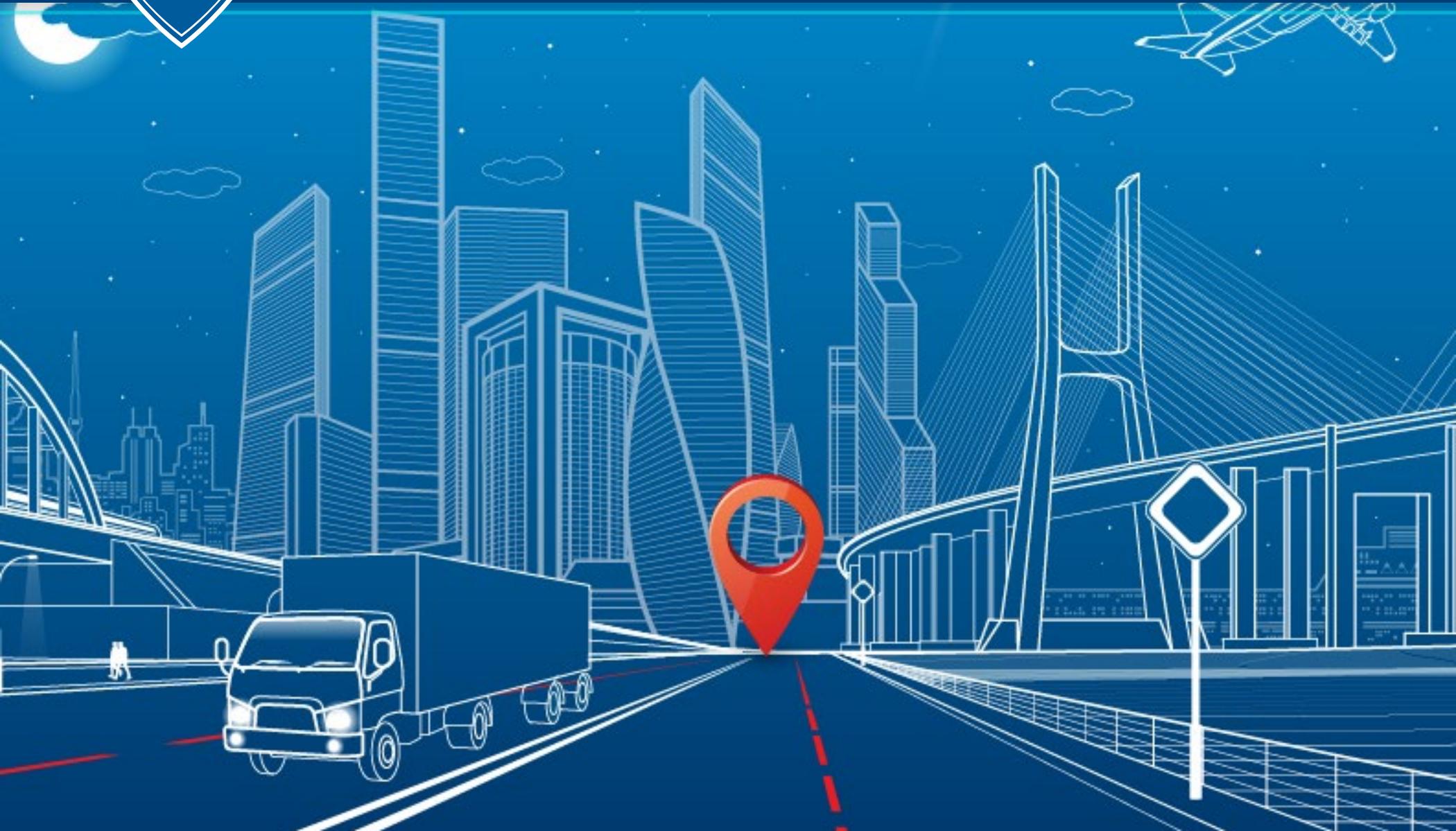


Office of Inspector General | United States Postal Service

## Audit Report

# Postal Service Dynamic Route Optimization and Cost Savings Initiative

Report Number NL-AR-19-004 | September 27, 2019



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# Highlights

## Objective

Our objective was to evaluate the cost savings for implementing the U.S. Postal Service's Dynamic Route Optimization (DRO) initiative.

The Postal Service began implementing the initiative in fiscal year (FY) 2016. The initiative allows for morning Highway Contract Routes (HCR) to change from a fixed-price contract with set routes (static) to a rate per mile (RPM) contract with varying departure times, lines of travel, and mail types transported based on mail volume (dynamic) to optimize routes thus reducing mileage and transportation costs. The Postal Service awards DRO contracts for sites selected for conversion and uses Commercial Off-the-Shelf Transportation Management System (TMS) software in conjunction with the Shipment File Web application to generate weekly dynamic manifests at the DRO sites.

The Postal Service spent about \$6.59 million piloting the initiative at the Dulles Processing and Distribution Center (P&DC), VA in January 2016, and expanded it to the El Paso P&DC, TX, and Margaret L. Sellers P&DC, CA in September 2016.

The Postal Service approved an additional \$48.47 million in October 2016 to implement the initiative nationwide through FY 2019. The goal was to deploy the program to an additional 90 sites by FY 2018 and 102 additional sites by FY 2019, for a total of 195 sites, including the three pilot sites.

The Postal Service projected total savings of \$22.38 million for FYs 2017 and 2018, and a total of \$301.21 million by FY 2024.

