



OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

Passive Adaptive Scanning System Functionality and Labor Savings

Audit Report

Report Number
MI-AR-15-007

September 1, 2015





OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

Highlights

The revenue protection functions were developed and tested, but not activated, because the related manual functions for assessing and collecting postage identified by PASS were determined to be too costly.

Background

The Passive Adaptive Scanning System (PASS) is a cart-mounted, overhead scanning system used in delivery units to scan packages and identify associated delivery routes. PASS enables clerks without route knowledge training to sort packages and provides both visual and audible indicators for routing information.

PASS was also designed to provide greater package visibility through scanning and identify shortpaid (insufficient), unpaid, and duplicate postage. The U.S. Postal Service projected PASS would recover [REDACTED] million in shortpaid, unpaid, and duplicate postage and [REDACTED]

The Postal Service approved about [REDACTED] million to deploy 4,168 PASS units nationwide at 3,869 locations.

Our objective was to evaluate the functionality of and labor savings associated with PASS.

What The OIG Found

During our 40 site visits, we found that PASS units, as designed, enabled clerks without route knowledge training to sort packages using both visual and audible indicators for routing information. However, the revenue protection functions were developed and tested, but not activated, because the related manual functions for assessing and collecting postage identified by PASS were determined to be too costly. Over \$300,000 was spent to develop revenue protection functions that will not be used with PASS. As a result, the Postal Service will not realize the [REDACTED]

The Postal Service has redirected its package revenue protection efforts into mail processing operations rather than the delivery operation. This revenue protection effort is in development and is not projected to begin recovering revenue until [REDACTED]. The program will address a shortpaid revenue gap projected to exceed [REDACTED]

Additionally, we found the Postal Service has no plans to use printers, handheld scanners, weight scales, and weight sets for calibration worth \$2.8 million that it purchased with PASS. Since revenue protection was not activated this \$2.8 million equipment investment is at risk of loss or misuse because it is not being safeguarded and repurposed.

In the final deployment of PASS (1,137 units), the Postal Service estimated that each PASS unit would save [REDACTED] workhours per year. The Postal Service did not include this workhour calculation for previous deployments (3,025 units), but because all PASS units give clerks the same ability to sort packages, workhour savings should be consistent for all units.

When workhour savings for the previously deployed 3,025 PASS units are calculated, delivery units save a total of about [REDACTED] million workhours annually, or almost [REDACTED] million.

What The OIG Recommended

We recommended management ensure the future revenue protection function for packages be implemented; establish a program to secure, repurpose or dispose of the printers, handheld scanners, weight scales, and weight sets for calibration; and reduce delivery unit workhours by about [REDACTED] million annually.

Transmittal Letter



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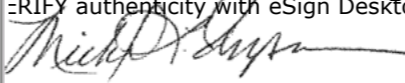
September 1, 2015

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

KELLY M. SIGMON
VICE PRESIDENT, RETAIL &
CUSTOMER SERVICE OPERATIONS

SUSAN M. BROWNELL
VICE PRESIDENT, SUPPLY MANAGEMENT

PRITHA N. MEHRA
VICE PRESIDENT, MAIL ENTRY &
PAYMENT TECHNOLOGY

E-Signed by Michael L. Thompson
VERIFY authenticity with eSign Desktop


FROM: Michael L. Thompson
Acting Deputy Assistant Inspector General
for Technology, Investment and Cost

SUBJECT: Audit Report – Passive Adaptive Scanning System
Functionality and Labor Savings
(Report Number MI-AR-15-007)

This report presents the results of our audit of Passive Adaptive Scanning System Functionality and Labor Savings (Project Number 15TG023MI000).

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

Attachment

cc: Corporate Audit and Response Management

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Findings

PASS enables clerks without route knowledge training to sort packages at delivery units because it provides routing information to the clerk through visual and audible indicators.

Introduction

This report presents the results of our self-initiated audit of Passive Adaptive Scanning System (PASS) Functionality and Savings (Project Number 15TG023MI000). Our objective was to evaluate the functionality and associated labor savings for PASS. See [Appendix A](#) for additional information about this audit.

