

OFFICE OF INSPECTOR GENERAL UNITED STATES POSTAL SERVICE

Kaizen Event
Review: Fiscal
Year 2016 Atlanta
Processing and
Distribution
Center Surface
Visibility
Scanning

Audit Report

Report Number NL-AR-17-003

April 17, 2017





OFFICE OF INSPECTOR GENERAL UNITED STATES POSTAL SERVICE

Highlights

Background

In 2007 the U.S. Postal Service introduced the Continuous Improvement Program to promote organizational process improvements in the workplace. The program includes Lean Six Sigma (LSS) and Kaizen processes. The Continuous Improvement office offers a 2-week LSS training course for all Kaizen project leaders. After the training, a project leader must lead one LSS project or two Kaizen events within 180 business days to earn Green Belt certification. The Continuous Improvement office recommends LSS refresher training for a Green Belt candidate who is not certified within 180 business days.

Kaizen (Japanese for "improvement") is an incremental process. The Postal Service's Kaizen process uses a "Plan-Do-Check-Act" method to analyze operational deficiencies and identify root causes. The entire process takes five weeks to complete and includes the pre-event planning and three to five-day Kaizen event. In addition, a project charter defines the goals, scope, and team member roles for the three- to five-day event. Local management should allow team members to complete the three- to five-day Kaizen event without performing their regular duties. At the conclusion of an event, the team prepares a summary report.

The Atlanta Processing and Distribution Center (P&DC) scheduled a Kaizen event from November 2015 to March 2016 to improve surface visibility load and unload scans.

The goal of the Kaizen event was to increase scan percentages from 39 percent for load scans and 68 percent for unload scans to 90 percent for both by March 31, 2016. The Postal Service scans mail and uses the surface visibility system to track it.

Our objective was to determine the effectiveness of the Kaizen process to improve surface visibility load and unload scan percentages at the Atlanta P&DC.

What the OIG Found

We determined the Kaizen event was ineffective because Atlanta P&DC management did not follow and complete the Kaizen process.

Specifically, the project team did not have a charter defining the project scope and timeframe. Additionally, the project leader completed LSS training in June 2012, but was not Green Belt-certified at the time of our review, and had not attended LSS refresher training. We concluded the project leader was not qualified to conduct the Kaizen event.

In addition, the Kaizen process lasted four months rather than the recommended five weeks. The Kaizen team performed trend analysis, identified potential barriers and root causes, and developed a list of recommended improvements. However, the Kaizen event was not completed because the improvements were not implemented. The project leader said the team did not implement any of the improvements because management



support was minimal and the team members were required to perform their regular duties instead of focusing on the Kaizen event.

Although the team did not complete the Kaizen event, it attempted to motivate employees to improve scan frequency by posting a report in the P&DC listing employee names and scan frequencies. Subsequently, Postal Service Headquarters management directed the report be removed to protect employee privacy.

We found that load and unload scan scores had improved as of March 31, 2016, to 68 and 82 percent, respectively, but did not meet the 90 percent goal. We did not find a direct correlation between the Kaizen event and the improved scan percentages.

During the audit, the acting Atlanta P&DC manager, who was not part of the Kaizen team, said the team would be

reassembled to complete the event and would provide us documented results. We will not include this information in our review because it is outside the scope of our audit and did not occur during the Kaizen event, as required.

We made a referral to our Office of Investigations concerning the Atlanta P&DC's lack of compliance with the Kaizen process and funds wasted on a Green Belt certification. We identified questioned costs of over \$14,000 for the project leader's Green Belt training and associated salary expenses for the project team.

What the OIG Recommended

We recommended management ensure that employees follow the Kaizen process and the approved steps for Green Belt certification and that onsite management supports the project team to ensure timely completion of Kaizen events.