The Postal Service reported implementation (changed static HCR contract to DRO contract) of the initiative at 34 sites as of the end of FY 2018. We visited nine of these sites, covering all seven Postal Service areas. While DRO contracts were in place for these nine sites, the Postal Service reported that four sites were fully converted to DRO and operating dynamic routes; the remaining five sites were operating static routes even though a DRO contract was in place.

In FY 2018, the Postal Service spent about \$4.32 billion on HCR transportation and drove about 1.6 billion miles. This was a cost increase of about \$249 million (or 6.1 percent) and a decrease in miles driven of about 41.7 million miles (or 2.5 percent) from FY 2017.

## FISCAL YEAR 2018

THE POSTAL SERVICE SPENT ABOUT  
**\$4.32 BILLION**  
ON HCR TRANSPORTATION  
AND DROVE ABOUT  
**1.6 BILLION MILES.**

THIS WAS A COST  
INCREASE OF ABOUT  
**\$249  
MILLION**



AND A DECREASE OF  
MILES DRIVEN BY ABOUT  
**41.7  
MILLION**

FROM **FISCAL YEAR 2017**

## What the OIG Found

The DRO initiative did not achieve planned cost savings for FYs 2017 and 2018 because the Postal Service did not identify and resolve program issues before national rollout and did not accurately measure related Key Performance Indicators (KPI).

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*“We found the DRO initiative did not achieve planned cost savings for FYs 2017 and 2018.”*

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Specifically, despite the Postal Service spending \$32.72 million in total investments in FYs 2017 and 2018, at the time of our audit, 29 of the 34 sites (or 85 percent) had not fully optimized under DRO and were still running static routes. Four of the 29 static sites were one time optimized but converted back to static routing using the last dynamic manifest (frozen). Additionally, of the five sites that were reportedly fully optimized to dynamic routing, only one site was operating dynamically. Three sites required significant time and resources to manually adjust the weekly dynamic manifests to meet local transportation requirements. The remaining site continues to run frozen routes based on the initial optimization routes without following the dynamic manifest schedule. In addition, payments to the HCR suppliers for this site were inaccurately based on the dynamic manifest mileage.

Further, the Postal Service implemented the program using the TMS software application by [REDACTED]. The TMS software product required [REDACTED].

These occurred because the Postal Service did not identify and resolve program issues before national rollout. Specifically:

- Management oversight and control over the program needed improvement.
- The software used to generate the weekly manifests contained some errors such as trip miles, travel times, line of travel, sorting, loading and unloading times, and types of equipment needed to transport mail volume.
- Data in the Shipment File Web application contained some errors. For example, the container capacity for Priority Mail used the incorrect container-

to-pieces conversion rate. Additionally, the weekly forecasted mail volume did not always meet the variance thresholds of 10 percent.

- Some HCR suppliers and site personnel concerns related to manifests and supplier payment issues were not addressed and resolved timely.
- Payments to HCR suppliers participating in the program were manually processed and the methodology for calculating these payments was inconsistent and inaccurate. In addition, some payments were not processed timely.

Additionally, we found the Postal Service did not accurately measure the six program KPIs to reflect the actual initiative performance.

We determined that in FYs 2017 and 2018, 25 of the 34 DRO sites (or 74 percent) paid an RPM higher than they did under the previous fixed-price contracts. The overall RPM increased by 9.3 percent and did not achieve its planned national performance goal of a less than 8 percent increase. Additionally, while mileage was reduced by 7 percent, this was well short of the 12.5 percent mileage reduction goal.

Furthermore, in FYs 2017 and 2018, the Postal Service did not achieve the projected savings of \$22.38 million, instead, the program incurred an additional \$3.40 million in transportation contract costs for the 34 DRO sites. The Postal Service imputed indirect savings \$8.54 million by applying inflationary factors to the RPM and fuel cost recovery, resulting in net imputed savings of \$5.14 million. However, we determined the Postal Service used incorrect and inconsistent savings calculations by applying the inflationary factors overstating the imputed savings by \$2.07 million.

Consequently, the Postal Service incurred questioned costs of about \$16.36 million annually in FYs 2017 and 2018 for capital investment costs related to implementing the initiative.

During our audit Postal Service management provided additional documentation on steps they have initiated in FY 2019 to improve program implementation issues and concerns. For example, in March 2019, the Postal Service appointed

an acting national program manager for the program. In addition, they developed a new Help Desk process using the Service Now System to track questions, problems, and concerns from DRO sites. Further, as of August 13, 2019, the Postal Service stated that five additional sites are reportedly fully optimized to dynamic routing, however we did not verify this information.

## What the OIG Recommended

We recommended management:

- Identify and resolve DRO program issues before continuing implementation and the national rollout.
- Provide management oversight and certify the site personnel have updated guidance, procedures, and training on the program.
- Evaluate the data accuracy in the Transportation Management System and Shipment File Web applications and test the functionality of both systems to ensure it meets the Postal Service's program requirements and the accuracy of the dynamic manifest.
- Continue defining clear and timely communication protocols with stakeholders to ensure concerns with manifests and supplier payments are addressed and resolved.
- Develop an automated payment process to ensure suppliers are paid consistently, accurately, and timely.
- Establish a method for calculating KPIs to ensure the accurate measure of program performance.
- Evaluate the program savings calculation for rate per mile and fuel inflationary factors to ensure accurate calculation of initiative savings.