The U.S. Postal Service approved the following three decision analysis reports (DAR)¹ for about [REDACTED] million to deploy 4,168 PASS units nationwide at 3,869 locations:

- *Passive Adaptive Scanning System (PASS) Program*, April 2010;
- *Delivery Unit Infrastructure Technology (DUIT) Program*, October 2013; and
- *Delivery Unit Infrastructure Technology Program Modification*, January 2014.

PASS is a cart-mounted, overhead scanning system that provides greater package visibility through scanning, which the Postal Service deployed to identify and collect shortpaid, unpaid, and duplicate postage. The cart on which the overhead scanner is mounted includes a handheld scanner, a weight scale, a weight set, and a printer to support revenue-protection efforts (see Figure 1.) PASS enables clerks without route knowledge training to sort packages at delivery units because it provides routing information to the clerk through visual and audible indicators.

The DARs included different justifications for the PASS investment. The April 2010 DAR funded 1,031 PASS units, which were projected to increase revenue protection by identifying [REDACTED] million in shortpaid, unpaid, and duplicate postage and [REDACTED] million because these activities will be [REDACTED]. The October 2013 DAR funded 2,000 additional PASS units to support schemeless² sortation and Sunday package delivery. The January 2014 DAR funded 1,137 PASS units that were projected to save [REDACTED] workhours, or [REDACTED] per unit annually.

Figure 1: PASS Unit



¹ DARs ensure that investments are properly documented and reviewed. The DAR defines the problem and details the need for the expenditure, providing sufficient detail to enable the reviewing and approving officials to make an informed decision.

² A scheme is that part of an officially published list of all elements of an address and their distribution that management requires employees who conduct scheme qualification to learn.

Because the revenue-protection aspects of the system are not being activated, the \$2.8 million in equipment is at risk of loss or misuse.

Conclusion

PASS provides schemeless sortation and hands-free scanning. It also captures package address barcode images at the delivery unit. However, its revenue protection functions were developed and tested but not activated because the manual functions [REDACTED] identified by PASS were determined to be too costly.

As a result, the Postal Service will not realize the projected [REDACTED] million from collecting shortpaid, unpaid, and duplicate postage or the [REDACTED] million from [REDACTED]. The Postal Service has redirected its revenue-protection efforts with Delivering Results, Innovation, Value, and Efficiency (DRIVE) Initiative 46 – Package Revenue Assurance.

About \$2.8 million of the [REDACTED] million invested in PASS units was for handheld scanners, weight scales, weight sets, and printers that support revenue protection. In addition, over \$300,000 was spent developing revenue-protection functions that will not be used with PASS. Because the revenue-protection aspects of the system are not being activated, the \$2.8 million in equipment is at risk of loss or misuse.

In the January 2014 DAR, the Postal Service stated that each PASS unit would save [REDACTED] workhours per year. The previous DARs (April 2010 and October 2013) funded 3,025 PASS units and did not include labor savings as part of their justification for the purchase of these units. However, since all PASS units give clerks the same ability to sort packages, the DARs for the 3,025 PASS units should reflect an annual labor savings consistent with the reduction identified in the third DAR. By incorporating this change, delivery units will save about [REDACTED] million workhours annually, or almost [REDACTED] million.

Revenue Protection

The April 2010 DAR projected that for fiscal year (FY) 2011 through 2016, the Postal Service would recover [REDACTED] million in shortpaid, unpaid, and duplicate postage and generate another [REDACTED] million because [REDACTED]. During our site visits, we found the PASS revenue-protection feature was not activated. The program manager, Mail Information Technology, stated that the [REDACTED] was developed and tested but not activated and the program has been transitioned to the Mail Entry and Payment Technology group. The manager, Mail Entry and Payment Technology, stated that PASS will not be used for revenue protection because it is not cost effective, but portions of the PASS investment will be used to support DRIVE Initiative 46. Revenue protection on PASS would have included manual functions to [REDACTED] at delivery units, while DRIVE 46 plans to accomplish these functions on automation equipment in mail processing plants. This initiative, costing over [REDACTED] million, is projected to start recovering shortpaid revenue in [REDACTED]. By not using the PASS revenue-protection function today, the Postal Service will not realize \$31 million in shortpaid, unpaid, and duplicate postage or the [REDACTED] million from [REDACTED].

