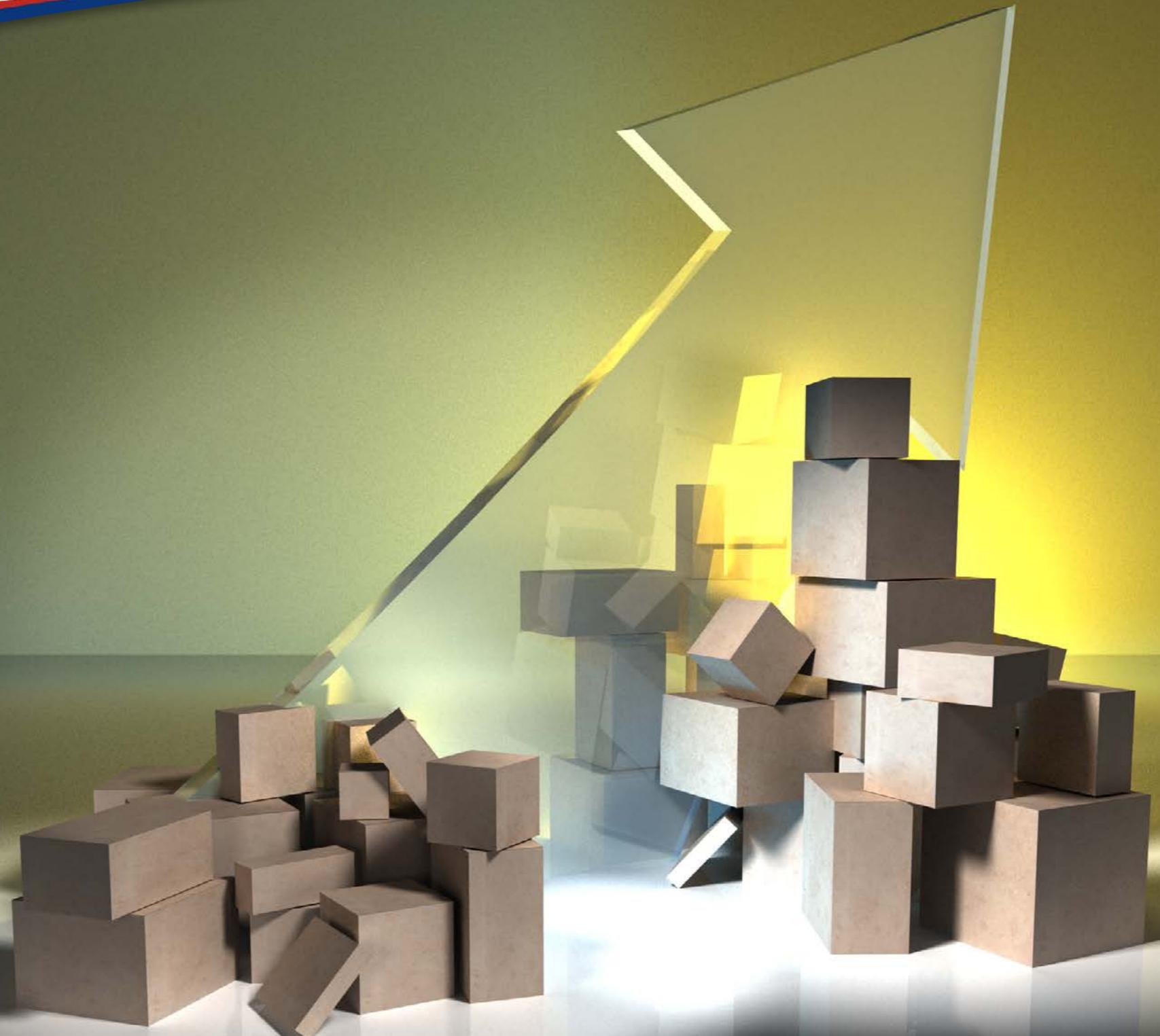OFFICE OF
INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

Readiness for Package Growth- Delivery Operations

Management Advisory Report

Report Number
DR-MA-14-001-DR

December 11, 2013

OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

Highlights

Opportunities exist to better manage Postal Service growth in the package business. These include:

- **Implementing dynamic routing**
- **Modifying package compartments on cluster box units**
- **Improving staff retention**
- **Establishing a vehicle shelving system**
- **Using parcel data to further bolster package readiness**

Background

Strong customer demand for goods purchased over the Internet has driven growth in the package market, despite otherwise declining mail volume. This growing package segment provides the U.S. Postal Service an opportunity to expand services and increase revenue.