# Transmittal Letter



OFFICE OF INSPECTOR GENERAL  
UNITED STATES POSTAL SERVICE

September 27, 2019

**MEMORANDUM FOR:** ROBERT CINTRON  
VICE PRESIDENT, LOGISTICS  
  
MARK A. GUILFOIL  
VICE PRESIDENT, SUPPLY MANAGEMENT

E-Signed by Inspector General  
VERIFY authenticity with eSign Desktop  
*Darrell E. Benjamin, Jr.*

**FROM:** Darrell E. Benjamin, Jr.  
Deputy Assistant Inspector General  
for Mission Operations  
  
**SUBJECT:** Audit Report – Postal Service Dynamic Route  
Optimization and Cost Savings Initiative  
(Report Number NL-AR-19-004)

This report presents the results of our audit of the U.S. Postal Service Dynamic Route Optimization and Cost Savings Initiative (Project Number 19XG006NL000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Carmen Cook, Director, Transportation, or me at 703-248-2100.

Attachment

cc: Postmaster General  
Corporate Audit Response Management

# Results

## Introduction/Objective

This report presents the results of our self-initiated audit of the U.S. Postal Service's Dynamic Route Optimization (DRO) and Cost Savings Initiative (Project Number 19XG006NL000). Our objective was to evaluate the cost savings for implementing the Postal Service's DRO initiative. See [Appendix A](#) for additional information about this audit.

## Background

The Postal Service began implementing the DRO initiative in fiscal year (FY) 2016. The initiative allows for morning Highway Contract Routes (HCR) to change from a fixed-price contract with set routes (static), to a rate per mile (RPM) contract with varying departure times, lines of travel, and mail types transported based on mail volume (dynamic) to optimize routes thus reducing mileage and transportation costs. The Postal Service awards DRO contracts for sites selected for conversion and uses Commercial Off-the-Shelf Transportation Management System (TMS) software in conjunction with the Shipment File Web (SFW)<sup>1</sup> application to generate weekly dynamic manifests at the DRO sites.<sup>2</sup>

The Postal Service spent about \$6.59 million piloting the initiative at the Dulles Processing and Distribution Center (P&DC), VA in January 2016, and expanded it to the El Paso P&DC, TX, and Margaret L. Sellers (MLS) P&DC, CA in September 2016.

The Postal Service approved an additional \$48.47 million in October 2016 to implement the initiative nationwide through FY 2019 (see Table 1). The goal was to deploy the program to an additional 90 sites by FY 2018 and 102 additional sites by FY 2019, for a total of 195 sites, including the three pilot sites.

<sup>1</sup> Bridge application that connects mail volume projections to manifest generation in the TMS.

<sup>2</sup> Site refers to mail processing facility.

<sup>3</sup> Time goal when distributing mail to carrier routes.

**Table 1. DRO Investment Summary National Rollout FYs 2017- 2019**

Description	Amount
Capital Investment	\$41,022,489
Expense Investment	7,451,844
<b>Total Investment</b>	<b>\$48,474,333</b>

Source: U.S. Postal Service Decision Analysis Report (DAR) Business Case – DRO National Rollout, 10/2/2016.

Management identified six key performance indicators (KPI) to measure overall national performance: RPM, mileage reduction, extra trips, vendor on-time performance, delayed trip, and delivery up-time (DUT).<sup>3</sup> See Table 2.

**Table 2. DRO Primary Performance Metrics Targets**

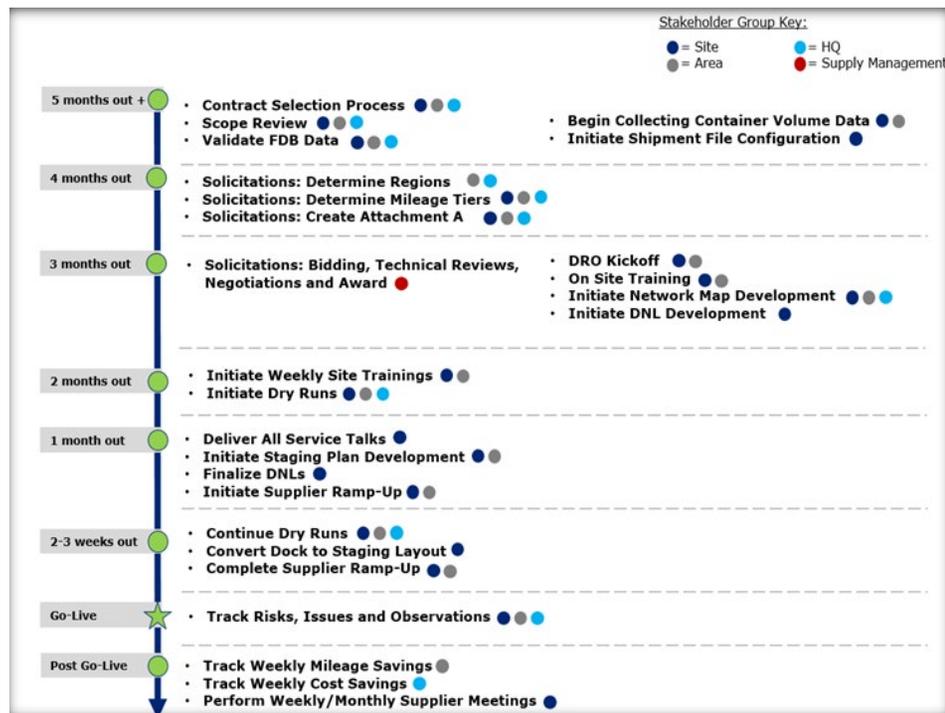
Metric	Target
Rate Per Mile	<8% increase
Mileage Reduction	12.5% reduction
Extra Trips	10% reduction
Vendor On-time Performance	98%
Delayed Trip Reduction	3% decrease
Delivery Up-Time	0% change

Source: DAR Business Case – DRO National Rollout, 10/2/2016.

