DESIGN OF IMPROVEMENTS FOR THE PACKAGING OPERATIONS OF AN APPLIANCES MANUFACTURER’S DISTRIBUTION CENTER

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PROJECT GOAL: Increase in 10% the gross margin obtained from the packaging operation, while guaranteeing the productivity, safety and quality standards.

General Objective: Design Improvements for the packaging operations of an appliances manufacturer’s distribution center.

Specific Objectives:
1. Characterize the operations carried out within the packaging area of the distribution center.
2. Record and analyze information related to levels of productivity of the area.
3. Identify the factors that are affecting the productivity of the area.
4. Design proposals to improve the operations of the area (increase efficiency).
5. Implement the proposals generated.
6. Evaluate the impact of the implementation.

Project Timeline:
- Initial Process
- New Products Introduction
- Layout Modification
- Project Initiation
- Project Completion

New Products Introduction:
A new variety of products were introduced by the client. These products were more difficult to package, resulting in decreased efficiency and a gross margin reduction, with overtime reflecting a slight increase.

Layout Modification:
Beginning in 2011, the layout of the packaging area was modified. This modification was intended to reduce distances between the new material and production units. However, in the poly bag area, changes made promoted an increment of the transportation distance for all parts. Waiting on parts became the most common cause of downtime at this point.

Action Plan:
1. Optimization of the personnel involved in the operations (reduction of two Material Handlers).
2. Reduction of downtime (from 11.94% in May 2011 to 4.64% by the end of July 2011) and overtime (from 18.10% to 11.17% in the same period of time) ratios.
3. Increment of the efficiency from 72% (May 2011) to 88% (end of July 2011).
4. Increment of the gross margin ratio from 5% (May 2011) to 21% (end of July 2011).

Once the project started the margin reached its lowest record since the initiation of the operation (5% G.M). At this point the strategy of the project was adjusted to the requirements of the client. Different tools were designed and progressively implemented. The results were appreciated immediately after the redistribution of the layout, the optimization of the headcount of the area and the implementation of a customized training program.

Please note that the above text is a summary of the project's objectives, actions, and results. The full project report includes detailed descriptions of each phase and specific data.