



**OFFICE OF
INSPECTOR GENERAL**
UNITED STATES POSTAL SERVICE

**Retail Systems
Software
Deployment
and
Functionality**

Audit Report

Report Number
MI-AR-15-002

March 13, 2015





OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

Highlights

Background

The U.S. Postal Service Office of Inspector General (OIG) conducted a self-initiated audit of Retail Systems Software (RSS). RSS is a new software solution that replaces existing retail point-of-service software, including software used in Post Office self-service kiosks.

In January 2012, the postmaster general approved \$68.6 million to deploy RSS to post offices by the end of fiscal year (FY) 2013, but RSS was only deployed at four sites by that time. Deployment to pilot sites occurred primarily from May to September 2014. The deployment schedule has been revised, with full deployment now planned for December 2015.

In August 2014, the vice president, Engineering Systems, requested an additional \$28.6 million for a help desk, other program development and implementation expenses, and a data conversion tool. This increased investment in RSS to over \$97 million and reduced the expected return on investment from 41.3 percent to negative 9.8 percent and extended the deployment by 25 months to December 2015.

Management extended point-of-service, self-service kiosk, and contract access retail system software contracts through FY 2015 to accommodate deployment delays, at a cost of over \$37 million.

Our objective was to review and evaluate the national deployment plan and functionality of RSS.

Click the login screen to see some of the key functions of the Retail Systems Software.



During our 16 site visits we found an average of three functionality issues per site that required a workaround process.

What the OIG Found

Functionality issues delayed completion of the pilot. In addition, management stopped RSS deployment in December 2014 because of an unrelated temporary national freeze on information technology deployment. RSS was deployed at only 396 of the 700 planned pilot sites as of December 2014.

The Postal Service now plans to deploy RSS at 17,219 sites between February and December 2015. In January 2015, 1 month before deployment begins, management plans a 50-site test of the Office Data Import tool, which converts point-of-service data for import into RSS. Management does not know if Office Data Import tool testing will be successful or if it will affect the start of the national deployment.

During our 16 site visits we found an average of three functionality issues per site that required a workaround process. These issues included screen freezes, money order transaction errors, processing surcharges, and a lack of application for

international mail restrictions concerning height and weight and currency conversion. The RSS help desk also needs improvement. Inadequate functionality and help desk support can adversely affect the customer experience, the national deployment timetable, and users' confidence in RSS.

The current deployment schedule is aggressive, making successful deployment in 2015 challenging. In addition, existing and future functionality issues may require more funding, which would further reduce the expected return on investment.

What the OIG Recommended

We recommended management complete the RSS pilot in retail offices, demonstrate self-service kiosk functionality, correct user-related functionality issues before initiating a national deployment, and evaluate and establish metrics to ensure the RSS help desk is adequately staffed with knowledgeable personnel and is able to support national deployment.

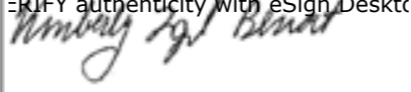
Transmittal Letter



OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

March 13, 2015

MEMORANDUM FOR: MICHAEL J. AMATO
VICE PRESIDENT, ENGINEERING SYSTEMS

E-Signed by Kimberly Benoit
VERIFY authenticity with eSign Desktop


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

SUBJECT: Audit Report – Retail Systems Software Deployment and
Functionality (Report Number MI-AR-15-002)

This report presents the results of our audit of Retail Systems Software Deployment and Functionality (Project Number 15TG002MI000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Michael Thompson, director, Major Investments, or me at 703-248-2100.

Attachment

cc: Corporate Audit and Response Management

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Findings

RSS is a commercial off-the-shelf (COTS), single software solution capable of providing point-of-sale business functionalities that support all physical retail channels.

RSS deployment was delayed by 25 months because of complexity and functionality issues.

Because of functionality issues, the Postal Service was not able to deploy RSS at all 700 pilots by September 2014.

Introduction

This report presents the results of our self-initiated audit of Retail Systems Software Deployment and Functionality (Project Number 15TG002MI000). Our objective was to review and evaluate the U.S. Postal Service's national deployment plan and functionality of Retail Systems Software (RSS). See [Appendix A](#) or additional information about this audit.