The Postal Service projected total savings of \$22.38 million for FYs 2017 and 2018, and a total of \$301.21 million by FY 2024.

The Postal Service begins preparing for DRO implementation about five months before a site's planned implementation date. The process involves various stakeholders such as local site management, area coordinators, headquarters surface transportation, supply management personnel, and HCR suppliers. See Figure 1 for a high-level timeline, activities, and stakeholder involvement related to the DRO implementation processes.

**Figure 1. DRO Implementation Timeline, Activities, and Stakeholder Involvement**



Source: Postal Service DRO Playbook, December 2017.

The Postal Service reported implementation (changed static HCR contract to DRO contract) of DRO at 34 sites as of the end of FY 2018. We visited nine of these sites, covering all seven Postal Service areas. While DRO contracts were in place for these nine sites, the Postal Service reported that four sites were fully converted to DRO and operating dynamic routes; the remaining five sites were operating static routes even though a DRO contract was in place.<sup>4</sup>

In FY 2018, the Postal Service spent about \$4.32 billion on HCR transportation and drove about 1.6 billion miles. This was a cost increase of about \$249 million (or 6.1 percent) and a decrease in miles driven of about 41.7 million miles (or 2.5 percent) from FY 2017.

***“We found the DRO initiative did not achieve planned cost savings for FYs 2017 and 2018 resulting in a predicted savings shortfall of about \$19.31 million.”***

### Finding #1: Dynamic Route Optimization Cost Savings

The DRO initiative did not achieve planned cost savings for FYs 2017 and 2018 because the Postal Service did not identify and resolve the program issues before national rollout and did not accurately measure related KPIs.

#### Program Implementation

Despite the Postal Service spending \$32.72 million in total investments in FYs 2017 and 2018, at the time of our audit, 29 of the 34 sites (or 85 percent) had not fully optimized under DRO and were still running static routes. Four of the 29 static sites (Albuquerque, Burlington, Manchester, and Fayetteville P&DCs) were one time optimized but converted back to static routing using the last dynamic manifest (frozen). Additionally, of the five sites that were reportedly fully optimized to dynamic routing, only one site (Oshkosh P&DF) was operating dynamically. Three sites (El Paso, MLS, and Manasota P&DCs) required significant time and resources to manually adjust the weekly dynamic manifests

4 The five static sites are Santa Barbara, Fayetteville, Columbus, Albuquerque, and Burlington P&DCs. The four dynamic sites are Dulles, MLS, El Paso P&DCs and Oshkosh Processing and Distribution Facility (P&DF).

to meet local transportation requirements. The remaining site (Dulles P&DC) continues to run frozen routes based on the initial optimization routes without following the dynamic manifest schedule. In addition, payments to the HCR suppliers for this site were inaccurately based on the dynamic manifest mileage.

Furthermore, the Postal Service implemented the program using TMS software application by [REDACTED] [REDACTED] was not meeting Postal Service program requirements. The TMS software product required [REDACTED].

These occurred because the Postal Service did not identify and resolve program issues before national rollout. Specifically:

- Management oversight and control over the program needed improvement.
- The software used to generate the weekly manifests contained some errors such as trip miles, travel times, line of travel, sorting, loading and unloading times, and types of equipment needed to transport mail volume. For example:
  - Trip miles, travel times, and lines of travel used were for the shortest route, not necessarily the most efficient or practical route, and did not account for road restrictions or traffic.
  - The types of equipment needed to transport mail volume indicated in the system were for the incorrect size trailers based on mail volume and dock capacity at the facilities.

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***“The Postal Service did not identify and resolve program issues before national rollout and did not accurately measure related KPIs.”***

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- Due to numerous changes being made to the manifests, local personnel could not supply them to suppliers timely.
- The data in SFW contained some errors. For example, the container capacity for Priority Mail used the incorrect container-to-pieces conversion rate. Specifically, SFW showed 248 pieces of Priority Mail per wire container capacity; however, the Priority Mail container-to-pieces conversion rate for a wire container is 85.84 pieces.<sup>5</sup> TMS depends on data from the SFW application to optimize transportation; therefore, updates to SFW are critical to ensuring the accuracy of the TMS manifest. Additionally, the weekly forecasted mail volume did not always meet the variance threshold of 10 percent.<sup>6</sup> For example, the Dulles P&DC did not meet the 10 percent threshold for 12 of the 13 weeks in FY 2018, Quarter (Q) 4, with a range from 11 percent under forecasted volume to 27 percent over forecasted volume.
- Some HCR suppliers and site personnel concerns related to manifests and supplier payment issues were not addressed and resolved timely. For example, a supplier contacted Postal Service Headquarters management regarding manifest and payment issues with no resolution. In addition, personnel at DRO sites submitted necessary manifest changes through the DRO support email at headquarters which were not addressed and resolved timely.
- Payments to the 37 DRO HCR suppliers at the 34 DRO sites were manually processed by entering the executed miles and selecting the appropriate RPM in the Service Change Request system and the methodology for calculating these payments was inconsistent and inaccurate. In addition, some payments were not always processed timely. Specifically, we reviewed April 2019 payment records for the 34 DRO sites and noted that:
  - Personnel at DRO sites pay suppliers using different mileage sources such as manifest mileage in TMS, mileage from pre-DRO contracts, or manually calculating trip miles.

<sup>5</sup> Handbook M-32, *Management Operating Data System*, Appendix D, page 231, September 2018.

<sup>6</sup> Postal Service DRO Playbook, December 2017 states, “In order to optimize transportation, the TMS depends on accurate Run Plan Generators (RPG). RPGs should have a variance of less than 10 percent of actual volume by each mail type. Reducing RPG variance to under 10 percent is a key to success for DRO.”