Transmittal Letter



April 17, 2017

MEMORANDUM FOR: FRANK D. VEAL

ACTING LEAD PLANT MANAGER, ATLANTA DISTRICT

E-Signed by Michael Thompson ERIFY authenticity with eSign Deskto

FROM: Michael L. Thompson

Deputy Assistant Inspector General

for Mission Operations

SUBJECT: Audit Report – Kaizen Event Review: Fiscal Year 2016

Atlanta Processing and Distribution Center Surface Visibility

Scanning (Report Number NL-AR-17-003)

This report presents the results of our audit of the U.S. Postal Service's Kaizen Event Review: Fiscal Year 2016 Atlanta Processing and Distribution Center Surface Visibility Scanning (Project Number 17XG008NL000).

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

Attachment

cc: Corporate Audit and Response Management
Postmaster General
Chief Operating Officer and Executive Vice President
Vice President, Network Operations
Vice President Capital Metro Area

Table of Contents

Cover Highlights.....1 Background......1 What the OIG Found......1 What the OIG Recommended......2 Transmittal Letter......3 Findings......5 Introduction5 Summary......5 Kaizen Process......6 Project Charter......6 Kaizen Leadership6 Kaizen Event......6 Event Effectiveness......7 Recommendations.....8 Management's Comments8 Evaluation of Management's Comments9 Appendices......10 Appendix A: Additional Information11 Background11 Objective, Scope, and Methodology11 Appendix B: Management's Comments......13

Findings

Introduction

This report presents the results of our audit of the U.S. Postal Service's Kaizen event review of the fiscal year (FY) 2016 Atlanta Processing and Distribution Center's (P&DC) Surface Visibility (SV) Scanning (Project Number 17XG008NL000). The objective of our audit was to determine the effectiveness of the Kaizen process in improving SV load and unload scan percentages at the Atlanta P&DC. See Appendix A for additional information about this self-initiated audit.

In 2007 the Postal Service introduced the Continuous Improvement Program to promote organizational process improvements in the workplace. The program includes Lean Six Sigma (LSS) and Kaizen processes. The Continuous Improvement office offers a two-week LSS training course for all Kaizen project leaders. After the training, a project leader must lead one LSS project or two Kaizen events within 180 business days to earn Green Belt certification. The Continuous Improvement office recommends LSS refresher training for a Green Belt candidate who is not certified within 180 business days.

Kaizen (Japanese for "improvement") is an incremental process. The Postal Service's Kaizen process uses a "Plan-Do-Check-Act" method to analyze operational deficiencies and identify root causes. A project charter defines the goals, scope, and team member roles for the three- to five-day event. Local management should allow team members to complete the Kaizen event without performing their regular duties. At the conclusion of an event, the team prepares a summary report.

The Atlanta P&DC scheduled a Kaizen event from November 2015 to March 2016 to improve SV load and unload scans. The goal of the Kaizen event was to increase scan percentages from 39 percent for load scans and 68 percent for unload scans to 90 percent for both by March 31, 2016. The Postal Service uses the SV system to track scans.

Summary

We determined the Kaizen event was ineffective because Atlanta P&DC management did not follow and complete the Kaizen process. Specifically, the project team did not have a charter defining the project scope and timeframe and the project leader completed LSS training in June 2012, but was not Green Belt-certified and had not attended LSS refresher training. The project leader was still not certified at the time of our review and we concluded that she was not qualified to conduct the Kaizen event.

Additionally, the Kaizen process lasted four months rather than the recommended five weeks. The Kaizen team performed trend analysis, identified potential barriers and root causes, and developed a list of recommended improvements. However, the Kaizen event was not fully completed because the improvements were not implemented. The project leader said the team did not implement any of the improvements because management support was minimal and team members were required to perform their regular duties instead of focusing on the Kaizen event.

Although the team did not complete the Kaizen event, it attempted to motivate employees to improve scan frequency by posting a report in the P&DC listing employee names and scan frequencies. Subsequently, Postal Service Headquarters (HQ) directed the team to remove the report to protect employee privacy.

Load and unload scan scores as of March 31, 2016, improved to 68 and 82 percent, respectively, but the goal of 90 percent was not met. We did not find a direct correlation between the Kaizen event and improved scan percentages.

Kaizen event preparation requires a charter, which identifies the goals, scope, and team roles in the Kaizen process.

The Kaizen process lasted four months rather than the recommended five weeks, which includes the pre-event planning and a three- to five-day Kaizen event.