RSS is a commercial off-the-shelf (COTS), single software solution capable of providing point-of-sale business functionalities that support all physical retail channels. RSS will replace Point-of-Service (POS) ONE, Self-Service Kiosks (SSK), and Contract Access Retail System (CARS) software. Implementation of a single software solution is projected to reduce annual maintenance support costs by \$69.8 million through fiscal year (FY) 2019. Other benefits include a more efficient closeout process and reinforcement of Postal Service policies, such as prompting sales and service associates (SSA) to ask customers whether they are mailing hazardous materials.

During implementation, the Postal Service underestimated the complexities of interfacing RSS with Postal Service systems and requested an additional \$28.6 million, bringing the total RSS investment to over \$97 million. RSS deployment was delayed by 25 months because of complexity and functionality issues. The delay caused the Postal Service to extend existing support contracts for POS, SSKs, and CARS through FY 2015, at a cost of over \$37 million. RSS was supposed to reduce net annual contract, licensing, and support costs by \$29.7 million (in FY 2015) and to produce a return on investment (ROI) of 41.3 percent. However, these delays have reduced the projected ROI to a negative 9.8 percent.¹

Conclusion

The current RSS deployment schedule is too aggressive because of the limited experience with the decreased pilot sites, identified functionality issues, help desk issues, and the testing of the Office Data Import (ODI) tool just 1 month before the projected national deployment.

Because of functionality issues, the Postal Service was not able to deploy RSS at all 700 pilots by September 2014. The Postal Service stopped the RSS pilot in December 2014, after deploying the technology to 396 sites. No SSK sites were tested because management gave retail sites priority. Even though pilot testing was not completed, the Postal Service plans nationwide RSS deployment at 17,219 sites between February and December 2015.

Deployment

The Program Management Office (PMO) planned to deploy RSS to POS terminals at 700 pilot sites between May and September 2014. However, RSS was only deployed at 396 sites because of functionality issues. RSS had to be redeployed at 31 of the 396 sites (8 percent), due to human error,² connectivity issues, or employees' failure to follow RSS pre-deployment instructions. The vice president, Engineering Systems, stated that the Postal Service stopped RSS pilot deployment because of an unrelated temporary national freeze on information technology (IT) deployment.

The PMO plans to complete nationwide RSS deployment by December 2015, 25 months later than the original date. Because of this delay, the Postal Service extended the support contract for POS through FY 2015, at a cost of over \$17 million. It cannot extend the contract beyond September 2015, without a modification and additional funding.

¹ ROI is based on a projected cash flow through FY 2019.

² Human error is omission of a manual step in the conversion to transfer over data; this causes financial discrepancies identified the morning after conversion.

Inadequate functionality and help desk support can adversely affect the customer experience, the national deployment timetable, and user confidence in RSS.

RSS national deployment is scheduled to begin in February 2015, for 17,219 sites. The PMO plans deployment at 16 to 198 sites each night over a period of 158 nights, for an average RSS deployment of 109 sites a night.³ During the pilot phase management never deployed the RSS at more than 39 sites in a single night. The average redeployment rate was 8 percent during pilot testing. Assuming this 8 percent rate continues, the RSS might have to be redeployed at 1,378 sites during national deployment. In addition, there is an increased risk that help desk support will be inadequate for this rapid deployment. Adequate help desk staffing and well-trained help desk personnel are critical to meeting this aggressive deployment schedule, maintaining user confidence in RSS, and ensuring a positive retail customer experience.

In January 2015, just 1 month before the nationwide RSS deployment begins, the PMO plans to deploy RSS to 50 sites to test the ninth version of the ODI tool. The ODI tool converts POS data and imports it into RSS.⁴ At this time, management does not know if this test will affect the national deployment schedule.

RSS is intended to support all retail channels, including SSKs, but no SSKs were included in the pilot because retail sites were given priority. The program manager for change management stated that the SSK deployment schedule has not been finalized, but that deployment will begin in 2015. The SSK service support contract has been extended until September 2015 at a cost of \$17 million. If RSS deployment to SSKs goes beyond September 2015, the support contract will need to be extended again, at an additional cost that will further reduce the ROI for the project.