- Overpayments and underpayments were occurring when incorrect mileage sources were used.
- Late slips from delayed trips were not timely paid to suppliers.
- Non-DRO miles were paid under the DRO contracts using the DRO RPM.
- Total mileage payment exceeded the upper tier range mileage limit established in the contracts.

#### Recommendation #1

The **Vice President, Logistics**, identify and resolve the Dynamic Route Optimization program issues before continuing implementation and the national rollout.

#### Recommendation #2

The **Vice President, Logistics**, provide management oversight and certify the site personnel have updated guidance, procedures, and training on the program.

#### Recommendation #3

The **Vice President, Logistics**, evaluate the data accuracy in the Transportation Management System and Shipment File Web applications and test the functionality of both systems to ensure it meets the Postal Service's program requirements and the accuracy of the dynamic manifest.

#### Recommendation #4

The **Vice President, Logistics**, continue defining clear and timely communication protocols with stakeholders to ensure concerns with manifests and supplier payments are addressed and resolved.

#### Recommendation #5

The **Vice President, Logistics**, in coordination with the **Vice President, Supply Management**, develop an automated payment process to ensure suppliers are paid consistently, accurately, and timely.

### Key Performance Indicators

We found the Postal Service did not accurately measure the six DRO KPIs to reflect the actual initiative performance. We reviewed the methodology for FY 2019, Q1<sup>7</sup> and, based on the actual reported performance, the Postal Service met only one of the six KPI goals (RPM) (see [Table 3](#)).

<sup>7</sup> The Postal Service did not report actual KPIs for FY 2018, Q4.

**Table 3: DRO DAR Target vs. Actual FY 2019, Q1**

Metric	DAR Target	Actual
<b>RPM</b>	<b>&lt;8% increase</b>	<b>4.7% increase</b>
Mileage Reduction	12.5% reduction	5.3% reduction
Extra Trips	10% reduction	2.3% reduction
Vendor On-Time Performance	98%	85%
Delayed Trip Reduction	3% decrease	0% decrease
Delivery Up-Time	0% change	0% change

Source: Detailed Capital Investment Report for FY 2019, Q1.

Further, the Postal Service could not provide supporting data for four of the six KPIs (mileage reduction, delayed trip reduction, vendor on-time performance, and DUT). Therefore, we could not validate the methodology and reported percentages for these KPIs. We reviewed supporting data for the two KPIs (RPM and Extra Trips) and determined the Postal Service did not accurately measure them to reflect the actual performance of the initiative.

This occurred because the Postal Service did not use consistent data and methodologies to measure the KPIs. For example, the methodology used in the RPM KPI comparison did not account for all 34 DRO sites and, instead included the evaluation of only eight sites. In addition, historical miles were used instead of DRO actual miles to calculate DRO RPM, which is incorrect. Furthermore, the methodology used for the extra trip reduction KPI was inconsistent and incorrect. The Postal Service used the extra trip miles and divided it by total miles using two months of data, instead of comparing the DRO against the pre-DRO extra

trip miles data for the entire quarter. Therefore, this calculation did not provide the true comparison required to measure the extra trip reduction KPI. As a result, Postal Service management did not have the accurate performance results and visibility for the program needed to make informed management decisions.

We determined that in FYs 2017 and 2018, 25 of the 34 DRO sites (or 74 percent) paid an RPM higher than they did under the previous fixed-price contracts. The overall RPM increased by 9.3 percent and did not achieve its planned national performance goal of a less than 8 percent increase. Additionally, while mileage was reduced by 7 percent, this was well short of the 12.5 percent mileage reduction goal.

**Recommendation #6**

The **Vice President, Logistics**, establish a method for calculating Key Performance Indicators to ensure the accurate measure of program performance.

## Cost Savings Calculation

In FYs 2017 and 2018, the Postal Service did not achieve the projected savings of \$22.38 million, instead, the program incurred an additional \$3.40 million in transportation contracted costs for the 34 DRO sites. The Postal Service imputed

indirect savings by applying inflationary factors to the RPM and fuel cost recovery of \$8.54 million resulting in net imputed savings of \$5.14 million and a savings shortfall of \$17.24 million compared to the planned savings of \$22.38 million (see Table 4).

**Table 4. Postal Service DRO Savings in FYs 2017 - 2018**

Fiscal Year	Planned Savings	Total Hard Savings	Inflation Recovery <sup>8</sup>	Total Realized Savings	Savings Shortfall
2017	\$4,297,077	\$(402,811)	\$407,989	\$5,178	\$4,291,899
2018	18,085,987	(2,998,358)	8,136,980	5,138,622	12,947,365
Total	\$22,383,064	\$(3,401,169)	\$8,544,969	\$5,143,800	\$17,239,264

Source: Postal Service DRO national rollout DAR and savings calculation.

We determined the imputed savings were overstated by \$2.07 million. Specifically, the Postal Service overstated RPM inflation recovery by \$3.18 million and understated both the fuel inflation recovery by \$1.04 million and fuel avoidance by \$68,189 (see Table 5).

**Table 5. Inflation Recovery Comparison in FYs 2017 - 2018**

Source	RPM Inflation	Fuel Inflation	Fuel Avoidance	Total Inflation Recovery
Postal Service	\$4,867,461	\$3,447,413	\$230,096	\$8,544,969
OIG	1,691,493	4,485,635	298,285	6,475,412
Difference	\$3,175,968	\$(1,038,222)	\$(68,189)	\$2,069,557

Source: U.S. Postal Service Office of Inspector General (OIG) analysis of the DRO savings calculation.