We made a referral to the U.S. Postal Service Office of Inspector General (OIG) Office of Investigations concerning the Atlanta P&DC's lack of compliance with the Kaizen process and funds wasted on Green Belt certification. We also identified questioned costs of over \$14,000 for the project leader's lack of Green Belt certification and associated salaries for the project team.

Kaizen Process

We determined the Kaizen process was ineffective because the Kaizen team did not complete a project charter, provide adequate leadership, or complete the Kaizen event.

Project Charter

Kaizen event preparation requires a charter, which identifies the goals, scope, and team roles in the Kaizen process. The project leader, who was the manager of distribution operations, could not provide a charter but instead, provided a slide presentation that referred to a tentative charter.

Kaizen Leadership

We determined the Kaizen project leader was not qualified to lead the event. After completion of LSS training, a project leader must lead one LSS project or two Kaizen events within 180 business days to earn Green Belt certification. The Continuous Improvement office said there are no consequences when a Green Belt candidate is not certified within 180 business days; however, it is recommended that the candidate complete LSS refresher training.

We found that the project leader completed LSS training in June 2012, but had not completed the Green Belt certification or attended the LSS refresher course. We identified questioned costs of \$14,644 for the project leader's lack of Green Belt certification and associated salary expenses for the project team.

Kaizen Event

Atlanta P&DC management did not complete the Kaizen event or adhere to the Kaizen timeframe. The Kaizen process lasted four months rather than the recommended five weeks, which includes the pre-event planning and a three- to five-day Kaizen event. The Kaizen project team performed trend analysis, identified potential barriers and root causes, and developed a list of recommended improvements. However, the Kaizen event was not completed because the improvements were not implemented.

The project leader said the team did not complete the event because management support was minimal and the team members were required to perform their regular duties instead of focusing on the Kaizen event. Managers are instructed to allow time for team members to complete the three- to five-day Kaizen event without the expectation of performing their regular duties.

Although the project team did not complete the event, it attempted to motivate employees to improve scan frequency. According to the senior operations support specialist (a Kaizen team member), the team posted a report publically at the P&DC listing the load and unload scan frequencies by employee name. After six weeks, the listing was removed because a HQ visibility program specialist said it violated employee privacy rights.

The Atlanta P&DC missed the opportunity to fully benefit from the Kaizen event because the project team did not comply with the process and the event was not completed.

Event Effectiveness

We found that load and unload scan scores as of March 31, 2016, improved to 68 and 82 percent, respectively, but the goal of 90 percent was not met. However, we did not find a direct correlation between the Kaizen event and improved scan percentages.

The Atlanta P&DC missed the opportunity to fully benefit from the Kaizen event because the project team did not comply with the process and the event was not completed. We determined that the Postal Service is at risk of losing \$228,329,531 in revenue from customers who seek alternative delivery options because of low scanning visibility.

The acting Atlanta P&DC manager, who was not part of the Kaizen team, said the team would be reassembled to complete the event and provide documentation of the results. We will not include this information in our review because it is outside of the scope of our audit and did not occur during the Kaizen event, as required.

Recommendations

We recommend management
ensure that employees follow the
Kaizen process and the approved
steps for Green Belt certification,
and that onsite management
supports the project team
to ensure timely completion
of Kaizen events.

We recommend the acting lead plant manager:

- 1. Ensure that employees follow the Kaizen process in the future and that local management fully supports the Kaizen project team to ensure timely completion and implementation of the Kaizen process.
- 2. Ensure that candidates complete the necessary steps for Green Belt certification timely or attend the Lean Six Sigma refresher course when they do not achieve certification in 180 days.

Management's Comments

Management disagreed in part with the findings and monetary impact, but agreed with one of the two recommendations.

Management disagreed that the Kaizen process was ineffective and stated the process has proven beneficial for the Postal Service. They further stated that the Surface Visibility Kaizen event conducted at the Atlanta P&DC was effective. Management disagreed that the Kaizen project team did not have a charter and stated they could provide supporting documentation.