From fiscal years (FYs) 2010 to 2012, Postal Service package revenue increased by $1.4 billion, or 14 percent, and volume increased by 445 million mailpieces, or 14 percent. The package volume also increased by 13.7 percent in the first 3 quarters of FY 2013, compared to the same period last year.

This report is one of a series of U.S. Postal Service Office of Inspector General (OIG) products that address the Postal Service's readiness for growth in the package business.

Our objective was to assess operational readiness for package growth in delivery operations.

What The OIG Found

The Postal Service's Delivery Operations organization has successfully managed package growth from a mail volume and workhour standpoint. However, opportunities exist to improve readiness by implementing dynamic routing and modifying package compartments on cluster box units. Improving the retention of city carrier assistants, establishing a vehicle shelving system, and using parcel data will further bolster package readiness. Meeting these challenges will help the Postal Service manage package growth, improve its competitiveness in the package business, and better meet customers' needs.

What The OIG Recommended

We recommended the vice president, Delivery and Post Office Operations, continue to test and implement dynamic routing, modify package compartments on cluster box units, and use operational reports to monitor and manage carrier package pickup data. We also recommended coordination with the vice president, Engineering Systems, to implement a vehicle shelving system.
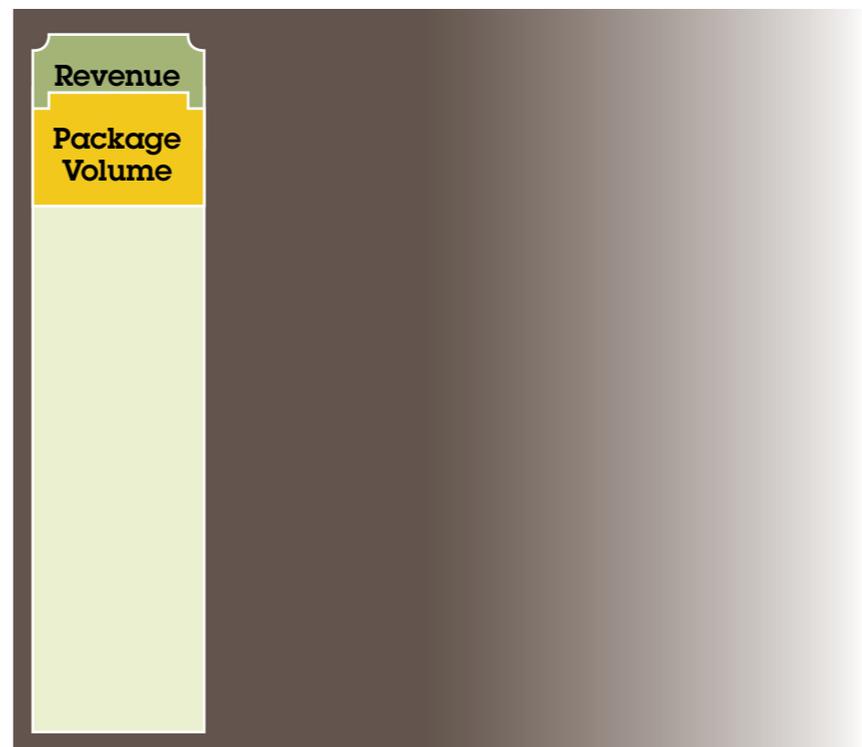
Revenue

Package Volume
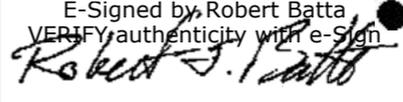
Transmittal Letter

December 11, 2013

MEMORANDUM FOR: **EDWARD F. PHELAN, JR.**
VICE PRESIDENT, DELIVERY AND POST OFFICE OPERATIONS

MICHAEL J. AMATO
VICE PRESIDENT, ENGINEERING SYSTEMS

E-Signed by Robert Batta
VERIFY authenticity with e-Sign

Robert J. Batta

FROM: Robert J. Batta
Deputy Assistant Inspector General
 for Mission Operations

SUBJECT: Management Advisory Report - Readiness for Package Growth -
Delivery Operations
(Report Number DR-MA-14-001)

This report presents the results of our self-initiated review of Readiness for Package Growth in Delivery Operations (Project Number 13XG030DR000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Rita F. Oliver, director, Delivery and Post Office Operations, or me at 703-248-2100.