This occurred primarily due to the incorrect and inconsistent savings calculation related to applying the inflationary factors for the RPM and fuel. Specifically:

- The Postal Service incorrectly and inconsistently calculated the RPM inflation factor using the flat rate of 3 to 6 percent or contract aging<sup>9</sup> multiplied by 1.5 percent<sup>10</sup> instead of the one-time economic pay adjustment per

<sup>8</sup> Inflation included RPM inflation, fuel inflation, and fuel avoidance.

<sup>9</sup> The timeframe before the contract was converted to DRO.

<sup>10</sup> Supply Management provided this percentage based on a local freight trucking services study.

Postal Service policy,<sup>11</sup> which states that in HCR transportation contracts with terms of greater than two years, the supplier may be eligible for one economic pay adjustment beginning with the first day of the third year of the contract. Based on this policy, pre-DRO contracts may be eligible to receive a one-time economic pay adjustment increase up to 1.5 percent during the contract term.

- The Postal Service incorrectly calculated the fuel inflation recovery and fuel avoidance using the contract fuel price per gallon (PPG) instead of the Department of Energy’s fuel PPG index to reflect true fuel inflation.

As a result, the Postal Service imputed savings were only \$3.07 million,<sup>12</sup> overstating the reported savings by \$2.07 million, in FYs 2017 and 2018, resulting in a predicted savings shortfall of about \$19.31 million (see Table 6).

**Table 6. DRO Planned Savings Shortfall in FYs 2017 - 2018**

Planned Savings by the Postal Service	OIG-Calculated Savings	Predicted Savings Shortfall
\$22,383,064	\$3,074,244	\$19,308,820

Source: OIG analysis of DRO savings calculation.

Consequently, the Postal Service incurred questioned costs of about \$18.16 million in FY 2017 and \$14.56 million in FY 2018, totaling \$32.72 million in capital investment costs related to implementing the initiative and incurring additional transportation contract costs of \$3.40 million and not achieving the planned number of sites for DRO implementation.

**Recommendation #7**

The **Vice President, Logistics**, evaluate the program savings calculation for the rate per mile and fuel inflationary factors to ensure accurate calculation of initiative savings.

During our audit Postal Service management provided additional documentation on steps initiated to improve previously identified DRO implementation issues and concerns. For example, in March 2019, the Postal Service appointed an acting director, field surface transportation, to be national program manager for the program. In addition, in April 2019 the Postal Service started soliciting feedback from area coordinators and site representatives on DRO processes and started working to improve these communications, which are currently in progress. Further, they developed a new Help Desk process using the Service Now System

to track questions, problems, and concerns from DRO sites. Furthermore, as of August 13, 2019, the Postal Service informed the OIG that five additional sites are reportedly fully optimized to dynamic routing; however, we did not verify this information.

**Management’s Comments**

Management generally agreed with the finding and recommendations 1 through 6 and disagreed with recommendation 7.

Management stated that several points in the report require clarity and context, such as the description of whether a site was running a static, dynamic or frozen schedule. They explained that static schedules equate to the pre-DRO contract award schedule, resulting in no optimization or mileage savings. Dynamic schedules change weekly, so will have varying degrees of savings. Frozen schedules start as dynamic, meaning the schedule has been optimized; however, they were frozen for a period before becoming dynamic again. Management agreed that the savings are not as high as projected; however, they contend that the report characterizes the frozen schedules as not generating savings. Management also acknowledged the ongoing issue with sites manually adjusting

<sup>11</sup> Management Instruction PM-4.4.1-2005-1, Section 432, Transportation Routes, effective April 1, 2005.

<sup>12</sup> We evaluated Postal Service DRO savings using the actual payment data available at the time of our audit. This data may not reflect the true DRO costs and miles due to the payment errors we identified.

the automated DRO manifests and are addressing that as part of the DRO deployment by field transportation managers. Management further acknowledged the need for data accuracy and reliability, stating that to mitigate the risks associated with data integrity, they have been working on automating those data sources requiring limited manual input and achieving time efficiencies with modeling efforts.

Management also stated that the OIG's handling of the rate of inflation, the 9.3 percent rate increase, was incorrect, and the interpretation of the Management Instruction on Economic Adjustments for HCR contracts allows for an automatic 1.5 percent adjustment per year at the beginning of the third year of the contract, was also incorrect. Management assumes contract renewals would have a rate increase using a 1.5 percent inflation factor, within two years a 3 percent inflation factor, within 3 years a 4.5 percent inflation factor and finally within the last 4 years a 6 percent inflation factor, which results in DRO contracts savings once the sites are fully converted to dynamic and are expected to operate at the expected tier price, lowering the overall RPM. Management stated that they reviewed 1,116 contracts that were converted to DRO and only 13 had economic adjustments performed at the beginning of the third year, and the dollar increase associated with these adjustments accounted for less than a 0.1 percent rate increase in the overall annual cost for the 1,116 contracts. Finally, management agreed with the OIG's suggested improvements on management oversight and control over the DRO program and cited several examples of steps they have taken to improve the program.

Regarding recommendation 1, management agreed to identify and resolve program issues before continuing with national implementation. The target implementation date is December 31, 2019.

Regarding recommendation 2, management agreed to provide oversight and certify that site personnel have updated guidance, procedures, and training on the program. The target implementation date is December 31, 2019.

Regarding recommendation 3, management agreed to evaluate the data accuracy in the Transportation Management System and Shipment File Web applications data for accuracy and test the functionality to ensure that it meets the Postal Service's program requirements and the accuracy of the dynamic manifest. The target implementation date is December 31, 2019.

