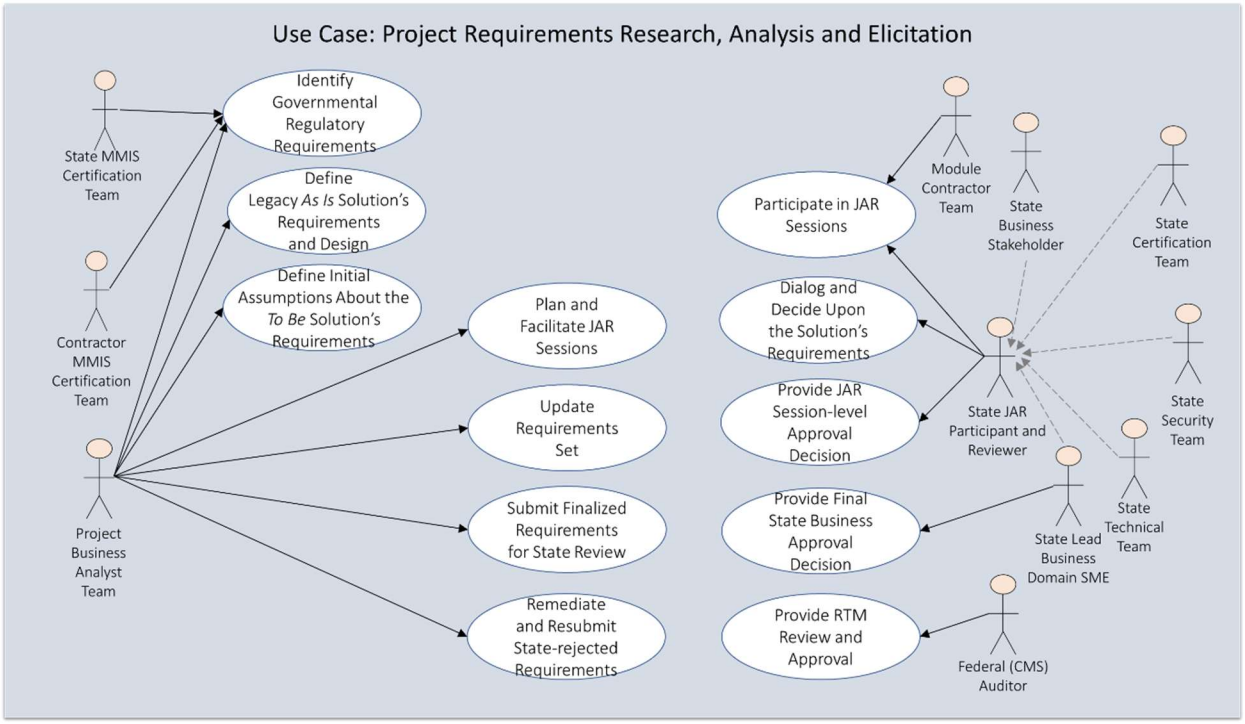

Figure 6 – Project Requirements Process Use Case

The Business-approved requirements for each functional component of the solution shall be added to the development backlog for processing into design, development and test artifacts.

5.7 Stakeholder Engagement

The project's business analyst team shall organize and facilitate the JAR sessions that are required to define the requirements for all components of the proposed solution.

The available time of the State's business and technical stakeholders is limited. Therefore, the project's business analyst team shall engage in a structured process for engaging with the stakeholder community.

It is the business analyst's responsibility to engage in the following activities in preparation for facilitating each JAR session:

- Engage Leadership and management to identify appropriate subject matter experts (SMEs)
- Thoroughly research, document and distribute information needed for each JAR session
- Provide an agenda and background information to stakeholders far in advance of each session
- Prepare to manage the JAR session using industry best practices to keep the session on-track

The business analyst team shall make every effort to use stakeholder time efficiently, including the avoidance of asking the same basic questions multiple times.

6 Requirements Review and Approval

The State's business and technical stakeholders shall review and comment on the requirements that are developed during JAR sessions and individual interviews for each component of the solution. JAR session participant stakeholders shall provide initial approach of each completed set of requirements.

The Lead Business stakeholder for each business domain that is covered by the solution shall provide final customer approval for the a given set (package) of *To Be* solution requirements.

7 Change Control

State-approved sets of requirements for this project shall be maintained as baselines. Requested changes to a baseline shall be submitted to the State's approved change control process.

8 Conclusion

The Provider Replacement Project's requirements management plan is a living document. It will be updated as needed, based on customer and stakeholder feedback, as well as lessons learned analyses.

Appendix I – Glossary

Term	Definition
CLIA	*The Clinical Laboratory Improvement Amendments of 1988* set forth certification and quality standards for clinical laboratories performing diagnostic tests on specimens. Pursuant to CLIA, any laboratory performing moderate or high complexity specimen tests must have either a CLIA certificate or be a CLIA-exempt laboratory.
CMS	*The Centers for Medicare and Medicaid Services* – CMS is an agency within the US Department of Health and Human Services (HHS). Among other work, CMS manages and largely funds the effort to modernize MMIS systems across the US.
COTS	*Commercial Off the Shelf Software d*escribes a category of software products that have been pre-built to handle what is typically a complex set of business needs. COTS-based solutions reduce the risks involved in large-scale custom software development. For MMIS replacement initiatives,
MMIS	*Medicaid Management Information System* – Each state and territory of the US, plus the District of Columbia, manages its Medicaid program through an integrated platform of software modules.
MMIS Replacement	CMS manages a national program to fund the modernization of legacy MMIS systems, many of which have been in operation for 30-to-40 years.
MPEC	*Medicaid Provider Enrollment Compendium* – This document contains sub regulatory guidance guiding all aspects of the Medicaid Provider enrollment process. MPEC is the most important source of requirements for MMIS replacement-based provider enrollment functionality.
NPPES	*National Plan and Provider Enumeration System* – This federal program maintains unique identifiers for healthcare service providers. Medicaid Provider certification and re-certification requires that state Medicaid agencies verify a provider's compliance with NPPES requirements, as defined in the Medicaid Provider Enrollment Compendium (MPEC).
PECOS	*The Medicare Provider Enrollment, Chain, and Ownership System* - supports the Medicare Provider and Supplier enrollment process by allowing registered users to securely and electronically submit and manage Medicare enrollment information. PECOS is used to confirm whether a Medicaid provider (or enrollee) is also enrolled in the Medicare providers system.