

Integration Plan (Sample)

Optum Rx will develop a comprehensive solution Integration Plan, in close collaboration with the State and vendors who are essential for a smooth implementation. This plan describes a strategy to achieve modularity, how the Pharmacy solution will interact and provides a fully functional system that operates as one module of the interconnected MMIS.

The solution Integration Plan includes, but is not limited to:

- Requirements Traceability Matrix – An interim document that links requirements throughout the requirements validation process showing how the State's requirements, user stories, and use cases will be certified as functional and complete during solution configuration.
- Solution requirements documentation including the business requirements document
- System requirements specifications for features, epics, and user stories
- Configuration elements such as business rules
- Reporting - dashboards, reports, cadence
- Interface specification documents
- System architecture, including security, database designs, and process flows

Georgia Integration Plan

Prepared by: Optum Rx

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Contents

Revision log	2
Contents	3
Figures	4
Tables	5
1 Introduction	6
2 Test phases	8
2.1 System integration testing	8
2.1.1 SIT scope and approach	8
2.1.2 SIT environment	8
2.1.3 SIT test data	9
2.1.4 SIT execution	9
2.1.4.1 SIT test case creation and tracking	9
2.1.4.2 SIT defect tracking and resolution	9
2.1.5 SIT reporting	11
3 Notification of stakeholders	11
3.1 Internal communications:	11
3.2 External communications:	11
4 Operational readiness	12

Figures

Figure 3: Defect detail worksheet.....	10
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Tables

Table 1: Optum Rx defect severity levels..... 10

1 Introduction

The Integration Management Plan is included within the Project Management Plan and details the process to identify, combine and coordinate various project management activities and processes determined by the PMBOK® Guide. Management of integration processes includes a series of actions for identification, consolidation, and unification of the project activities critical to achieving success and meeting stakeholders' expectations. The integrative management processes refer to making choices regarding concentrating resources, anticipating potential issues, dealing with risks, and coordinating workflows for successful project completion.

When the manager is able to address most integration management issues, this person unifies and coordinates the constraints (time, cost and risk) and finds effective solutions.

It is important that the approach to managing the projects' scope be clearly defined and documented in detail.

With the successful integration of administrative, supporting, and delivery processes, the following activities may be ensured:

- Management and coordination of activities in the project schedule
- Reinforcing ownership and accountability at all requirement levels and making sure project conforms to schedule and budget
- Providing frequent and accurate status reporting and other communications
- Establishing effective identification and reporting metrics that support decision-making and corrective action planning

The Integration Plan below describes and documents the processes, and testing strategies that Optum Rx employs to verify that the solution meets the design specifications. This plan document addresses each phase of testing, including, Unit Testing, System Integration Testing, and User Acceptance Testing.

The purpose of the Integration Plan is to:

- Describes how the Requirements Traceability Matrix will provide a cross-reference to specific test cases used to confirm that each requirement has been successfully tested
- Describes the testing tools and defect resolution tracking methods to be used
- Describes how Optum Rx will establish a test environment separate from the production environment
- Describes how accessibility compliance with federal and State requirements including, but not limited to the Americans with Disabilities Act (ADA) will be tested
- Describes which activities will be conducted by Optum Rx on site
- Describe the process for notification of all stakeholders of the timelines for system implementation and any training or responsibilities of theirs for pilot testing or interface testing
- Provide a description of the systems and end-user documentation, guides, and manuals that will be used
- Describe how Optum Rx will assist with the creation of a test deck for regression testing and professional certification during user acceptance testing
- Processes for rules-based solution testing and validation

- Demonstration of functionality of all interfaces and web messaging
- Population of the rules-based solution repository

2 Test phases

2.1 System integration testing

This subsection describes the System Integration Testing (SIT) process that will be conducted by Optum Rx and will occur prior to the deployment of the PBMS solution.

2.1.1 SIT scope and approach

During SIT, applications are tested to ensure that they perform in accordance with defined and accepted business rules and properly operate with other supporting systems and applications. This is where a considerable amount of the testing time and effort will be expended. In cooperation with operations staff, Optum Rx project staff (i.e., Project Managers and Business Analysts) who are familiar with the applications, contract requirements, and business rules write test cases and run the tests.

A summary of the application-specific business rules, included in the Detailed System Design (DSD) document, is available on the <Enter location> at the following location: <Enter URL location>.

The individual POS business rules are available on the <Enter location> at the following location: <Enter URL location>.

