

# Case Study

## BUILDING MATERIALS MANUFACTURER

### CLIENT:

A building materials manufacturer with nationwide manufacturing locations had to replace an aging forklift truck fleet and upgrade its material handling methods.

### DESCRIPTION OF OPERATION:

The company manufacturer building materials which are shipped to customers within the service region of each of its sixteen plants. Finished goods are stored both indoors and outdoors. The putaway operation began at the end of the manufacturing line from a palletizing station and ended at an outdoor storage area, nearly 1/4 of a mile away. The client's management needed to be convinced that a recommended change in methods and equipment would save as many people as we projected.

### OBJECTIVES:

Gross & Associates recommended that finished goods pallets be transported on trains of carts towed by propane counterbalanced fork lift trucks and unloaded by the same trucks at the storage area. We were retained to produce manning requirements and productivity measurements of the recommended method.

### MODELING PROCESS:

Measurements of the existing operations and industry standards were compiled to model the output of the manufacturing line and the putaway process. A computer simulation was used to test alternatives to determine the equipment and manning limits of the system at different levels of production.

### RESULTS:

The simulation model showed that two forklift trucks working at 67% of their maximum capacity could handle the production rate of two simultaneously running production lines. The company is implementing our recommendations. The company will be able to save a total of 24 fork lift trucks for the four facilities studied. Significant cost savings are projected from the careful specification of the fork lift trucks and from the replace versus repair decision based on an economic justification model. In addition to the cost savings, tighter control over the operation, improved safety and greater throughput capacity will be achieved.

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