Management disagreed with our conclusion that the project leader was not qualified to lead the event because they said a project leader does not have to be Green Belt certified in order to complete a Kaizen event. Management stated the project leader was Green Belt trained and, therefore, qualified to conduct a Kaizen event. They also said it is not mandatory for Green Belt trained employees to attend refresher training if they have not certified within a year and the timeline for certification is a guideline, not a requirement.

Management disagreed that the project team did not complete the Kaizen event or adhere to the timeframe because the Kaizen event started on November 12, 2015 and due to peak processing, concluded on December 10, 2015. The project was restarted on February 12, 2016, and concluded on March 31, 2016. Management stated the timeframe for completing a Kaizen event is a guideline to help the team understand the process and not a fixed timeframe.

Management disagreed with our conclusion that there was not a direct correlation between the Kaizen event and the improved scan percentages. Management stated there were improvements put into place, which were sustained during the six-week period beginning February 12, 2016 through March 31, 2016. Management recently implemented the initial improvements and noted an increase in the load and unload scan scores. Management also set a new target date of May 1, 2017, to attain a load and unload scan score of 90 percent.

Management disagreed with the amount of monetary impact because the questioned costs calculated included a greater number of workhours than the project leader actually used. Management also stated the cost of the Kaizen project leader's training is a valuable investment and not a wasted cost.

Management agreed with recommendation 1 and stated they will continue to support recommended Kaizen projects and ensure employees follow the Kaizen process. In addition, they will ensure the local LSS coordinator is involved in all future Kaizens and will meet bi-weekly to ensure each Kaizen event is following the implemented plan. Management's target implementation date is April 11, 2017.

Regarding recommendation 2, management disagreed because the timeline to become certified within 180 days is a guideline and not mandatory. In addition, the LSS refresher course is not mandatory.

See Appendix B for management's comments in their entirety.

Evaluation of Management's Comments

The OIG considers management's comments responsive to recommendation 1 and corrective action should resolve the issue we identified in the report. Prior to closing the recommendation, we will need to review documentation showing that corrective action was taken.

The OIG considers management's actions unresponsive to the findings and recommendation 2 in the report.

During our audit, Kaizen team members acknowledged the Kaizen event was not successful because the team did not achieve the goal to increase the load and unload scan scores to 90 percent by March 31, 2016.

Regarding management's statement that they have a project charter, during our audit, the Kaizen project champion and project leader both stated that they did not have a signed project charter. In addition, the Atlanta District's LSS coordinator did not have a charter and was unaware the project was taking place.

The current acting lead plant manager agreed during the exit conference that the event should have taken no longer than four weeks to complete and the Kaizen project leader was probably unaware of the proper timeframe because she completed LSS training in 2012 and had not taken refresher training. Additionally, the Kaizen project team members said that the Kaizen event had not been completed. The HQ Continuous Improvement Office recommends and supports Kaizen project durations of one to four weeks.

Management stated the Kaizen event was effective. Although scan scores increased, the event was not effective because the goal to increase the load and unload scan scores to 90 percent by March 31, 2016, was not met. As noted in our report, we did not find a direct correlation between the Kaizen event and improved scan percentages because the Kaizen process was not followed and the event was not completed.

Management disagreed with our identified questioned costs of \$14,000 for training and associated salary costs for the project team. We used the workhour estimates received from the Kaizen project leader for the event's timeframe, therefore, we believe our calculation is a reasonable estimate of the costs the Postal Service spent on a project that did not follow the Kaizen process. Although management considers the training costs to be an employee investment, we consider these costs questionable because the project leader did not complete the Kaizen event.

Recommendation 1 requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. The recommendation 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. We view the disagreement on recommendation 2 as unresolved, but do not plan to pursue it through the formal audit resolution process. We consider recommendation 2 closed with the issuance of this report.

Appendices

Click on the appendix title to the right to navigate to the section content.

Appendix A: Additional Information	1
Background	1
Objective, Scope, and Methodology	1
Prior Audit Coverage	1
Appendix B: Management's Comments	1

Appendix A: Additional Information

Background

The Postal Service introduced the Continuous Improvement Program in 2007 to promote process improvements in the workplace. LSS and Kaizen events are initiatives of the Continuous Improvement Program (see Table 1).