Attachment

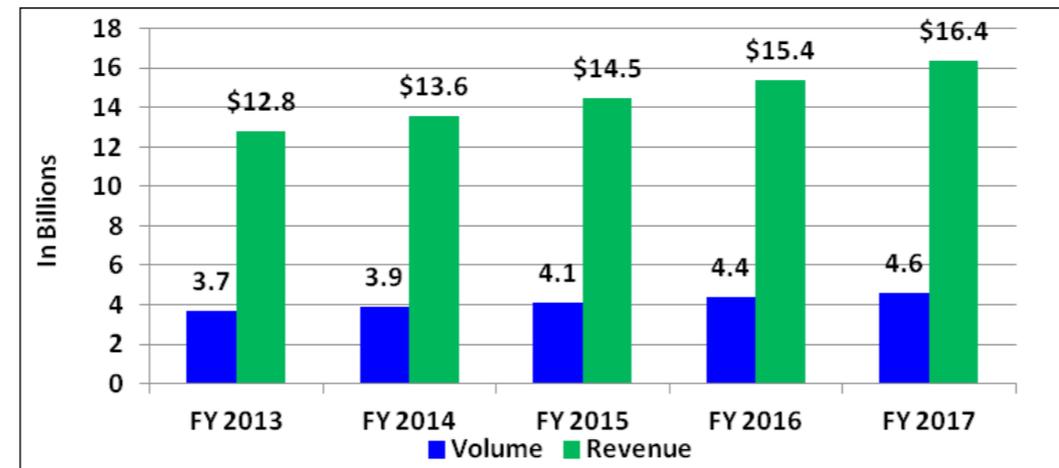cc: Corporate Audit and Response Management

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Findings

Improving the retention of city carrier assistants (CCA), using parcel data, and establishing a vehicle shelving system will further bolster package readiness.

This report presents the results of our self-initiated review of readiness for package[1] growth. Our objective was to assess[2] operational readiness for package growth in Delivery Operations (Project Number 13XG030DR000). See Appendix A for additional information about this audit.

Strong customer demand for goods purchased over the Internet has driven growth in the package market. In an otherwise declining mail market, growth in the package segment provides the U.S. Postal Service an opportunity to expand services and increase revenue. In its 2013 *Five-Year Business Plan*, the Postal Service projects package volume growth of 5 to 6 percent per year through fiscal year (FY) 2017. The Postal Service projects that revenue from packages will grow by 6 to 7 percent annually during this same period[3] (see Figure 1).

Figure 1. Projected Package Volume and Revenue

Source: Postal Service *Five-Year Business Plan*, April 2013.

Conclusion

The Postal Service's Delivery Operations organization has successfully managed package growth from a mail volume and workhour standpoint. However, opportunities exist to improve readiness by implementing dynamic routing and modifying package compartments on cluster box units (CBU).[4] Improving the retention of city carrier assistants (CCA), using parcel data,[5] and establishing a vehicle shelving system[6] will further bolster package readiness. Meeting these challenges will help the Postal Service manage growth and improve its competitiveness in the package business to better meet customers' needs.

Readiness for Package Growth

The Postal Service's Delivery Operations organization has successfully managed package growth from a mail volume and workhour standpoint.

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1   Publication 32, *Glossary of Postal Terms*, defines packages as mail that does not meet the mail processing category of letter-size or flat-size mail. Packages are usually enclosed in a mailing container, such as a carton or parcel. For the purpose of this review, we consider Priority Mail, Parcel Select Mail, Parcel Return Service Mail, Package Service Mail, First-Class Mail® Packages, First-Class Package Service, Single-Piece Parcel Post, and Express Mail to be packages.
2   The U.S. Postal Service Office of Inspector General (OIG) may do future reviews on various aspects of readiness for package growth.
3   *Five-Year Business Plan*, April 2013.
4   Several mail receptacles clustered at one delivery point. The CBUs' delivery compartments have been designed to accommodate magazines, merchandise samples, and packages; and are large enough to handle several days' mail. Outgoing mail can be deposited in a designated CBU compartment for added convenience.
5   A tool that analyzes various addresses in an area and orders them into a route with a minimum number of miles and for which the carrier will need the minimum amount of time to deliver packages.
6   An engineering design of trays and compartments that accommodates a large number of mail trays and packages in Postal Service vehicles.

Mail Volume. Since FY 2010, overall package volume has increased, on average, 24 percent and holiday package volume has increased, on average, 38 percent (see Figures 2 and 3). Delivery Operations has successfully managed these increased package volume fluctuations, in part, due to flat and letter[7] mail volume declines of 16 and 17 percent, respectively, through normal operational decisions. To accommodate the added volume, management added extra package delivery trips and delivered mail on Sunday using overtime and temporary employees.

