



Case Study

CSR Gyprock

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www.newworld.com.au

Case Study: CSR Gyprock

Australian manufacturer of plaster products to the construction industry

Project Details

Client Name: CSR Gyprock

Project Location: Yarraville, Melbourne, Victoria

Major Vendors & Suppliers: Meca Racking

Project Value: Confidential

Background

CSR commissioned the project to re-design the existing Distribution Centre at Yarraville, Victoria as a result of their \$120M 'Gyprocket' Project.

The project involved the development of a plasterboard manufacturing presence at Yarraville and the consolidation of two key facilities into the existing Yarraville site.

A new Distribution Centre design was required to accommodate the consolidated inventories of their Sunshine and Yarraville DC's at the re-developed Yarraville site

Challenge

The primary objective of the design was to determine the capacity of the Yarraville facility to accommodate consolidated current inventories and projected demand 5 years into the future

. The tasks to be addressed included:

- evaluating production / inventory related costs and dynamically optimising production lot sizes and inventories
- combining inventories across two sites into an existing heavily constrained facility
- developing streamlined operating processes, material and traffic flows in a 'safety first' and efficient operating environment
- understanding the impact of company operating/manufacturing policies on facility capacity
- identifying appropriate and cost effective warehouse automation technologies for improved operating performance
- develop design criteria for a long term solution, supporting a flexible and scalable layout for expansion, changing order profiles and reconfiguration for future business needs

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Approach

- Designed and built a detailed multi period capacity model based on forecast production and demand profiles to determine peak storage requirements over a five-year time horizon.
- Collated activity based costing data and product volume data for both current operations
- Analysed current throughput, production, inventory and storage data to incorporate long term projected demand
- Derived existing capacity utilisation
- Calculated optimal production lot sizing and impact on facility
- Prepared warehouse activity based costing models to profile existing operating productivity and processing costs
- Prepared and validated various facility design options (in AutoCad), identifying immediate and long term improvement opportunities. Design considerations within the existing constraint environment included existing warehouse size, configuration, access, heights, production flows, material flows, travel distances, multiple product locations, storage and materials handling equipment, dock design, pedestrian and vehicle access and maximum cubic utilisation
- Prepared capital and operating cost budgets for recommended improvement items over short, medium and long term time horizons
- Recommended additional technology enhancements, automation opportunities and layout modifications to increase facility life beyond 5 year horizon

Outcome

- Detailed facility design incorporating best practice design criteria.
- Infrastructure and technology improvements were recommended for enhanced productivity.
- Key benefits of proposed design included improved cubic capacity utilisation of existing facility using optimised production lot sizes, optimised slotting of SKU's to reduce pick paths and sufficient capacity to accommodate inventories over the required 5 years

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