The Requirements Traceability Matrix (RTM) is used to track contract requirements, linking each requirement to test cases that are created for those requirements. Requirements that do not require a SIT test case are denoted as such in the RTM (i.e., "Demonstrable"), allowing test coverage to be tracked within the framework of the RTM. Conversely, requirements that are deemed to require a SIT test case are labeled as "Testable". These designations are approved by <Enter Client/State> through a joint Optum Rx/<Enter Client/State> vetting process. The RTM is available on the <Enter location> at the following location: <Enter URL location>.

The RTM will be updated with test case numbers and their status (Pass / Fail) at the end of SIT.

Alternate methods are employed to demonstrate compliance with contract requirements and service level agreements for any RTM item that is not considered testable. Optum Rx creates exit criteria that must be met to ensure that all requirements are adequately evaluated and accepted prior to moving an application to the next phase of testing.

Optum Rx uses experienced internal operations staff members who are familiar with the operation of the PBMS components during SIT, which will occur in <Enter location>. In the event of delays or resource conflicts, operational staff assisting other client accounts may be available to aid in the test effort to prevent schedule delays. No training or knowledge transfer activities are conducted during this phase of testing.

Regression testing is conducted as part of SIT to ensure that defect corrections and new functionality do not cause unexpected behaviors in the application, as a whole, prior to the application being released into the next phase of testing.

2.1.2 SIT environment

SIT is conducted in the Certification test environment by Optum Rx Quality Assurance (QA) Analysts/Testers and Pharmacists. The test environment is set up to mimic the future production environment as much as possible, including the same editions and versions of system containers, reference libraries, and basic operating system security settings. Section 2.1.3 of this test plan provides additional detail on the data that will be supplied to this test environment.

2.1.3 SIT test data

Since production data is readily available, provides realistic production conditions, and is relatively consistent, this will be the primary source of test data during SIT. <Enter Client/State> Medicaid system contractors may use protected health information (PHI) for internal testing with covered entities as part of health care operations activities (HIPAA Privacy Rule 45 CFR 164.501). HIPAA training is provided for any employee that may come into contact with production data and the same privacy and confidentiality safeguards used during production are implemented for testing, including user authentication, role-based security and secure data handling and data transfer methodologies. SIT test cases containing PHI will be stored electronically in <Enter location>, which was requested by <Enter Client/State>.

If necessary, other sources of data will be used to supplement SIT in specific situations. Data may be manually created to test specific scenarios that are not normally encountered in daily operations but would reasonably be expected to occur. For instance, data might be manually produced to supplement SIT to ensure a desired variety of errors is achieved. One example would be if a user enters “abcd” into a field identified as numeric to determine that data checks are in place and working as expected.

Production data would also include any reference data that may be required for applications being tested. This might include pricing files, eligibility files and other common reference data. In this case, recent production reference files obtained from <Enter Client/State> will be used.

2.1.4 SIT execution

This subsection describes the process of test execution, test tracking and defect management. The descriptions in this section are applicable across all applications, unless otherwise noted.

2.1.4.1 SIT test case creation and tracking

Contract requirements, applicable national and state standards, the DSD document, Functional Requirement Document (FRD) Use Cases, and business processes drive the design of test cases. Test cases are then mapped to the individual contract requirements, and the test case ID is logged in the RTM for the purposes of tracking and determining test coverage, as previously described in the scope and approach to SIT.

Each individual test case contains a title identifying the application and phase of testing. The document header contains information on the version of the application being tested, any associated tracking numbers, the test status, date, and test case ID. The header also includes a comments section containing a brief summary of the functionality found in the screens referenced in the test case. The test case also includes numbered step-by-step instructions with the expected response for each step and space for documenting the results of each step. Testers include screenshots and the pass/fail results of each step for QA purposes.

Test cases are saved as word documents and are stored in a central repository by phase and application. Authorized users are given access to the repository as appropriate. **Error! Reference source not found.** shows a sample of the Optum Rx test case format.

2.1.4.2 SIT defect tracking and resolution

Optum Rx follows an established process for addressing defects to ensure that defects are handled consistently. The main objectives of the defect identification process are to:

- Document the defects to be investigated
- Classify the defect according to the degree of severity

- Prioritize the defect
- Develop and implement the corrective action
- Ensure that the defect is corrected efficiently and correctly
- Document the results of the retest

The JIRA application is used to track defects found during the testing process. Test incidents or defects are identified by the testers. A “ticket” is created in JIRA for each defect, which includes a description of the defect and any pertinent documentation from the failed test. Each ticket is automatically assigned a unique ID number by the system. The ID number is then logged in the test case and the application-specific Test Plan Matrices. Rework is conducted, and the defect resolution is logged in JIRA against the defect ticket. Failed test cases are retested using the original test case. Test cases are versioned to be able to link test cases together.

