

Manufacturing Integration: Managing Throughput and Organizational Change

LFMcapital

BUSINESS PROBLEM

Rainier is working to maintain revenue targets and to improve EBITDA margin with the pandemic housing renovation boom coming to an end. The shade division has achieved high profitability and positive EBITDA over the past few years. However, with increased competition, capturing demand and reducing costs will be crucial to meeting financial goals. Rainier is acquiring Eclipse Shade, a competitor, and seeking opportunities to reduce its material, production, and overhead costs. Screen production will be moving exclusively to Statesville, NC and the production rate will need increase 100% to keep up with demand.

DATA SOURCES

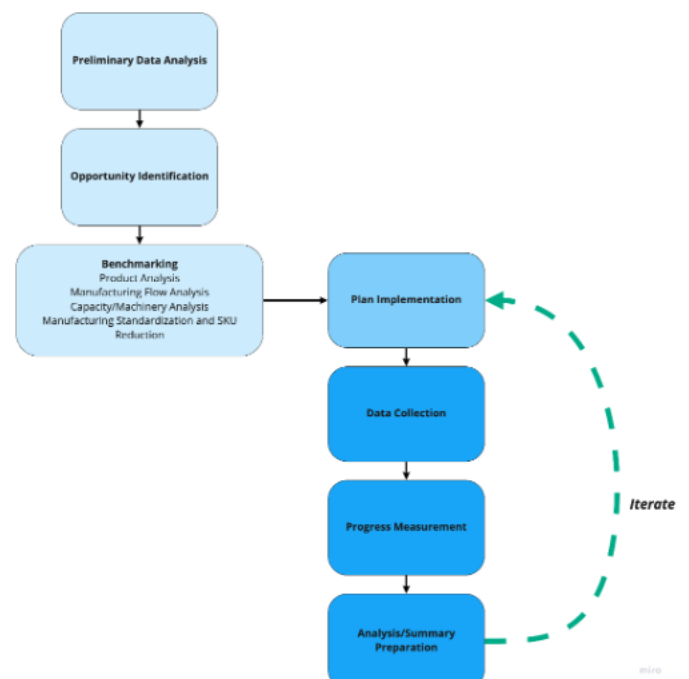
ERP system queries, team member provided excel sheets, and manufacturing observations.

Data Types and Format

ERP System, Excel, Time Series

APPROACH

Through data analysis, I have concluded that standard color offerings, reduced custom color volume, and design improvements, will reduce the number of steps required in the process, and allow for an increased production rate in Statesville, NC. In addition, reorganization of the manufacturing floor and inventory storage optimization will further drive efficiencies.



IMPACT

The solution will reduce overall costs of screen production and increase unit throughput. Through SKU reduction and manufacturing process improvement, the facility will be able to manage higher demand. Lean manufacturing principles guided the capacity and throughput analysis done at the plant to determine optimal machinery, headcount, and overall flow of product. Implementation of the recommendations provided in the study will allow for 100% increase in product output. The changes are still ongoing and the successful integration of the two companies will determine the overall success of the project.

DRIVERS

The company cared about the success of the project from the C-suite all the way to the factory floor where the changes were taking place. Each company had a stake in the successful integration of manufacturing lines to increase throughput and better meet demand of the customers.

BARRIERS

Multiple stakeholders in the project proved to be a large barrier to it moving quickly. Lofty timelines were set at the beginning, yet differing stakeholder views led to slowdowns in decision making. In addition, the manufacturing site of the project was in North Carolina while the researcher was located in Washington. This made it more difficult to be involved in the day to day changes taking place on-site.

ENABLERS

The management team and each member of the Rainier team on the site in North Carolina helped enable my project. Their constant support and assistance throughout the process was key to the final product and analysis that resulted. Interviews with the plant manager helped the researcher realize what was possible within the constraints of the building and helped guide the final recommendation.

ACTIONS



Early time studies and plant walk throughs helped the researcher identify areas of opportunity. In addition, the gemba walks gave the researcher the opportunity to ask questions and begin formulating a plan of approach. Finally, gaining the trust of the team members was essential in building out floor plans and flow diagrams.

INNOVATION

For the outdoor manufacturer, innovation came with the complete change in the manufacturing approach. Eliminating a large portion of the process was novel but quickly led to results.

IMPROVEMENT

Once fully implemented, the throughput time of a unit on the manufacturing floor is expected to decrease by nearly 70 minutes. In addition, the cycle time per unit will reduce from 10 minutes to 7 minutes per unit.

BEST PRACTICES

Each process within the manufacturing line must be carefully assessed to identify areas of opportunity. Time studies as well as a capacity analysis on each individual process are key to understanding which levers to pull. Finally, visiting the factory floor and seeing the production flow is necessary to making an impact.

OTHER APPLICATIONS

This project may be applicable to companies experiencing rapid growth or manufacturing integrations after buy-outs. In addition, companies shifting manufacturing from multiple sites to a single site may find value in determining the best path forward from this research.