



March 30, 2015

MEMORANDUM FOR: JOHN T. EDGAR
VICE PRESIDENT, INFORMATION TECHNOLOGY

MICHAEL J. AMATO
VICE PRESIDENT, ENGINEERING SYSTEMS

E-Signed by Kimberly Benoit 
VERIFY authenticity with eSign Desktop



FROM: Kimberly F. Benoit
Deputy Assistant Inspector General
for Technology, Investment and Cost

SUBJECT: Management Alert – Retail Systems Software Application
Requirements (Report Number IT-MA-15-002)

This management alert presents the results of our review of the U.S. Postal Service's Retail Systems Software Application Requirements (Project Number 15TG003IT000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Aron Alexander, director, Information Technology, or me at 703-248-2100.

Attachment

cc: Corporate Audit and Response Management

Introduction

We are issuing this management alert to provide U.S. Postal Service management with insight into issues discovered during our self-initiated review of Retail Systems Software Application Requirements (Project Number 15TG003IT000). Since the Postal Service started the next Retail Systems Software (RSS) deployment phase in February 2015, we are notifying management of our findings so they can take timely action to ensure future testing of the application is more comprehensive. Our objective is to determine whether the Postal Service performed proper testing of the RSS application to ensure compliance with defined system requirements.

RSS is the common platform the Postal Service is developing to reduce the number of vendors involved in its retail solutions and lower operational and maintenance costs. RSS will replace current software applications that support the full-service Point of Service (POS), Self-Service Kiosks (SSK), and Contract Access Retail System (CARS) retail locations, as well as the Integrated Retail Terminal and other manual processes. RSS is based on a commercial off-the-shelf software package and will only replace the software – the hardware will remain the same. The Postal Service will use RSS at all existing and new retail locations (full-service, self-service, and other alternative retailers that sell postal products and services).

RSS consists of three components that support each retail location type: POS, SSK, and CARS; and management is developing each component separately. As of December 2014, the Postal Service has tested the POS full-service component and deployed it to 396 of the 700 planned pilot sites. The Postal Service plans to deploy the full-service POS component nationally to 17,219 sites between February and December 2015. The second component, SSK, is in the development phase and has not been tested yet and the third component, CARS, is in the planning activities stage.

In August 2013, the Postal Service's Information Technology (IT) organization required use of the Agile Scrum¹ method for all new technology and application development efforts. The Postal Service is developing RSS based on the Technology Solutions Life Cycle (TSLC)² methodology, which leverages Agile Scrum to standardize development and testing processes for all applications prior to deployment into the production environment. In October 2013, Postal Service IT and Engineering executive management acquired testing responsibilities for RSS. There are two primary groups responsible for testing the functional requirements associated with RSS – the St. Louis

¹ The Agile approach is a software development methodology that breaks a release into smaller shorter cycles of 1 to 6 weeks called Sprints. Scrum is a project management methodology that facilitates agile software development and enables the creation of self-organizing agile teams.

² TSLC is the Postal Service's systems development life cycle methodology used to develop and implement technology solutions such as software development.

IT Solutions Center conducts System Integration Test (SIT)³ testing and Engineering Delivery and Retail Systems conducts Customer Acceptance Test (CAT)⁴ testing.

Development of System Integration Test and Customer Acceptance Test Testing

The RSS, SIT, and CAT teams did not follow and were not aware of the TSLC Agile Scrum process and Handbook AS-805⁵ requirements for planning and testing the application. These policies require the SIT and CAT teams to follow the TSLC Agile Scrum process when creating their formalized testing documentation.

For example, the SIT team did not:

- Develop sprint SIT scripts⁶ that included documented test scenarios outlining input data, sequence of test steps, and expected output values.
- Validate its sprint test results to user stories⁷ to ensure all documented requirements were met.

In addition, the CAT team did not develop a sprint CAT strategy⁸ to provide overall system development guidance for the project.

These issues occurred because management did not provide training and instructions to develop SIT and CAT testing that aligns with the TSLC Agile Scrum process and Handbook AS-805 policy requirements. We note, however, that some documentation existed to support completed testing. Without consistency in the development of SIT and CAT testing, the application may not be fully vetted, creating the risk of system failure, impacting productivity, or resulting in financial loss to the Postal Service.

³ The SIT process validates the technology solution and determines whether its features conform to technology solution design specifications and requirements. SIT occurs before the software is released to CAT.

⁴ The CAT process validates the technology solution for the business owner (customer) and determines whether its components conform to the approved technology solution requirements prior to deployment.

⁵ Handbook AS-805, *Information Security*, Section 8-1, Policy, requires that information resources be developed under the TSLC or other approved system development life cycle methodology.