Table 1. LSS and Kaizen Project Comparison

ර Lean Six Sigma	Project Attributes	改善 Kaizen
Broad, Negotiable	Scope	Narrow, Fixed; Supports Value Stream Plan
Weeks or Months	Duration	3-5 Days
Goals are Achieved	■ End Point ▶	End of Event
Operators + Support Staff	◀ Team ▶	Operators + Support Staff
Maximum Eight People	Team Size	Maximum Eight People
Team + Technical Skills	Training	Limited + On-the-Job Training
Part-Time	Participation	Full-Time for 3-5 Days
Developed by Team	Analysis	Prescribed
All Phases of Project	Focus	Detailed Design and Implementation

Source: Rath and Strong's Integrated Lean Six Sigma Pocket Guide.

Kaizen events are short improvement projects intended to provide immediate benefits to an organization. Kaizen teams are small, cross-functional teams with knowledge of Postal Service operations. Kaizen teams are supposed to enable the Postal Service to produce sustainable incremental improvements by identifying improvement sites and providing immediate benefit to the organization. A Kaizen event can be initiated at the plant, district, area, or HQ level, depending on the project or issue.

Objective, Scope, and Methodology

Our objective was to determine the effectiveness of using the Kaizen process to improve SV load and unload scan percentages at the Atlanta P&DC. To accomplish our objective we:

- Obtained an understanding and evaluated the Postal Service Kaizen process and required documentation of Kaizen events.
- Interviewed the Kaizen project leader onsite at the Atlanta P&DC about the implementation of the Kaizen process and gathered details about the Kaizen event to improve SV load and unload scans.
- Reviewed and evaluated the Kaizen slide presentation that included the tentative charter, data analysis on scan scores, and a list of potential improvements for the Kaizen event conducted at the Atlanta P&DC from November 2015 to March 2016, to improve SV load and unload scans.

- Extracted and analyzed Atlanta P&DC SV load and unload scan data from October 1, 2015, through September 30, 2016, in the Enterprise Data Warehouse (EDW).
- Compared Atlanta P&DC scan percentages before and after the Kaizen event to determine if the event achieved its goals and the steps taken to improve performance.
- Interviewed the acting Atlanta P&DC manager and project team members to determine if the intended goals were met and maintained.
- Interviewed the manager at the HQ Continuous Improvement office about LSS training and certification requirements.
- Analyzed FY 2016 Atlanta Post Office commercial revenue data from EDW for potential revenue at risk.
- Consulted with OIG operations research analyst to develop our monetary impact methodology.

We conducted this performance audit from December 2016 through April 2017, 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 March 14, 2017, and included their comments where appropriate.

We assessed the reliability of the EDW data by comparing it to data extracted from SVWeb during FY 2016. We also selected a random sample of the data and traced it to source documents to determine if scan percentages in EDW were consistent with scan percentages in SVWeb. 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.

Appendix B: Management's Comments



April 7, 2017

Lori Lau Dillard Acting Manager, Audit Policy, Quality and Tracking

SUBJECT: Kaizen Event Review: Fiscal Year 2016 Atlanta Processing and Distribution Center Surface Visibility Scanning audit (NLAR17DRAFT)

We do not agree in part with the findings that were summarized in the OIG audit. The Kaizen on Surface Visibility that was conducted at the Atlanta P&DC was indeed effective. It is management's opinion, based on results, that the Kaizen was very effective. We also disagree with the questioned costs identified in the OIG's audit and address the monetary impact below.

Kaizen Process: We disagree that the Kaizen process was ineffective. Based on results achieved, goals obtained and improvements, the process has proven beneficial for both the Postal Service and employees.

Project Charter: We disagree that the project team did not have a charter defining the goals, scope and team roles in the Kaizen process. Management has a charter defining the project and can provide supporting documentation.