Regarding recommendation 4, management agreed to establish clear and timely communication protocols with stakeholders and manage and resolve their concerns with transportation manifests and supplier payments. The target implementation date is December 31, 2019.

Regarding recommendation 5, management agreed to automate the supplier payment process to ensure payments are consistent, accurate, and timely. The target implementation date is October 1, 2020.

Regarding recommendation 6, management agreed to develop a methodology for the KPIs to accurately measure program performance. The target implementation date is December 31, 2019.

Regarding recommendation 7, management disagreed with the OIG's interpretation of the Management Instruction and use of the RPM and fuel inflationary factors. Since management disagreed with this recommendation, they did not provide a target implementation date.

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

## Evaluation of Management's Comments

The OIG considers management's comments responsive to recommendations 1 through 6 and management's corrective actions for these recommendations should resolve the issues identified in the report.

Management disagreed with recommendation 7; therefore, they provided no corrective actions. The OIG considers management's comments unresponsive and will elevate this recommendation through the audit resolution process. Management Instruction, Transportation Routes, allows for a one-time contract increase beginning the third year of an HCR contract. We followed this instruction

in calculating the cost savings. Management, however, assumed a 1.5 percent increase every year in HCR contract costs when computing the savings calculation. Thus, we believe management's cost savings calculation was overstated, and that this calculation should be corrected moving forward.

All recommendations require OIG concurrence before closure. The OIG requests written confirmation when corrective actions are completed. Recommendations 1 through 7 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

## Scope and Methodology

The scope of our audit was to evaluate the effectiveness of the DRO program and evaluate the cost savings of the DRO initiative for FYs 2017 and 2018.

To accomplish our objective, we:

- Interviewed Postal Service headquarters management to obtain an understanding of the overall DRO process and how the savings are calculated and reported.
- Reviewed the DRO DAR business case and identified the costs expanded to date. Performed a comparative analysis against savings and the return on investment of the initiative.
- Obtained and compared DRO savings targets and actual savings reported by the Postal Service for FY 2016 through FY 2018 to determine whether DRO savings targets were met.
- Identified and evaluated the Postal Service's methodology used to calculate DRO savings.
- Reviewed, analyzed, and determined whether DRO reported savings were complete, accurate, and valid.
- Judgmentally selected nine DRO sites (four dynamic sites and five static sites) across all seven Postal Service areas for site visits.

- Interviewed key area, district, and plant personnel to obtain an understanding of DRO processes and operations at the local sites.
- Identified the primary KPIs and goals of the program and analyzed related data to determine if the goals for each performance indicators were achieved.

We conducted this performance audit from February through September 2019, 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 August 29, 2019 and included their comments where appropriate.

We assessed the reliability of the DRO savings calculation data by tracing the costs and miles from the Postal Service DRO savings spreadsheet to payment and HCR data. We traced and verified the payment data to the Postal Service 5429 payment process in the Service Change Request system. We also interviewed Postal Service personnel knowledgeable about the data. We determined that the data 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 within the last five years.

# Appendix B: Management's Comments



September 19, 2019

LAZERICK POLAND  
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Postal Service Dynamic Route Optimization and Cost Savings  
Initiative  
(Report Number NL-AR-19-DRAFT)

Thank you for providing the Postal Service with an opportunity to review and comment on the recommendations contained in the draft audit report, "Postal Service Dynamic Route Optimization and Cost Savings Initiative". Management generally agrees with the majority of the report's findings and all but one of the recommendations.

There are several points within the draft report that management suggests require further background to provide clarity and context. The first item for clarification is the description of whether a site was running a static, dynamic or frozen schedule. For the purposes of dynamic route optimization (DRO), static schedules equate to the same schedule the site was running before the DRO contract. This means that there has been no optimization and no mileage savings. Dynamic schedules change week to week and have varying degrees of savings depending on the week. A frozen schedule starts as a dynamic schedule, meaning the schedule has been optimized, however, then the Postal Service "froze" the schedule for a period of time until management took action to return the location back to a dynamic week to week schedule. The characterization provided in the report suggests a conclusion that when a site schedule is frozen, it is not saving mileage over prior static schedules. That is not the case. Since it is an optimized schedule to begin with, there are clear savings. Management agrees however that the savings are not as high as they potentially would be under a weekly dynamic schedule.

Further, the sections and conclusions regarding three sites requiring significant time and resources to manually adjust the weekly dynamic manifests to meet local transportation requirements are not complete as to those circumstances. The specific matters there were that sites were making changes to the manifest in order to keep the schedules similar to the old schedules they had historically used. That is an ongoing issue management is addressing as the Postal Service continues

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DRO deployment and location conversion. This issue will be addressed with field transportation managers to ensure that the manifests are followed, and only few edits need be made.

As with any modeling effort, accurate data is paramount. One of the major issues the Postal Service has encountered with DRO implementation is getting accurate local transportation data. To mitigate this issue we have been working to automate the data gathering of local data as much as possible. Our goal is to have the significant majority of data pulled from databases so that very little manual entry is needed. Not only will this speed up data gathering, but it will speed up the modeling effort as well.

In response to the OIG regarding the handling of the rate of inflation, the 9.3% that the OIG is citing as a rate increase is inaccurate for several reasons. First, the OIG incorrectly assumed that the Management Instruction (MI) on Economic Adjustments for HCR contracts allows for an automatic 1.5% adjustment per year at the beginning of the third year of the contract. The MI however requires that suppliers make a request to the contracting officer in order to seek an adjustment and provide documentation for the adjustment amount that they are requesting. When we reviewed the 1,116 contracts that were converted to DRO we found that only 13 contracts had economic adjustments performed at the beginning of the third year, and the dollar increase associated with the adjustments performed on these contracts accounted for less than a 0.1% rate increase in the overall annual cost for the 1,116 contracts. Due to the fact that sites are not fully dynamic, the majority of the sites are operating using the upper tier mileage price, which is on average, more per mile than the expected mileage tier price. Once the sites are fully converted to dynamic, the sites are expected to operate at the expected tier price, lowering the overall rate per mile.