Functionality

At the August 13, 2014, Investment Review Committee meeting, the vice president, Engineering Systems, said there were no critical issues preventing successful RSS implementation. He based this on the assessment by two third parties; however, the Postal Service deployed RSS at only 396 of the planned 700 sites because of functionality issues. In November 2014, the vice president stated that the Postal Service stopped RSS pilot deployment because of an unrelated temporary national freeze on IT deployment. During our 16 site visits we found an average of three impacted functions per site, including:

- Screen freezes:
 - Customers must wait for RSS to resolve the freeze or for the SSA to restart the system.
- Money orders:
 - When one customer purchases multiple money orders, the first money order is correct, but subsequent orders are overwritten with the information from the previous money order. This is a defect in the RSS software. According to the RSS executive team leader, this issue has been corrected, but we have not verified this correction.
 - There is an inability to modify money order transaction data. The system does not allow edits during the transaction; instead, clerks must cancel the transaction and start a new one. This is a defect in the RSS software. According to the program manager for change management, this will be corrected during the R102 software release in January 2015.

³ 17,219 sites divided by 158 nights of deployment.

⁴ On the night of conversion after the office closes and transmits its POS data, the ODI tool converts and imports the data into RSS.

- Non-machinable mail surcharge fee:
 - Product configuration was not completed.⁵ As a result, surcharge fees are not automatically included in the postage strip as they are in the current POS system. Instead, customers purchase stamps to pay this fee. The RSS executive team leader said the R102 software release will correct this defect in January 2015.
- Size and weight limitations and special drawing rates:⁶
 - These international mail functions are in the current POS system and were not required in RSS. According to the program manager for change management, the requirement has been changed and these functions will be added at a future date.
- SSAs at 11 of the 16 sites we visited said the RSS help desk needs improvement. Specifically, the SSAs reported the following experiences, with the numbers in parenthesis indicating the number of times the issue occurred:
 - Help desk could not resolve issue (4)
 - Excessive time on hold (3)
 - Help desk employees need more training on RSS (4)
 - Untimely help desk response (next day or later) (1)
 - Help desk is helpful (1)

Inadequate functionality and help desk support can adversely affect the customer experience, the national deployment timetable, and user confidence in RSS.

⁵ An on-screen button was created but not configured with the product information.

⁶ Currency conversion rates for customs documents.

Recommendations

We recommend management complete the RSS pilot in retail offices, demonstrate self-service kiosk functionality, correct user-related functionality issues before initiating a national deployment, and evaluate and establish metrics to ensure the RSS help desk is adequately staffed with knowledgeable personnel and is able to support national deployment.

We recommend the vice president, Engineering Systems:

1. Deploy Retail Systems Software at the remaining 304 pilot sites, demonstrate self-service kiosk functionality, and correct any user-related functionality issues before initiating a nationwide deployment.
2. Evaluate and establish metrics to ensure the Retail Systems Software help desk is adequately staffed with knowledgeable personnel and is able to support national deployment.

Management's Comments

Management agreed in part with the recommendations.

In response to recommendation 1, management stated that they have converted an additional 348 sites since national deployment and indicated they are developing the SSK, with a demonstration scheduled for January 2016. Additionally, management stated that they prioritized functionality issues and defects based on business and customer needs and resolved prior to national deployment.

In response to recommendation 2, management indicated that help desk improvements are ongoing and that metrics have been established, help desk staffing was increased, and training and knowledge-based enhancements will continue throughout the life of the program. Management also stated that the OIG did not request metrics related to the RSS help desk. During the audit, the OIG was aware that management was in the process of establishing a help desk and, therefore, did not evaluate help desk metrics.

See [Appendix B](#) for management's comments, in their entirety.

Evaluation of Management's Comments

The OIG considers management's comments responsive to the recommendations and the actions taken or planned will address the issues identified in the report.

The OIG considers both recommendations significant and, therefore, requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. Management stated they resolved functionality issues and defects and upgraded 348 sites, but did not provide any documentation to close out the recommendation. Recommendation 1 will remain open until management provides written confirmation concerning the upgraded 348 sites and SSK functionality.

Recommendation 2 will remain open until management provides written confirmation of the help desk metrics that demonstrate functionality issues and defects are being resolved.

Recommendations 1 and 2 should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed.