Figure 2. Average Monthly Package Volume – FYs 2010 through 2013[8]
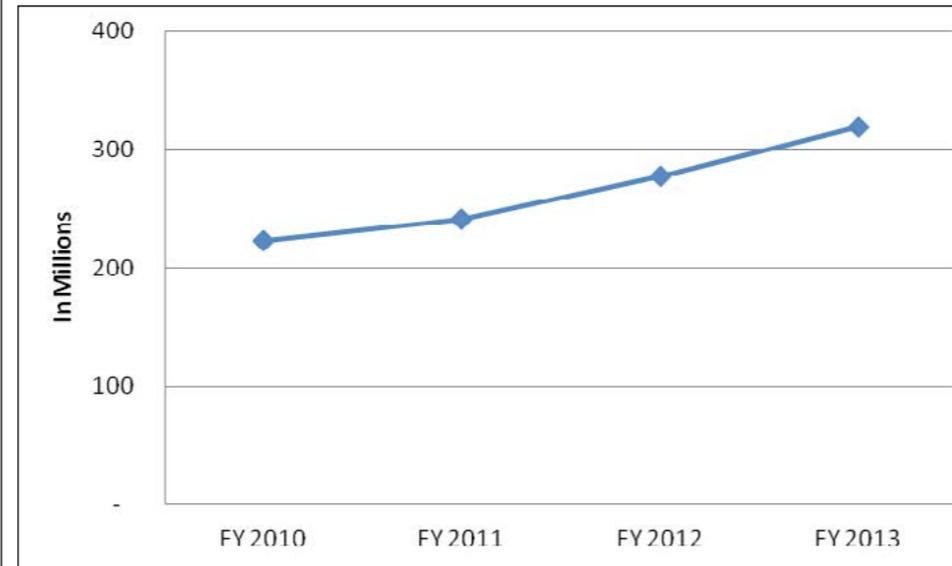
Source: Postal Service eFlash System.

Figure 3. Holiday Package Volume[9]

Source: Postal Service eFlash System.

Workhours. The Postal Service did not experience an increase in work hours due to package growth, based on our analysis of Delivery Operations' regular and overtime[10] workhours, from FY 2010 to June 1, 2013 (see Figure 4). City letter carrier overtime[11] hours increased by 10 percent from FY 2010 to June 1, 2013; however, in relation to package volume growth, the percentage of overtime has remained around 1.4 percent[12] over the same period.

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7   Reflects delivery unit distribution letter volume only and does not include customer service letter volume, which includes Post Office box volume.
8   Package volume calculated for FYs 2010 through 2013.
9   Holiday package volume calculated for the months of November and December of 2009, 2010, 2011, and 2012. The months of November and December are part of the new fiscal year.
10 Rural letter carrier overtime workhours increased from FY 2010 to June 1, 2013; however, the percentage of overtime in relation to package growth is relatively low, increasing over the same period from 1.25 percent to 2.76 percent.
11 A recent OIG report, *Overtime Use During Fiscal Years 2011 and 2012* (Report Number HR-AR-13-002, dated July 5, 2013) stated that overtime was sometimes caused by carriers waiting to begin their work and having to use overtime to complete deliveries. The Postal Service stated that in any year when there are consolidations, closures, or organizational changes, overtime will go up and the key is to reduce overall workhours.
12 City carrier workhours totaled 270,864,682 and Delivery Operations used 39,172,654 overtime hours from October 1, 2012 through June 30, 2013.

Figure 4. Monthly Letter Carrier Hours From FY 2010 to June 2013
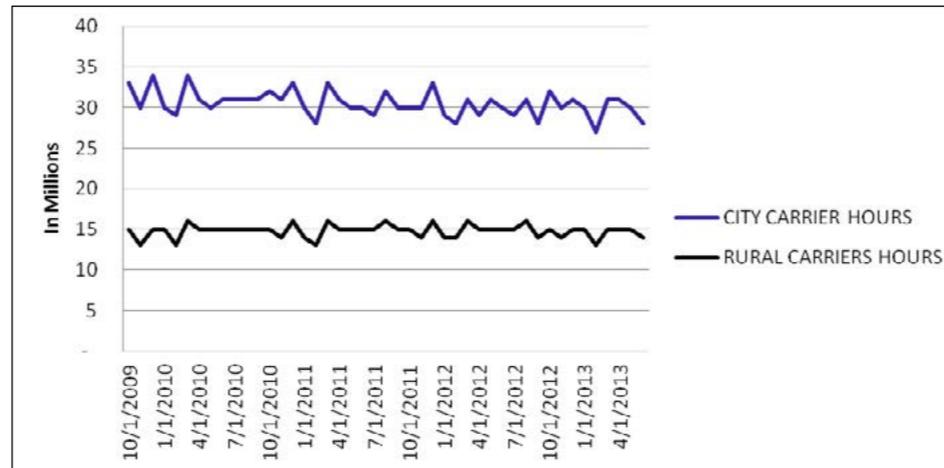
Source: Postal Service eFlash System.

