Optimizing Efficiency and Employee Satisfaction by Streamlining the Complaint Sample Testing Request SOP of a Manufacturing Company Using Lean Methodology

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Abstract

In the Complaint Department of a Manufacturing Company, the redundancy of documentation within the SOP has emerged as a critical challenge. This redundancy is primarily manifested in the duplication of testing requests, which exist in both electronic (LIMS) and paper format (Logbook). These inefficiencies directly impact employees' ability to accurately track activities in a timely manner and have led to a decline in employee satisfaction. This unnecessary duplication of documentation represents an overprocessing waste by Lean Methodology. It consumes valuable resources, elevates the risk of data entry errors, and introduces delays in carrying out essential tasks. Our project aims to eliminate double documentation (overprocessing waste), reduce/eliminate data entry errors, and enhance employee satisfaction by streamlining processes. Our data and analysis show promising alignment with project objectives. The elimination of redundant documentation, the prevention of data entry errors, and the subsequent increase in employee satisfaction are all positive outcomes that contribute to the overall success of the project.

Key Terms – *complaint, data integrity, employee satisfaction, lean methodology, SOP improvement*

Problem Statement

The duplication of testing requests, both in electronic (LIMS) and paper format (Logbook), is generating inefficiencies that directly impact employee's ability to track activities accurately in a timely manner and have negatively impacted employee satisfaction. This unnecessary duplication is an overprocessing waste by Lean Methodology not only consumes valuable resources but also increases the likelihood of entry errors and delays in carrying out essential tasks. Therefore, it is imperative to address this issue to enhance efficiency and employee satisfaction.

Methodology

VOC surveys and PDCA cycle Lean Manufacturing tools were used for this project Design to measure employee satisfaction and standardize the SOP.

Results and Discussion

Current process:

