

PROJECT PROFILE

CROSS ROADS



PROJECT BACKGROUND

Cross Roads Cycle Sales, based in Pugwash, Nova Scotia, has expanded into modular home production from its recreational equipment and prefabricated shed business. The company targets bulk buyers and aims to enhance its manufacturing layout for efficiency and productivity.

Their manufacturing space was originally organized and optimized to produce their prefabricated sheds. With the growing demand for their modular houses, they have had to re-configure the space and have been trying different layouts to determine what will work best for their plant. The goal of this project was to develop an optimized layout for Cross Roads Cycle Sales to produce prefabricated sheds and modular homes in a shared space in an efficient and productive way.

METHODOLOGY

The research employed a comprehensive methodology involving site visits, documentation review, stakeholder interviews, 2D plant layout design, improvement roadmap development, and equipment recommendations. Data collection from Cross Roads Sales and process improvement literature informed the analysis and recommendations.

RESULTS

Process Mapping: To understand the construction activities required to complete a modular home versus a prefabricated shed at Cross Roads, process mapping sessions were conducted. This established a process map for each different product they offer, and provided insight into what materials and equipment are needed for each activity, which is a key consideration when optimizing the layout of material storage areas.

Plant Optimization: Process mapping sessions defined construction activities for modular homes and sheds, leading to an optimized plant layout. Material handling

strategies, workstation design, and production flow considerations were key aspects.

Improvement Initiatives: A detailed roadmap outlined initiatives like process time studies, Value Stream Mapping (VSM), quality assurance programs, cross-training, standardized information sharing, and inventory management systems. Equipment recommendations were prioritized for efficiency gains.

RECOMMENDATIONS

Process Time Studies: Initiate detailed studies to identify bottlenecks and streamline operations.

Value Stream Mapping: Develop a comprehensive map to eliminate waste and optimize production flow.

Quality Assurance Programs: Implement robust quality control measures to ensure product consistency.

Cross-Training: Train employees across multiple tasks for workforce flexibility and resilience.

Information Sharing: Standardize communication processes for improved coordination.

Inventory Management: Establish a systematic inventory system to meet production demands effectively.

CONCLUSIONS

The project's findings and recommendations provide a roadmap for Cross Roads Cycle Sales to enhance its manufacturing processes, reduce waste, improve efficiency, and deliver high-quality products. Implementation of these strategies will contribute to the company's competitiveness and capacity to meet customer demands effectively.