The Postal Service is assuming that rates will go up over time at a 1.5% inflation rate. When DRO is deployed to a site and a new contract is negotiated, we take into consideration the age of the existing contract. If the contract was renewed within the last year we apply a 1.5% inflation factor, within two years a 3% inflation factor, within 3 years a 4.5% inflation factor and finally within the last 4 years a 6% inflation factor.

In addition to the rate inflation factor, the OIG asserts that the Postal Service did not calculate the fuel inflation properly resulting in \$1.1M in understated savings. We believe timing of the audit work has affected this conclusion. The Postal Service performed a fuel cost allocation change with our Surface Transportation Suppliers during the course of the OIG's audit, which did not result in a rate increase. However this allocation change may have affected the OIG's fuel calculations.

We have also determined and agree that management oversight and control over the program needs to be improved. Listed below are a few examples of the

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significant actions that have been taken to improve the management and control of the DRO program:

- A new executive Program Manager, with extensive field experience has been assigned to manage the DRO Program.
- Two HQ specialists with extensive field experience have been assigned overall DRO Pre-Implementation and Post Implementation responsibilities.
- We have conducted surveys of Areas and sites to identify required improvements to the program from the field perspective.
- A new system has been established to log and track every inquiry, change request, concern, in the IT Service Now System.
- Area DRO Coordinators have been given written instructions and clarifications, and provided a complete list of their duties and responsibilities to increase support and Area/site ownership of the DRO program.
- Both HQ Supply Management and Area DRO Coordinators provide an updated list of supplier payment concerns/issues for follow up by the HQ DRO Team. This list is monitored weekly and followed up on by the Transportation Specialist assigned to DRO Post Implementation.
- A new orientation and training program is being developed based on surveys sent to Areas and sites, and on common issues/questions/problems raised by the field.
- KPIs of Mileage Reduction, F4 DUTs, Trips on Time and Extra trips are measured and published weekly, by site using TM & Paid Mileage, SPMS and SV databases.

In closing, DRO is an extremely complex undertaking that will fundamentally change the way the Postal Service plans its transportation. As with any new complex undertaking there are many learnings along the way. While the program has been delayed and has had issues, it is imperative that the Postal Service implement the Transportation Management System to both further our business interests and control costs as we support service to our customers. The ever changing dynamics of the delivery market dictate that we have an automated planning system in place.

**Recommendation #1:** The Vice President, Logistics, identify and resolve the Dynamic Route Optimization program issues before continuing implementation and the national rollout.

**Management Response/Action Plan:**  
Management agrees with this recommendation.

**Target Implementation Date:**  
December 31<sup>st</sup>, 2019

**Responsible Official:**

Director, Surface Transportation

**Recommendation #2:**

The Vice President, Logistics, provide management oversight and certify the site personnel have updated guidance, procedures, and training on the program.

**Management Response/Action Plan:**

Management agrees with this recommendation.

**Target Implementation Date:**

December 31<sup>st</sup>, 2019

**Responsible Official:**

Director, Surface Transportation

**Recommendation #3:**

The Vice President, Logistics, evaluate the data accuracy in the Transportation Management System and Shipment File Web applications and test the functionality of both systems to ensure it meets the Postal Service's program requirements and the accuracy of the dynamic manifest.

**Management Response/Action Plan:**

Management agrees with this recommendation

**Target Implementation Date:**

December 31<sup>st</sup>, 2019

**Responsible Official:**

Director, Surface Transportation

**Recommendation #4:**

The Vice President, Logistics, continue defining clear and timely communication protocols with stakeholders to ensure concerns with manifests and supplier payments are addressed and resolved.

**Management Response/Action Plan:**

Management agrees with this recommendation.

**Target Implementation Date:**

December 31<sup>st</sup>, 2019

**Responsible Official:**

Director, Surface Transportation

**Recommendation #5:**

The Vice President, Logistics, in coordination with the Vice President, Supply Management, develop an automated payment process to ensure suppliers are paid consistently, accurately, and timely.

**Management Response/Action Plan:**

Management agrees with this recommendation

**Target Implementation Date:**

October 1<sup>st</sup>, 2020

**Responsible Official:**

Director, Surface Transportation

**Recommendation #6:**

The Vice President, Logistics, establish a method for calculating Key Performance Indicators to ensure the accurate measure of program performance.

**Management Response/Action Plan:**

Management agrees with this recommendation

**Target Implementation Date:**

December 31<sup>st</sup>, 2019

**Responsible Official:**

Director, Surface Transportation

**Recommendation #7:**

The Vice President, Logistics, evaluate the program savings calculation for the rate per mile and fuel inflationary factors to ensure accurate calculation of initiative savings.

**Management Response/Action Plan:**

Management disagrees with this recommendation. We believe we have a valid method for calculating fuel and rate per mile inflation impact. See comments above for rationale.

**Target Implementation Date:**

N/A

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**Responsible Official:**

N/A



Robert Cintron  
Vice President, Logistics



E-SIGNED by MARK GUILFOIL  
on 2019-09-23 15:36:02 CDT

Mark Guilfoil  
Vice President, Supply Management

cc: Manager, Corporate Audit Response Management  
Director, Surface Transportation

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