Defect reporting is created using JIRA’s native reporting functionality. This includes the date the defect was first identified, a brief and thorough description of the defect, the severity of the defect, the status of the defect, the date of the anticipated retest to verify resolution of the defect, and a description of the anticipated regression testing required as a result of the defect being resolved. Defect reporting is included in the Master Test Plan Matrix. **Figure 1** shows a sample of the Defect Detail worksheet.

Application	Defect #	Test Case ID	Submit Date	Summary of Defect	Severity	Status	Date of Retest	Description of Regression Testing	Resolution Date

Figure 1: Defect detail worksheet

Each defect is assigned a severity and priority level by the Optum Rx QA Analyst/Tester. These levels are used to prioritize defect resolution by the technical team. By assigning the most critical defects for rework first, this ensures that technical resources are addressing critical issues that affect system functionality before addressing less critical issues.

The level of severity is an objective measure. The impact of the defect is placed into one of the three categories listed in the following table, **Table 1: Optum Rx defect severity levels**. Optum Rx will schedule meetings with <Enter Client/State> staff during SIT to review the severity levels for all defects that are identified. <Enter Client/State> will have final authority on defect severity in case of a dispute. **Table 1** below depicts the defect severity levels.

Table 1: Optum Rx defect severity levels

Severity Level	Description
Catastrophic	The defect prevents or has the potential of preventing the system or application from meeting most of the client requirements. Appropriate where there is widespread system impact to the extent that testing is halted.
Major	The defect prevents a major function of the system or application from meeting the client’s requirements, but there is an effective work around to meet these requirements. Appropriate for instances where service or delivery has been impacted although not completely disabled and workaround procedures are available to fix the problem.
Minor	The defect prevents a minor function of the system or application from meeting the client’s requirements. Appropriate for instances where minor functions are disabled, but service or delivery is not affected.

2.1.5 SIT reporting

Test cases and Test Plan Matrices for Phase 2 of the project are available on the <Enter location> at the following location: <Enter URL location>.

These are uploaded on a weekly basis prior to the start of business on Mondays. Weekly meetings are scheduled with <Enter Client/State> during SIT to review test results and defects.

At the end of SIT, a Final System Integration Test Report will be delivered to <Enter Client/State>. This report will be an executive level summary of the testing process, as well as the results.

3 Notification of stakeholders

<Enter Client/State> project stakeholders will be notified of the timelines for system implementation, training, and testing responsibilities via email, as well as during scheduled and ad-hoc meetings. All communications with internal and external stakeholders will be conducted according to the approved <Enter Client/State> Communication Plan, which is available on the <Enter Location> at the following location: <Enter URL location>. Internal project stakeholders include Optum Rx and <Enter Client/State> staff. External project stakeholders include third parties outside of Optum Rx and <Enter Client/State>, such as providers, manufacturers, managed care organizations (MCOs), and sister agencies (if necessary).

Stakeholder notifications will be distributed specifically for the following testing-related activities:

- Testing milestones, deliverables, and key activities – <Enter Client/State> staff, according to the Communications Plan
- POS system pilot testing – Communications to pharmacy providers participating in pilot testing
- MCO interface testing – Communications with MCOs participating in testing
- User Acceptance Testing – Training materials and technical design documents (DSD, FRD documents and Use Cases) for <Enter Client/State> staff

3.1 Internal communications:

Like other communications associated with testing activities, internal communications will be conducted according to the approved Communication Plan. These will consist of emails and other written communication, as well as verbal communications. The weekly testing meeting is used to discuss open topics related to testing. The meeting minutes / notes from these meetings are distributed to attendees and other stakeholders, including appropriate <Enter Client/State> staff.

3.2 External communications:

- External stakeholders are individuals associated with testing activities, but not necessarily included in the Communication Plan, such as providers, manufacturers, and managed care organizations (MCOs)
- Other <Enter Client/State> staff not directly participating in the project, but who have an interest in following implementation activities may also be external stakeholders, such as sister agencies (if necessary)

Refer to the Communication Plan, the Training Plan, and the Implementation Plan for additional information on timelines and the notification process. These documents are available on the Project Portal at the following location: <Enter URL location>.

4 Operational readiness

The Implementation Plan will describe the activities directly associated with the cutover to the <Enter Client/State> PBMS solution. The Implementation Plan will be available on the <Enter location> at the following location: <Enter URL location>.