Group I1.1 - Material Picking Improvement

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**Problem Statement**

The current material picking and movement process contributes to internal waste, complexity, and long customer lead times.

**Project Purpose**

The project will reduce average picking times for both raw and semi-finished goods (SEMs) within Signify’s internal supply chain, specifically materials flowing into paint and fabrication areas, and SEMs flowing out of those areas to final assembly.

**Objectives**

Reduce the average pick time of raw and SEM parts by 50% by:
- Provide optimal storage location for raw material destined for fab and/or paint.
- Implement supermarket area for SEMs.
- Implement Kanban system for high running SEMs coming out of fabrication.

**Current State**

![Future Supermarket Area](image1)

![Current Kanban](image2)

**Methodology & Design**

*Lean Manufacturing* is a philosophy of work, that defines the best way to improve and optimize a production system, focusing on the identification and elimination of wastes. *Signify* is applying Lean Manufacturing within its Factory of the Future program, which includes this project.

**DMAIC**

*DMAIC* is data-driven quality strategy from Six Sigma used to improve processes, in this case, material picking.

An analysis was conducted of over 700 parts to identify the top 24 “high runners”, with demands over 1,000 units.

**Time Studies**

Time studies will be used to establish current picking times and to measure improvement achieved on the picking process.

**Potential Solutions Under Evaluation**

- Implement a Supermarket and Kanban Area used as a single destination for small quantities of SEMs.
- Evaluate potential installation of carousels or stationary racks.
- Reorganize warehouse areas by placing raw materials for high running parts closer to processing equipment.
- Modify SAP to manage and control Kanban on the production floor.

**Team Members**

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- Haiver Montenegro, Signify
- George Mikhailov, Signify
- Dr. Patrick Thomas, Texas State University

**Acknowledgments**

*Ingram School of Engineering*

**Future Supermarket Area**

![Future Supermarket Area](image3)

**Schedule**

![Schedule](image4)

**Value Stream Map**

![Value Stream Map](image5)

**SEMIs**

- Uline Containers 900 lb. capacity
  - 15 x 12 x 7 1/2"
- Racks used at Signify
  - 24 x 15 x 9 1/2"

**Table**

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