Appendices

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Background

RSS is a new software solution replacing existing retail POS software, including software used at post office SSKs. Among its new capabilities, RSS can suspend a partially completed transaction and finish it later and transfer transactions between terminals. The RSS also allows managers and postmasters to perform administrative functions, such as audits and closeouts, while maintaining accountability from their Advanced Computing Environment, and sending messages to offices, even to the clerk level within their area of responsibility. The main benefits of this program are lower annual software maintenance costs, software change costs, and IT support costs associated with the four software maintenance contracts eliminated by this program.⁷ Other benefits include a more efficient closeout process and reinforcement of Postal Service policies, such as prompting SSAs to ask customers about whether there are hazardous materials in their mailing.

In January 2012, the postmaster general approved \$68.6 million to deploy RSS to post offices by the end of FY 2013. As work progressed, the program encountered major technical and programmatic issues that required additional funding. By October 2013, RSS was only deployed at four sites.

This program supports Delivering Results, Innovation, Value, and Efficiency Initiative 3, Transform Access. This initiative aims to maximize revenue by changing the customer experience through increased convenience and access while maintaining rural retail service.

Objective, Scope, and Methodology

Our objective was to review and evaluate the Postal Service's national deployment plan and functionality of RSS. Our scope was to evaluate the functionality of RSS and the reasonableness of the deployment schedule for sites to which RSS has already been deployed and the national deployment.

To achieve this we:

- Met with the program manager and other staff members responsible for planning and deploying RSS.
- Reviewed deployment schedules to evaluate deployment progress against goals established in the *Decision Analysis Report Retail Systems Software*, December 15, 2011; and the *Decision Analysis Report Modification Request for Retail Systems Software*, July 10, 2014.
- Reviewed and evaluated the following aspects of the 2015 RSS deployment strategy:
 - Number of sites deployed per night
 - Training provided to RSS users
 - RSS functionality issues
 - Help desk support
- Conducted 16 site visits at selected pilot sites to identify deployment and functionality concerns.

⁷ The four contracts are for CARS, POS, SSK, and the Integrated Retail Terminal.

We conducted this performance audit from October 2014 through March 2015, in accordance with generally accepted government auditing standards and include such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on February 12, 2015, and included their comments where appropriate.

We did not assess the reliability of any computer-generated data for the purposes of this audit. Deployment and functionality issues were tested during site visits and interviews of postal employees. We determined that the data used were sufficiently reliable for the purposes of this report.

Prior Audit Coverage

The OIG did not identify any prior audits or reviews related to the objective of this audit.

Appendix B: Management's Comments

MICHAEL J. AMATO
Vice President
Engineering Systems



March 5, 2015

LORI LAU DILLARD
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Retail Systems Software Deployment and Functionality
(Report Number MI-AR-15-DRAFT)

Engineering Systems has reviewed the subject draft audit report. In general, we are in agreement with some aspects of the recommendations.

Recommendation 1:

Deploy the Retail Systems Software at the remaining 304 pilot sites, demonstrate self-service kiosk functionality, and correct any user-related functionality issues before initiating a nationwide deployment.

Management Response:

Engineering Systems agrees in part with the recommendation.

- National Deployment began in February with 348 additional sites converted as of March 3, 2015.
- Self Service Kiosk development continues as planned. The RSS SSK Pre-Pilot is scheduled for January 2016. As discussed with the audit team, pre-Pilot includes demonstration of the Self-Service Kiosk functionality.
- As part of the Pilot phase of the program, functionality issues and defects are prioritized based on business/customer needs and resolved prior to the National Deployment.

Recommendation 2:

Evaluate and establish metrics to ensure the Retail Systems Software help desk is adequately staffed with knowledgeable personnel and is able to support national deployment.

Management Response:

Engineering Systems agrees in part with the recommendation. Help Desk improvement has been ongoing since beginning of Pilot Phase.

- Established metrics are measured and reported monthly. (Note: The audit team did not request metrics during discussions or meetings with the program office prior to issuing the audit report.)
- The Help Desk support staff complement was increased prior to National Deployment and will be closely monitored against the established metrics.
- Additional Help Desk training and knowledge base enhancements will continue throughout the life of the program.

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As with any software deployment, any identified anomalies will be corrected and incorporated into the deployed software as appropriate. In addition, releases are anticipated throughout the National Deployment. These releases are necessary to accommodate changes in Retail products and/or services.



Michael J. Amato
Vice President, Engineering Systems

cc: Manager, Corporate Audit Response Management



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