Kaizen Leadership: We disagree with the OIG's assessment that the project leader was not qualified to lead the event. The project leader completed LSS training in June 2012, but was not Green Belt-certified at the time of our review, and had not attended LSS refresher training. The project leader does not have to be Green Belt certified in order to complete a Kaizen. The report also indicates that the project leader was not qualified to conduct this Kaizen. The project leader was Green Belt trained in 2012. Green Belt trained employees are qualified to conduct a Kaizen. It is not mandatory for Green Belt trained employees to attend refresher training if they have not certified within a year. The timeline for certification is a guideline for Belts and not arequirement.

Kaizen Event: We disagree that management did not complete the Kaizen even or adhere to the timeframe: The Kaizen process lasted 4 months rather than the recommended 5 weeks. The Kaizen did not last 4 months as indicated by the OIG. The Kaizen started on November 12, 2015 and concluded on December 10, 2015. The Kaizen was halted due to Peak processing. The project was restarted on February 12, 2016 and lasted until March 31, 2016. Under the first four weeks of the Kaizen, several quick wins were instituted and the scores improved from 47.5% to 62% on the load scan and from 67.8% to 82% on the load scans. The timeframe for completion of a Kaizen are guidelines to help the team through the process. During a project, it takes time to understand the process and try solutions that will create incremental improvements. There is not a set time for this. Students learn a great deal from this project.

Event Effectiveness: We disagree with this finding. The OIG did not find a direct correlation between the Kaizen event and the improved scan percentages and Kaizen event was not completed because the improvements were not implemented. The improvements that were put into place sustained during the six week period starting February 12, 2016 through March 31, 2016. The initial improvements were rolled back out and the Atlanta P&DC finished week 23 with an 80.4% load scan and an 83.3% unload

scan and are continually getting better each week. The goal to get to 90% has been set with a target date of 05/01/2017. Kaizens are learning opportunities that may result in incremental improvements. Projects may implement quick wins that the team finds as well as best practices from other projects.

Questioned Costs: We disagree with the identified questioned costs of over \$14,000 for the project leader's Green Belt training and associated salary expenses for the project team. The investment in the employee was of value during and after the Kaizen. During the two phases of the project, management worked on the project 23 days for approximately 3.5 hours a day for the 151 phase and 38 days at 2.5 hours a day according to her managers. That is 61 total days with an average of 3 hours a day which equates to 175.5 hours. If you multiply the total hours by her hourly rate it would equate to \$7,321.86 not the 220 hours and \$9,177.81 recorded in the document. Also the \$3,224 that was calculated for the time spent in Greenbelt training was not lost as management uses training daily as they incorporate the lean practices learned in training in their day to day responsibilities. Using Lean principles in an employee's daily job is also a goal of Lean Six Sigma.

The goal of Continuous Improvement at the USPS is to equip employees with the tools to become problem solvers. It is a mindset that is being developed when each of our employees uses the terms and solves any problem no matter how large or small. Training and developing our employees is the duty of USPS and an investment into our future therefore we disagree with the findings above.

Recommendations:

We recommend the acting lead plant manager:

 Ensure that employees follow the Kaizen process in the future and that local management fully supports the Kaizen project team to ensure timely completion and implementation of the Kaizen process.

Response: We agree. Management will continue to fully support all recommended Kaizen projects and will ensure that employees follow the Kaizen process. The project team will use lean six sigma methodology to solve problems and will take the time required to determine root causes, implement solutions and sustain results as required by the project. We will ensure the local Black belt/LSS coordinator is involved in all future Kaziens. We will have bi-weekly meetings to go over each Kazien in the District is following the implemented plan.

Responsible Official: Acting Lead Plant Manager
Target Implementation Date: Management implemented this action on 04/11/2017

Ensure that candidates complete the necessary steps for Green Belt certification timely or attend the Lean Six Sigma refresher course when they do not achieve certification in 180 days.

> Response: We disagree with this recommendation. The certification timeline is a guideline for a belt but it is not mandatory to acquire a belt within 180 days. The refresher course is also not mandatory.

Frank D. Veal Lead Plant Manager/A

cc: Vice President Capital Metro Area Corporate Audit Response Management



Contact us via our Hotline and FOIA forms.
Follow us on social networks.
Stay informed.

1735 North Lynn Street Arlington, VA 22209-2020 (703) 248-2100