We concluded that opportunities exist to improve readiness for package growth in the areas discussed below.

Dynamic Routing. Delivery Operations is exploring dynamic routing[13] to prepare for package growth. Dynamic routing is an optimal delivery solution other package delivery companies[14] use to efficiently[15] deliver packages. The dynamic routing tool (DRT) will analyze various addresses in an area and order them into a route that has the minimum number of miles and for which the carrier will need minimum time to deliver packages.

The Postal Service developed a DRT to begin a planned transition to a 5-day delivery schedule, with continued package delivery 6 days a week. The Postal Service developed the DRT to work with the Address Management System (AMS),[16] testing it at the Brentwood Post Office, Washington, D.C. in the spring of 2013. The Postal Service also tested Sunday delivery of packages ordered through Amazon.com at several delivery units in Philadelphia, New York, and Washington, D.C. during July 2013.

The Postal Service has an alternative approach to DRT called Routing as a Service (RAAS), which is offered by a vendor. RAAS testing began in Pittsburgh, PA on July 29, 2013, with testing scheduled to end in September 2013. As package volume grows, Delivery Operations will require a more sophisticated and dynamic approach for carriers on delivery routes to deliver packages.

Delivery Equipment. Postal Service delivery equipment was not designed to handle the upcoming growth in package volume. The existing curbside mailbox was primarily designed for letters, flats, and small packages, and cannot accommodate large packages.[17] CBUs and apartment receptacles have package components, but space is limited (see Figure 5). For example:

- CBU configuration typically can only accommodate packages for two customers at a time.

- If a customer does not pick up packages timely, the CBU space is unavailable for new packages.

- If the carrier has three or more customers with packages, the carrier decides which packages to deliver based on the available capacity of the CBU. For packages the carrier cannot deliver to either the door or CBU, the carrier notifies the customer that delivery was attempted.

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13 The Postal Service issued a concept paper in FY 2013 on dynamic routing, which is technology that minimizes fuel, resources, and energy use; and maximizes service.

14 The Postal Service's competitors have been using dynamic routing for years and state that, with this tool, they are able to do more with less. One competitor stated that dynamic routing is a complex system and the company is continually updating its technology to be more efficient in delivery.

15 Dynamic routing can include the ability to plan for time penalties for road turns along with many other aspects of developing the most efficient delivery routes dynamically, adjusting to issues including customized delivery deadlines for certain items, speed limits, and traffic reporting.

16 The OIG has an ongoing review of AMS.

17 The OIG plans to conduct a review of a new alternative delivery option, parcel receiving boxes.
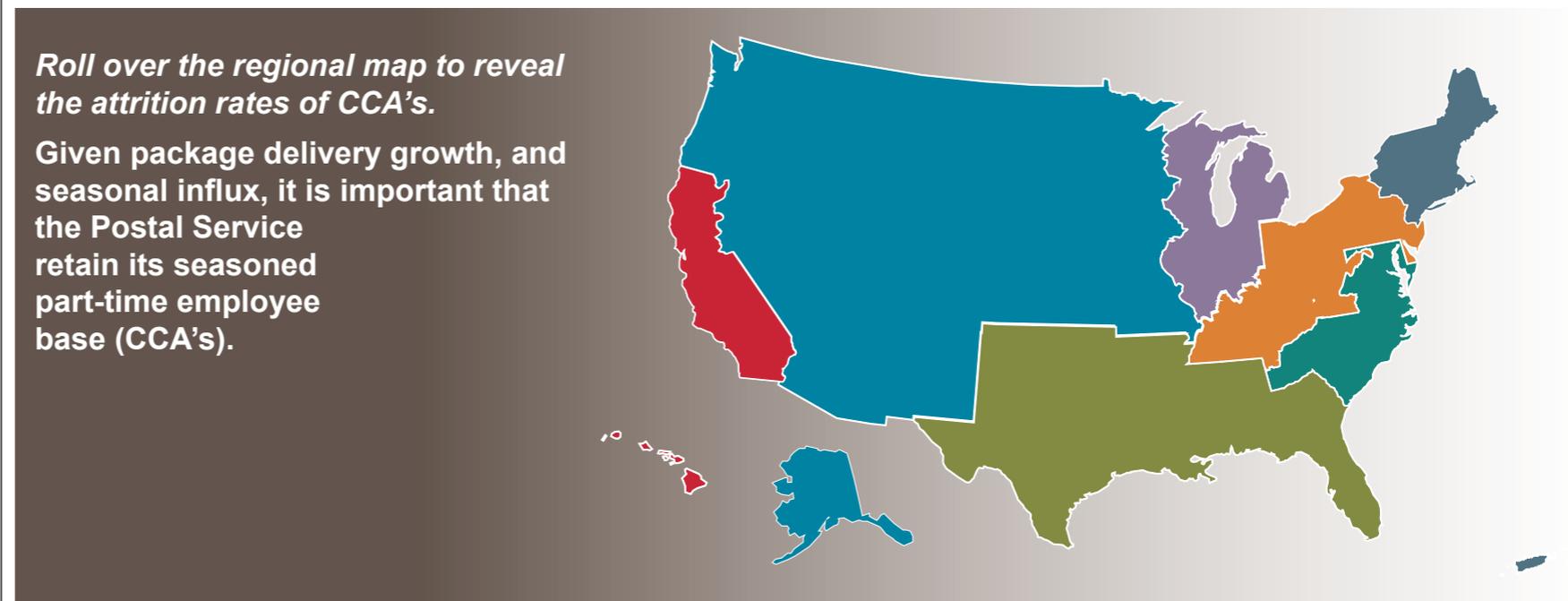
Figure 5. Letter Carrier Delivering to a CBU