Supporting Equipment for Revenue Protection

The Postal Service has not used and does not plan to use \$2.8 million worth of printers, handheld scanners, weight scales, and weight sets for calibration with PASS. While conducting site visits in the Northern Virginia District, we verified that PASS's revenue-protection functionality was not activated and the associated equipment was not being used. As previously stated, the chief information officer and executive vice president and the vice president for Mail Entry and Payment Technology decided not to use PASS equipment for revenue protection. This investment is now at risk of loss or misuse because it is not being safeguarded. Personnel at one of the 40 sites we visited indicated they had used the weight scale to confirm package weight while personnel at the remaining sites stated they had not used the supporting equipment. We also observed that five printers were removed

from PASS units, two were being used by delivery unit supervisors for other functions, and three were missing. The remaining equipment was not used.

In addition, the Postal Service spent over \$300,000 to develop revenue-protection efforts for PASS that it never deployed. See Table 1 for a listing of PASS equipment and related costs.

Table 1. PASS Equipment Not Being Used and Related Costs

PASS Equipment	Phase I Costs	Phase II Costs	Phase III Costs	Spares
4,194 Handheld Scanners	\$208,000	\$416,000	\$236,496	\$11,856
4,437 Weight Scales	39,000	638,000	329,730	87,000
4,137 Weight Sets	129,170	270,000	174,518	-
4,168 Printers	88,000	136,000	77,316	2,108
Subtotal	\$464,170	\$1,460,000	\$818,060	\$100,964
<hr/>				
Total Equipment				\$2,843,194
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Development Costs				300,224
<hr/>				
Total Equipment and Development				\$3,143,418

Source: Postal Service, manager, Automation & Material Handling, program manager, Mail Information Technology.

Labor Savings

According to the January 2014 DAR, the Postal Service stated that each PASS unit would save [REDACTED] workhours per year.³ These savings were integral in determining the success of the program and were included as a performance metric. The manager, Business Case Development, provided budget data showing that the workhour savings were being removed from delivery unit budgets for 1,137 of the 4,168 PASS units purchased. There were 3,025⁴ PASS units deployed prior to this DAR that had no associated workhour savings. The manager, Business Case Development, stated that the Postal Service has not eliminated budgeted workhours for the 3,025 PASS units in the earlier DARs (April 2010 and October 2013) because they did not identify labor savings. The Postal Service should eliminate [REDACTED] workhours per unit for all 3,025 PASS units because each unit can provide the same functionality and labor savings as the 1,137 PASS units cited in the January 2014 DAR. This will provide an annual delivery unit savings of about [REDACTED] million annual workhours, or [REDACTED] million.⁵

³ Annual workhours per unit for delivery operations, or annual workhour savings of [REDACTED] hours for Labor Distribution Code 43, totaling [REDACTED] million in annual labor savings for the 1,137 PASS units.

⁴ Six units were not included as five were damaged and one was sent to headquarters.

⁵ Labor savings calculation = 3,025 PASS units * [REDACTED] per unit = [REDACTED] million.

Recommendations

We recommend management ensure the future revenue protection function for packages be implemented; establish a program to secure, repurpose or dispose of the printers, handheld scanners, weight scales, and weight sets for calibration; and reduce delivery unit workhours.

We recommend the vice presidents, Mail Entry and Payment Technology and Engineering Systems:

1. Ensure that the Delivering Results, Innovation, Value, and Efficiency Initiative 46 – Package Revenue Assurance revenue-protection function is used to start recovering the projected shortpaid revenue in [REDACTED] because the Passive Adaptive Scanning System [REDACTED].

We recommend the vice presidents, Retail and Customer Service Operations and Engineering Systems:

2. Establish a program, in coordination with Supply Management to secure, repurpose or dispose of the printers, handheld scanners, weight scales, and weight sets for calibration currently not being used with the Passive Adaptive Scanning System units to safeguard the investment of more than \$2.8 million.