⁶ Sprint SIT scripts are documented test scenarios that outline input data, sequence of test steps, and expected output values, which could be on screens, in reports, etcetera. Once test scenarios have been developed, the SIT team will walk through all scenarios to ensure that requirements are thoroughly tested.

⁷ A user story is a document that relays what functionality the system needs based on business requirements.

⁸ The Sprint CAT Strategy is created in the early phases of system development and supports the project's generation-developing documentation and guidance.

Recommendations

We recommend the vice president, Information Technology, direct the manager, St. Louis Information Technology Solutions Center, to:

1. Implement and provide training and instructions to the Retail Systems Software System Integration Test (SIT) team on the Technology Solutions Life Cycle Agile Scrum testing process, as well as the requirements in Handbook AS-805, *Information Security*, to ensure the team follows the process when developing SIT testing.

We recommend the vice president, Engineering Systems, direct the manager, Delivery and Retail Technology, to:

2. Implement and provide training and instructions to the Retail Systems Software Customer Acceptance Test (CAT) team on the Technology Solutions Life Cycle Agile Scrum testing process, as well as the requirements in Handbook AS-805, *Information Security*, to ensure the team follows the process when developing CAT testing.

Management's Comments

Management agreed with our findings and recommendations. In response to both recommendations, management will provide the RSS, SIT, and CAT teams with training and instructions on the TSLC Agile Scrum testing process and Handbook AS-805, *Information Security*, requirements. Management's target implementation date is April 30, 2015. See [Appendix A](#) for management's comments, in their entirety.

Evaluation of Management's Comments

The U.S. Postal Service Office of Inspector General (OIG) considers management's comments responsive to the recommendations and corrective actions should resolve the issues identified in the report.

Appendix A. Management's Comments

JOHN T. EDGAR
VICE PRESIDENT
INFORMATION TECHNOLOGY



March 24, 2015

Lori Lau Dillard
Director, Audit Operations

SUBJECT: Retail Systems Software Application Requirements (Report Number
IT-MA-15-DRAFT)

Recommendation [1]:

Implement and provide training and instructions to the Retail Systems Software System Integration Test (SIT) team on the Technology Solutions Life Cycle Agile Scrum testing process as well as the requirements in Handbook AS-805, *Information Security*, to ensure the team follows the process when developing SIT testing.

Management Response:

St. Louis Solution Center agrees with the recommendation.

The St. Louis Solution Center management team recognizes the gap associated with RSS SIT Team's knowledge of TSLC Agile Scrum and Handbook AS-805 processes. This is an education/awareness issue with new members of the RSS SIT team not having a good understanding of the TSLC Agile Scrum and AS-805 processes. The RSS SIT Team will be trained in the Technology Solutions Life Cycle Agile Scrum testing process and the necessary Handbook AS-805, *Information Security*, requirements.

Target Implementation Date:
April 30, 2015

Responsible Management Official:
Manager, St. Louis Solutions Center



John T. Edgar
Vice President, Information Technology

cc: Mgr, Corporate Audit Response Management

MICHAEL J. AMATO
VICE PRESIDENT
ENGINEERING SYSTEMS



March 24, 2015

LORI LAU DILLARD
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Retail Systems Software Application Requirements
(Report Number IT-MA-15-DRAFT)

Engineering Systems and Information Technology have reviewed the subject draft audit report. In general, we are in agreement with the report's recommendations.

Recommendation 2:

Implement and provide training and instructions to the Retail Systems Software Customer Acceptance Test (CAT) team on the Technology Solutions Life Cycle Agile Scrum testing process as well as the requirements in Handbook AS-805, Information Security, to ensure the team follows the process when developing CAT testing.

Management Response:

Engineering Systems agrees with the recommendation.

- Delivery and Retail Technology CAT team works very closely with the St. Louis IBSSC SIT team to test complete releases in the CAT environment due to complexity and inter-dependencies of the RSS application. This ensures thorough testing of the RSS application for every software release. Further, the CAT team is knowledgeable of Chapter 8 of the AS-805 Handbook and continually reviews the subject requirements to ensure CAT processes are in compliance.
- Management recognizes that the CAT team will benefit from increasing team's knowledge of the TSLC Agile Scrum and AS-805 processes through training and better alignment of the test activities.

Target Implementation Date:

Training targeted for 4/30/2015

A handwritten signature in blue ink, appearing to read "Michael J. Amato", written over a horizontal line.

Michael J. Amato
Vice President, VP Engineering Systems

cc: Mgr, Corporate Audit Response Management

8403 LEE HIGHWAY
MERRIFIELD VA 22082-8101
703-280-7001