

# Improving Work Order Visibility and Trackability in the Materials Lab

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## Abstract

SKF Tool sponsored a project for their materials lab. Specifically, the project focuses on all operations and data collection with respect to the work orders to test compounds. Currently, there is no tracking or visibility of the work orders as they move through the individual labs of the process. Some data is collected at each step, but they are redundant and inaccurate. They have no reliable data to fully understand their workload. Our objective is to improve data collection by minimizing resource usage and increasing visibility of work orders. We created a current and future Value Stream Map that shows the work order processes. In addition, we created a dashboard to give them a snapshot of the performance of each lab.

## Introduction

SKF produces products, solutions and services for rolling bearings, seals, services, and lubrication systems. The project focuses on the workflow and processes of test requests in the materials lab, which goes through the Sirvene Lab, Mixing Lab and/or the Analytical Lab. Data is collected in each lab, but it is redundant and inaccurate. This is due to improper usage of software tools. Workers feel overwhelmed with the variety of tools and use what is comfortable. This limits the departments from making continuous process improvement or system integrations. There are six different tools in use: *Enterprise*, *SharePoint*, *Excel*, *Sirvene Lab Request Form*, *Sirvene Lab Data Sheet*, and *Analytical Lab Sheet*. Our objective is to improve data collection by minimizing resource usage and increasing visibility of work orders.

## Methodology

To understand the process, we observed and interviewed the employees. For every step, the type of information collected and the method of collections (electronic tool or paper) were documented. An “8 wastes of lean” chart was created to show the different problems or areas of waste in the process. We collected time studies and developed spaghetti diagrams to understand the processes, how long they took, and the distances travelled.

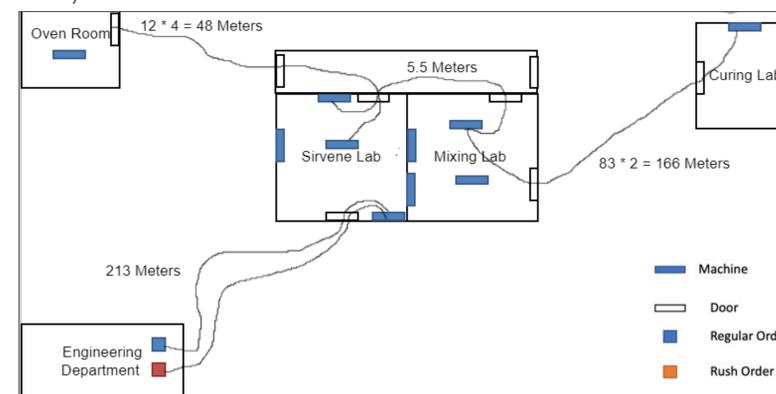


Figure 1 – Spaghetti Diagram

A value stream map shows the entire process of a work order from when the customer submits a work order and it is finished. This provides an overview for SKF to understand all the processes a work order undergoes.

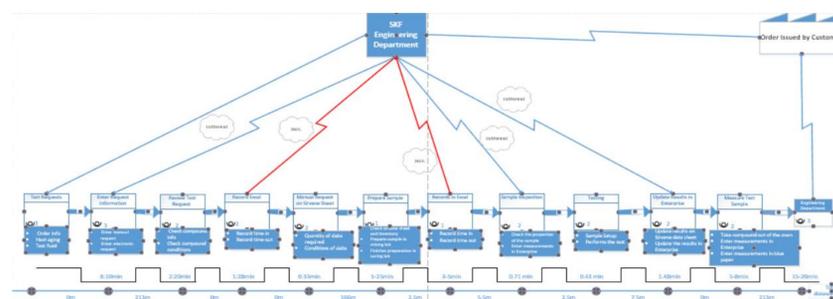


Figure 2 – Current VSM

## Results and Conclusion

We recommend that SKF uses SharePoint to record and share information in each lab. The information in SharePoint would be used to create a dashboard using Microsoft power BI which increases transparency of the work orders. The dashboard would essentially display the current status of the work orders. Future work can be made to streamline workflow via custom software solutions and addons tailored to workflow. Data collected from our preliminary changes can assist in the creation of these bespoke toolsets. Our new potential process is as shown in figure 4.

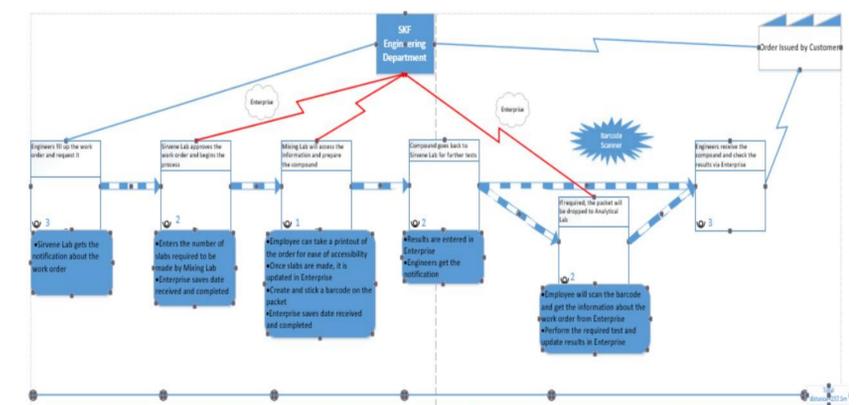


Figure 3 – Future VSM

## Acknowledgements

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