We recommend the vice president, Retail and Customer Service Operations:

3. Reduce Labor Distribution Code 43 workhours by about [REDACTED] million annually at the delivery units for the 3,025 Passive Adaptive Scanning System units funded by the April 2010 and October 2013 decision analysis reports.

Management's Comments

Management neither agreed nor disagreed with the findings and the \$3.1 million in questioned costs. Management agreed with recommendations 1 and 2 and disagreed with recommendation 3 and the [REDACTED] million in funds put to better use.

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

In response to recommendation 1, management stated they would deploy technology to perform revenue assurance to processing plants by [REDACTED]

In response to recommendation 2, management stated they will develop and implement a strategy to secure, repurpose, and/or dispose of the \$3.1 million in equipment by March 2016.

In response to recommendation 3, management stated that the reduction of [REDACTED] million LDC 43 workhours annually is not necessary at these units due to significant package volumes that have been generated by other organizational initiatives.

Evaluation of Management's Comments

The U.S. Postal Service Office of Inspector General (OIG) considers management's comments responsive to recommendations 1 and 2, but unresponsive to recommendation 3. Management's corrective actions for recommendations 1 and 2 should resolve the issues identified in the report. Management's actions for recommendation 3 will not resolve the issue identified in the report.

Management stated the reduction to LDC 43 workhours is no longer necessary because these units have experienced an increase in package volume. Management, however, did not provide an analysis or quantify the cost avoidance to see whether the [REDACTED] million has been achieved. Quantifying this cost avoidance is important for measuring the economic benefits of the program and would be especially useful for evaluating any additional purchases of PASS units.

The OIG considers all three recommendations significant, and therefore requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. These recommendations 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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Appendix A: Additional Information

Background

PASS is a cart-mounted, overhead scanning system used to scan packages when they arrive at delivery units and identify the destinating delivery routes. Three DARs identified PASS as a control point for revenue protection to help identify shortpaid and unpaid postage, which is reported through the postage assessment tool and customer payment portal for resolution.

The Postal Service approved the April 2010 PASS DAR for the purchase of 2,390 PASS units at a cost of about [REDACTED] million. While implementing the PASS program the Postal Service reduced the number of PASS units purchased to 1,031. Five of those 1,031 units were damaged in transit and one was sent to headquarters, resulting in 1,025 being deployed to the field. Subsequently, the Postal Service approved two more DARs for the purchase of 3,137 additional PASS units. The total cost for all PASS units was about [REDACTED] million.

Each DAR contained different supporting justification for PASS purchases. The April 2010 DAR stated that PASS would enhance revenue protection by identifying, collecting, and deterring shortpaid, unpaid, and duplicate postage. The October 2013 DAR identified the PASS units supporting schemeless sortation and dynamic routing at the delivery units. The January 2014 DAR identified a labor savings of [REDACTED] workhours per unit, or [REDACTED] annually per unit.

Objective, Scope, and Methodology

Our objective was to evaluate the functionality and associated labor savings for PASS. Our scope was the three DARs for the PASS investment and stated functionality of the PASS units. To achieve this we:

- Reviewed and evaluated the DARs.
- Interviewed managers for Mail Information Technology, Technology Acquisition, Automation and Material Handling Equipment, Payment Technology, and Business Case Development. We confirmed program requirements and identified issues with system performance, deployment, and functionality.
- Identified, evaluated, and documented functionality and operational issues related to PASS by observing PASS operations; distributing site visit questionnaires; and interviewing postmasters/officers-in-charge, supervisors, and mail handlers/clerks to identify issues with system performance during 40 sites visits in the Northern Virginia District.
- Reviewed and evaluated budgeted labor savings documentation.

We conducted this performance audit from March through September 2015, in accordance with generally accepted government auditing standards and included 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 July 30, 2015, and included their comments where appropriate.