Source: https://www.usps.com/

CCA Retention. The Postal Service has sufficient staffing capacity[18] to manage package growth; however, the attrition rate for the newly created CCAs[19] remains high, at 19 percent[20] (see Graphic 1). With this rate of attrition, Delivery Operations may face long-term staffing challenges as package volume increases.

Graphic 1. CCA Attrition Rates by Region from February through July 2013

Roll over the regional map to reveal the attrition rates of CCA's.

Given package delivery growth, and seasonal influx, it is important that the Postal Service retain its seasoned part-time employee base (CCA's).

Source: Postal Service Organizational Effectiveness.

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18 As of July 2013, there were 264,894 career and non-career city and rural letter carriers. The career city carrier workforce has decreased 11.5 percent since September 30, 2010.
19 A new job classification was created in January 2013 as part of the labor agreement with the National Association of Letter Carriers. This new position adds flexibility in staffing to assist management in aligning its delivery cost structure with declining revenue and delivering outside the typical 9 to 5 delivery window.
20 Delivery Operations lost 6,691 of 35,221 CCAs from February 23 to July 12, 2013.

In July 2013, the Postal Service Headquarters Organizational Effectiveness group finalized a report titled *CCA Hiring Strategies*,[21] which includes an attrition review, as a way to share ideas and allow areas to collaborate. The report also includes strategies for implementing more targeted training, an established protocol, and best practices to share with districts. The Postal Service plans to apply these strategies nationwide to ensure an effective, flexible, and lower cost workforce to help handle increased package growth. Management implemented corrective action during our review. Therefore, we are making no recommendation regarding CCA retention in this report.

Carrier Package Pickup Data. The Postal Service needs carrier package data to manage operations. With increased package pickups, carriers are spending more time collecting and transporting packages, which affects route street time.[22] Carrier package pickup volume grew 32 percent from FYs 2011 through 2012 (see Table 2). Delivery operations did not regularly track package data for operations because this was a relatively low volume contribution area.

Table 2. Carrier Pickup Package Volume

FYs	Total Volume of Package Pickups	Package Volume Change Between FYs	Package Volume Percentage Change	Average Pickup Volume Per Day	Average Packages Per Pickup
2011	62,740,280			206,383	9.9
2012	82,555,391	19,815,111	32	265,451	10.6

Source: Enterprise Data Warehouse (EDW).

Delivery Operations managers indicated that Marketing normally maintains carrier package pickup data[23] and periodically shares it with them.

Delivery and Collection Fleet. Postal Service vehicles were not designed to handle the upcoming growth in packages. The long-life vehicles (LLVs) were primarily designed for letters, flats, and small packages. Delivery Operations is working with Engineering to design a shelving system for the vehicles to accommodate future package growth.

There are over 190,000 delivery and collection vehicles, many of which are 18 to 25 years old.[24] In June 2011, the Postal Service developed a plan[25] to purchase new vehicles; however, the Postal Service's continuing financial situation prevents it from implementing the plan. We are conducting an in-depth review of vehicles, so we are not making recommendations on vehicle replacement in this report.[26]

Meeting these challenges will help the Postal Service manage package growth, improve its competitiveness in the package business, and assist in meeting customers' needs.