- The data collected covers complaints from 01/01/22 to 06/26/23.
- Twenty-nine (29) complaints were received.
- Documentation of testing in electronic system and paper format takes an average of forty-three (43) minutes to do both tasks (refer to Table 1).
- Fourteen (14) of them have entry errors in the logbook.
- The VOC survey in Figure 3 results show a 100% for very dissatisfied with the current process.
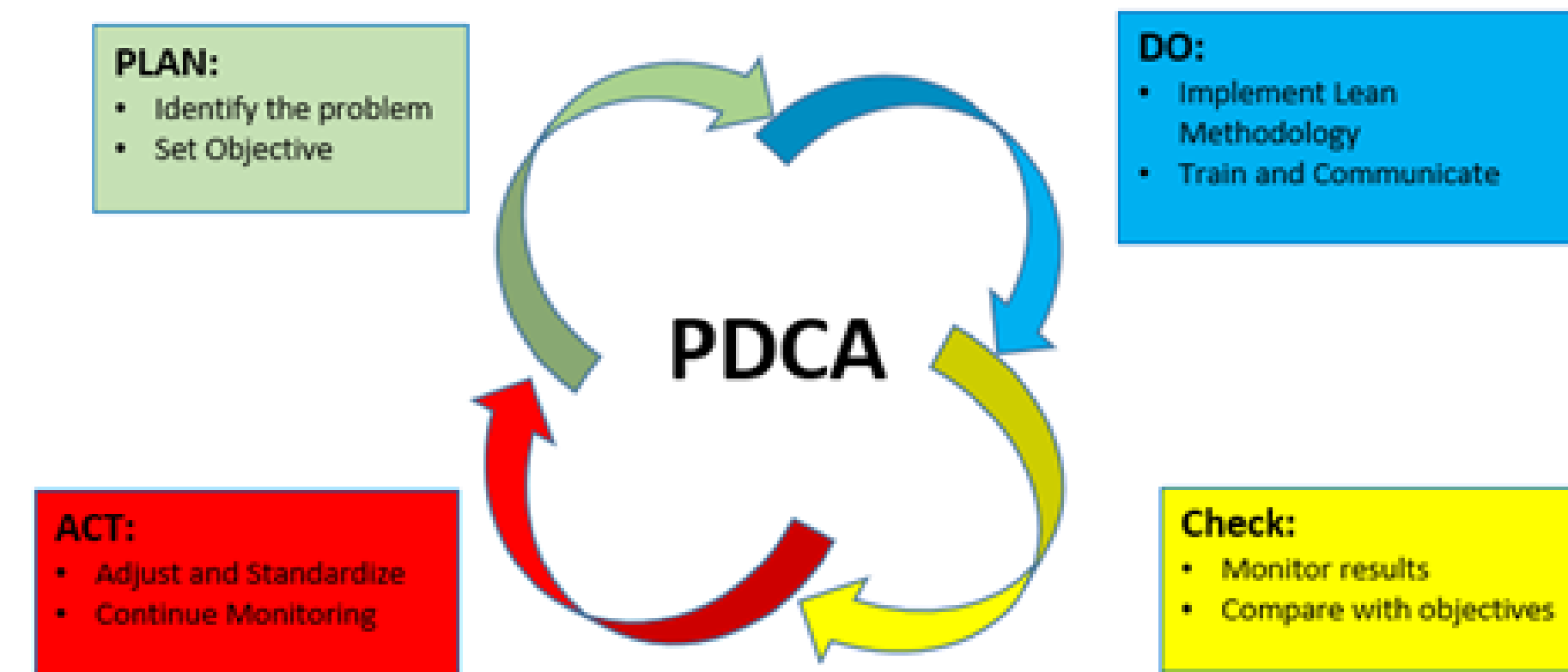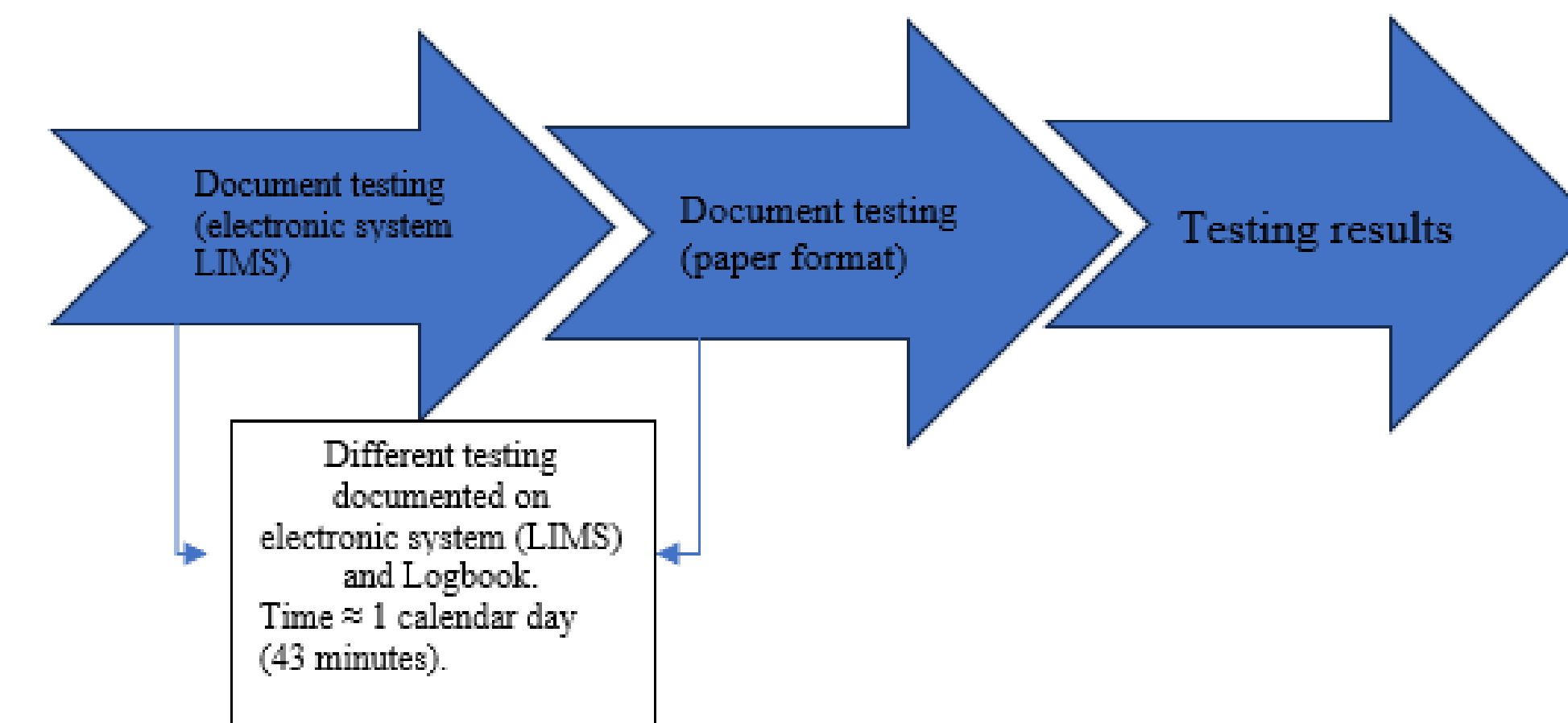
Results and Discussion Cont.