We did not assess the reliability of any computer-generated data for the purposes of this audit. 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

Report Title	Report Number	Final Report Date	Monetary Impact
<i>Sunday Parcel Delivery Service</i>	DA-AR-15-002	12/5/2014	\$356,736
<p>Report Results: Our report determined that operational inefficiencies existed during Sunday parcel deliveries in scanning, sorting, vehicle loading, and using the Dynamic Routing Tool software in street delivery at 40 of 134 hubs we visited in five districts. These inefficiencies occurred primarily because management did not always enforce policies and procedures and supervision was inconsistent at some hubs. We recommended management eliminate inefficient operational practices, reduce workhours cited, and ensure adherence to Postal Service policies and procedures for Sunday parcel delivery service. Management agreed in principle with the findings and recommendations, but disagreed with the associated monetary impact.</p>			
<i>Readiness for Package Growth - Customer Service Operations</i>	DR-MA-14-003	3/31/2014	None
<p>Report Results: Our report determined that Customer Service Operations has successfully managed periods of package growth, employee workhours, and scan rates at delivery units; however, opportunities exist to enhance readiness by improving acceptance scan rates, decreasing customer wait-time-in-line during the holiday mailing season, enabling the PASS revenue-protection function, and reducing the number of non-barcoded packages to provide end-to-end tracking for customers. We recommended employees perform acceptance scans to support the 100 percent product visibility strategy; and management enable the PASS revenue protection function, implement a comprehensive strategy to reduce non-barcoded packages, and define a solution for notification and collection of shortpaid postage for packages. Management agreed with our findings and recommendations.</p>			

Appendix B: Management's Comments



August 19, 2015

LORI LAU DILLARD
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Management Response to Draft Audit Report – Passive Adaptive Scanning System Functionality and Labor Savings (Report Number MI-AR-15-DRAFT)

The Passive Adaptive Scanning System (PASS) program has been an important part of the Postal Service's plan to ensure it has the necessary infrastructure in place to effectively compete in the package market. PASS technology has successfully allowed the Postal Service to enhance product visibility for our customers while also enabling schemeless package sortation in delivery units. The technology has supported greater staffing flexibility in delivery unit sortation and has been the foundation for dynamically creating efficient parcel delivery routes for the growing Sunday and customized delivery services the Postal Service is providing to customers.

Monetary Impact

The audit calculates savings for previously deployed 3,025 PASS units. As stated in the response for Recommendation 3, the Postal Service views these savings as costs that have been avoided given the significant package volume growth and the additional service provided to our customers.

OIG Recommendations

We recommend the vice presidents, Mail Entry and Payment Technology and Engineering Systems:

Recommendation 1: Ensure that the Delivering Results, Innovation, Value, and Efficiency Initiative 46 – Package Revenue Assurance revenue-protection function is used to start recovering the projected shortpaid revenue in [REDACTED] because the PASS [REDACTED]

Management Response/Action Plan: Management agrees with this recommendation. The Package Revenue Assurance program is being implemented, including deploying technology in our processing plants.

Target Implementation Date: [REDACTED]

Responsible Official: Manager, Payment Technologies

We recommend the vice presidents, Retail and Customer Service Operations, and Engineering Systems:

Recommendation 2: Establish a program, in coordination with Supply Management to secure, repurpose or dispose of the printers, handheld scanners, weight scales, and weight sets for calibration currently not being used with the PASS units to safeguard the investment of more than \$2.8 million.

Management Response/Action Plan: Management agrees with this recommendation and will initiate evaluation of alternatives and development of a strategy to ensure improved utilization and/or proper security, reallocation, or disposal of the equipment in delivery units which is currently not being utilized as part of the PASS program.

Target Implementation Date: Plan to be developed by October 2015; Implementation of recommended actions March 2016.

Responsible Official: Manager, Customer Service Operations and Manager, Technology Acquisition and Program Management in coordination with Manager, Asset Management, Supply Management

We recommend the vice president, Retail and Customer Service Operations:

Recommendation 3: Reduce Labor Distribution Code 43 workhours by about [redacted] annually at the delivery units for the 3,025 PASS units funded by the April 2010 and October 2013 decision analysis reports.

Management Response/Action Plan: Management disagrees with this recommendation. With the addition of other organizational initiatives that have affected parcel volume, the PASS has become a cost avoidance opportunity for the Postal Service. Management does commit to continue to look at how we can use the PASS to improve the efficiency our delivery unit sortation.

Target Implementation Date: N/A

Responsible Official: N/A



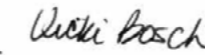
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for Pritha N. Mehra
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