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21 As of July 26, 2013.
22 Analyzing the amount of city carrier street time will be part of the OIG's PARIS 2.0, City Delivery Efficiency Model.
23 In collaboration with Delivery Operations management, the number of carrier package pickups is an item the OIG plans to add to its PARIS 2.0, City Delivery Efficiency Model.
24 *Delivery Vehicle Replacement Strategy* (Report Number DA-AR-10-005, dated June 16, 2010). *Delivery Fleet Strategies* (Report Number CI-AR-12-006, dated August 14, 2012).
25 *Light Delivery Vehicle Preliminary Business Case*, dated June 23, 2011.
26 The OIG is conducting an audit on next generation delivery and collection vehicles.

Recommendations

We recommend the Postal Service continue to test and implement dynamic routing, modify package compartments on cluster box units, and use operational reports to monitor and manage carrier package data. We also recommend the Postal Service implement a vehicle shelving system.

We recommend the vice president, Delivery and Post Office Operations:

1. Continue to test and implement dynamic routing to manage increased package growth on delivery routes.

2. Study package growth trends on delivery routes and modify cluster box unit package compartments, as needed, for additional delivery capacity.

3. Use operational reports to proactively monitor and manage Carrier Package Pickup data to make adjustments, as needed, to improve operational efficiency.

We recommend the vice president, Delivery and Post Office Operations, coordinate with the vice president, Engineering Systems, to:

4. Implement a vehicle shelving system to accommodate package growth.

Management's Comments

Management agreed with the findings and recommendations. Management noted that these issues were discussed during meetings with the OIG and corrective actions are being developed by the program offices.

For recommendation 1, Delivery and Post Office Operations responded that it has tested various versions of dynamic routing for over a year and will continue testing and implementing dynamic routing in specific areas through December 2013.

For recommendation 2, management stated it has taken corrective action and will continue to study growth trends on delivery routes. Delivery and Post Office Operations stated that it has collaborated with Engineering to design larger mailboxes and CBUs with an increased number of package compartments for use where additional capacity is needed and space is available.

For recommendation 3, management implemented corrective actions and will use them regularly to monitor Carrier Pickup data found in the Application System Reporting section in EDW.

For recommendation 4, management stated it took corrective actions and developed three different shelving systems for LLVs. It stated the systems are under evaluation at five sites and evaluation will be completed by the end of Quarter (Q) 1, FY 2014. It stated that upon successful completion, and if funds are available in Q2, FY 2014, shelving units can be available to be deployed starting in Q4, FY 2014.

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 corrective actions should resolve the issues identified in the report.

The OIG considers all recommendations significant, and therefore requires OIG concurrence before closure. Management has completed corrective actions for recommendations 1, 2, 3; therefore, these recommendations can be closed with the issuance of this report. Consequently, the OIG requests written confirmation when corrective actions are completed for recommendation 4. This recommendation should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

Appendices

Click on the appendix title

to the right to navigate to

the section content.

Background

The Postal Service delivered over 3.5 billion packages during FY 2012 and expects an increase in package delivery of over 7 percent during FY 2013. The Postal Service welcomes this growth at a time of declining letter and flat mail volume. The Postal Service has implemented Delivery Results, Innovation, Value, and Efficiency initiatives, including Shipping Growth and Building a World-Class Package Platform.[27] These two initiatives focus on the Postal Service becoming the shipper of choice and dominating the market for shipping business-to-customer packages. In FY 2012, the Postal Service named "Compete for the Package Business" as one of its four core business strategies.

Objective, Scope, and Methodology

Our objective was to assess operational readiness for package growth in Delivery Operations. To accomplish our objective, we:

■ Examined criteria for world-class package delivery components, including volume, capacity, systems, resources, transportation, and equipment. We used competitors' metrics, such as advanced routing technology, customer-focused processes, and other technology solutions.

■ Reviewed Postal Service documentation, including applicable policies and procedures and prior audit reports on topics related to packages, such as routing tools, vehicles, delivery equipment, staffing, and carrier package pickup data.

■ Reviewed package volume data for FYs 2010 through 2012 and staffing resources for FY 2011 through July 2013.

■ Reviewed data for Delivery Operations' initiatives for dynamic routing and hiring of city carrier assistants.

■ Interviewed officials at Postal Service Headquarters; the Southern, Western, and Great Lakes areas; and the Arizona and South Florida districts to discuss managing package growth, staffing, and attrition.