Figure 1 PDCA Lean Tool

Figure 2 Current Process Flow

Table 1. Sample Testing Request Current Process Flow Time

No.	Time	No.	Time
1	44	11	41
2	41	12	45
3	43	13	47
4	44	14	39
5	43	15	44
6	41	16	40
7	45	17	47
8	42	18	45
9	43	19	41
10	41	20	44
		Average	43

Improved Process Flow:

- New data collected after the implementation of the SOP change, covers the period from 06/27/23 to 08/31/23.
- Five (5) complaints were received.
- The average documentation of the test request had decreased from forty-three (43) minutes to sixteen (16) minutes, as shown in Table 2,
- Zero (0) data entry errors.
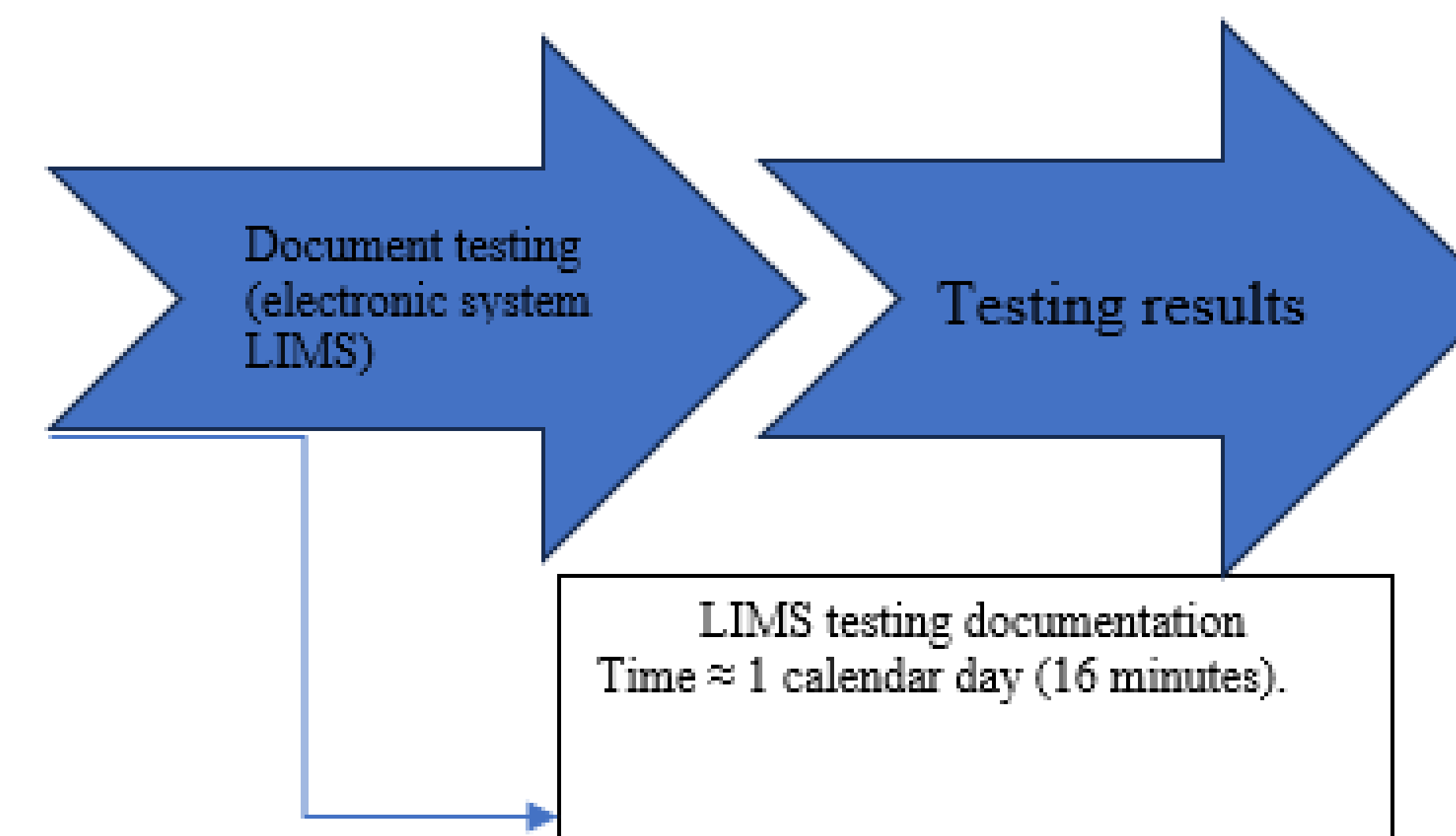- VOC survey in Figure 5 of the Improved Process Flow resulted in 100% levels of employee satisfaction.

Figure 4 Improved process Flow

Table 2. Sample Testing Request Improve Process Flow

No.	Time
1	15
2	17
3	17
4	16
5	16
AVG	16

Figure 3: Employee satisfaction survey of the current process No.1

Figure 5: Employee satisfaction survey of the current process No.2

Conclusions

Through this project the data and analysis align well with the project's objectives, indicating that significant improvements have been made. The elimination of double documentation (overprocessing waste), the absence of data entry errors, and enhanced employee satisfaction are all positive outcomes that contribute to the project's success.

By implementing Lean Methodology, it was demonstrated the practical benefits of Lean principles. Additionally, including employee feedback mechanisms underscores the importance of human factors in process optimization.

Future Work

A longitudinal study to establish the enduring impact of the implemented changes.

Apply Lean Methodology to enhance efficiency by reducing complaint investigation timelines.

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