We conducted this review from March through November 2013 in accordance with the Council of the Inspectors General on Integrity and Efficiency, Quality Standards for Inspection and Evaluation. We discussed our observations and conclusions with management on September 11, 2013, and included its comments where appropriate.

We assessed the reliability of computer-processed data from the EDW, but we did not test controls over the system; however, we checked the reasonableness of results by reviewing existing information about the data and the system that produced them. We also relied on supporting information provided by Postal Service officials. We determined that the data were sufficiently reliable for the purposes of this report.

Prior Audit Coverage

The OIG has conducted one audit related to this topic, *Package Delivery Growth*, (Report Number MS-AR-12-003, dated May 4, 2012). The report stated that the Postal Service's strategies for growing its package business have helped it keep pace with competitors in growing domestic and international package markets. Although the strategies are sound, their effectiveness has been impacted by lack of a strategic decision-making process for evaluating new sales opportunities, sales tracking system shortcomings, and chronic sales staff vacancies. The Postal Service can grow its package business by stabilizing sales staffing levels and adding new products. Management agreed with our findings and recommendations and set forth its plans for corrective actions. Management disagreed with the monetary impact of $647 million in subsequent correspondence stating that, even with a reduced sales force, it has increased sales by focusing on higher value sales and sales execution.

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27 The OIG reported on the Postal Service's real-time scanning capabilities in the report titled, *Delivery Data Transmission* (Report Number DR-MA-13-003, dated August 6, 2013).

**Appendix B:
Managment's Comments**

VICE PRESIDENT, DELIVERY AND POST OFFICE OPERATIONS

**UNITED STATES
POSTAL SERVICE**

November 15, 2013

TO: JUDITH LEONHARDT

SUBJECT: Draft Management Advisory – Delivery Operations – Readiness for
Package Growth (Report Number DR-MA-14-DRAFT)

Thank you for the opportunity to respond to your assessment of operational
readiness for package growth in delivery operations contained in Report number
DR-MA-14-Draft, Delivery Operations - Readiness for Package Growth dated
October 31, 2013. The OIG found that Delivery Operations has successfully
managed package growth from a mail volume and workhour standpoint but that
opportunity still existed to improve and made recommendations for such
improvement. Thankfully, and as the OIG discovered during their interviews and
investigation, Delivery Operations in conjunction with other functional areas such
as Engineering, Product Information, Labor Relations and Information
Technology, the Postal Service has already been working on and in fact
implemented tests regarding the recommendations made to the vice president,
Delivery and Post Office Operations. These recommendations are consistent
with Delivery Operations strategies to put the Postal Service in a position to gain
increase package business and then manage this growth and associated
workload efficiently.

Below is our response to each of the recommendations:

1. Continue to test and implement dynamic routing to manage increased
   package growth on delivery routes.

   RESPONSE - We agree with the recommendation. We have been testing
   various versions of dynamic routing for over a year and we are continuing
   to test and implement dynamic routing in specific areas in the Pacific,
   Northeast, and Eastern Areas through December 2013.

2. Study package growth trends on delivery routes and modify cluster box
   unit package compartments as needed for additional delivery capacity.

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RESPONSE - We agree to continue to study growth trends on delivery routes. We have already been working with Engineering and have designed larger mailboxes as well as CBUs with an increased number of package compartments that can be used where additional capacity is needed and space is available.

3. Use operational reports to proactively monitor and manage Carrier Package Pickup data to make adjustments as needed to improve operational efficiency.

RESPONSE - We agree and already regularly monitor Carrier Pickup using the Application System Reporting section in EDW.

We recommend the vice president, Delivery and Post Office Operations; coordinate with the vice president, Engineering Systems, to:

4. Implement a vehicle shelving system to accommodate package growth.

RESPONSE - Management concurs. Engineering Systems have developed three shelving systems for the LLVs. The different shelving designs are currently under evaluation at five sites (Escondido, CA; Carol Stream, IL; Potomac, MD; New Brunswick NJ; and Philadelphia, PA). The evaluation will be completed by the end of FY'14 Quarter-1. If the evaluation is successful and funding becomes available in FY'14 Quarter-2, shelving units can be available for deployment as early as FY'14 Quarter-4.

This report and management's response do not contain information that may be exempt from disclosure under the FOIA.
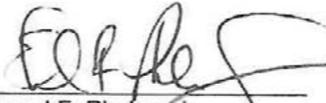
Edward F. Phelan, Jr.
Vice President, Delivery and
Post Office Operations

Michael J. Amato
Vice President, Engineering Systems

cc: CARM

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