



Case Study

3M Australia

9 Peacock Parade, Frenchs Forest
NSW 2086, Australia

Telephone: +61.2.9401.9152

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Case Study - 3M Australia

Global manufacturer of Pharmaceutical, Office, Safety & Technology products

Project Details

Client Name: 3M Australia

Project Location: St. Mary's & Pemulway, NSW

Major Vendors & Suppliers: Macquarie Goodman, Walker Construction, Dexion

Project Value: Confidential

Contact: Steve Williams, National Logistics Manager

Background

3M ceased manufacturing in Australia and an outsourcing feasibility study was carried out to determine if outsourcing its warehousing operations was economically viable.

3M decided to consolidate 4 of their existing Distribution Centres into a single National Distribution Centre.

The plan was to combine 3 onsite facilities (including pharmaceuticals, Dangerous Goods and FMCG) and an offsite pharmaceutical storage facility into a single operation.

3M originally occupied in excess of 19,500sqm of warehouse space across the 4 facilities and 2 sites.

The opportunity to sell 3M owned land was the catalyst for the consolidation and relocation.

Challenge

Develop facility design, operating methodology, and budget for Greenfield site national distribution centre. Consolidate 4 separate storage facilities into a single facility and operation. Source (site selection & suppliers), implement and project manage the fit-out, process re-engineering and relocation through to operational 'Go Live' for new facility.

The tasks addressed included:

- Complete and thorough analysis of all existing processes and storage methods for each of 6 business units
- Develop business strategy concept to meet future changes in demand and business requirements
- Develop technical concept for new 11,000 sqm warehouse
- Develop concept and detailed designs for consolidated operation
- Source and select suitable sites and contractors for construction, MHE equipment and racking vendors
- Implement and project manage building fit-out for smooth transition and continuation of operations during changeover period
- Coordinate racking suppliers, removalist and building contractors throughout implementation phase
- Liaise with council and other statutory authorities including submission of fitout plans for DA approval
- Manage facility OH&S risk assessment, compliance and controls & solution design

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Approach

- Collated activity based costing data and product volume data for 6 business units.
- Derived existing capacity utilisation
- Prepared warehouse activity based costing models to profile existing operating productivity and processing costs
- Mapped warehouse processes including: receipt/putaway, replenishment, order preparation, picking, despatch and returns
- Prepared and validated various facility design options (in AutoCad), identifying the optimum facility capacity to cater for existing volumes and projected future growth. Design considerations included warehouse size and location, configuration and type of construction, material flows, storage and materials handling equipment, dock design, pedestrian and vehicle access, and office /ancillary functions location and size
- Designed centralised warehouse and distribution operation of 11,000Sqm - Design incorporated the following features:
 - Dangerous goods storage for classes 1, 2, 2.3, 3.1, 4.1 and 5.2
 - Fork charge room and intrinsically safe ventilation
 - Temperature controlled area for pharmaceutical, medical and dental products
 - 2 x 3 tier picking module; Very Narrow Aisle racking - 9500 pallets
 - Voice activated pick module incorporating Intermec Text To Speech technology; Capital Expenditure \$3mil
 - Modules serviced by means of spiral conveyors with high speed shoe sort sortation system
- Re-configured existing WMS to obtain greater levels of productivity, inventory accuracy at location level

Outcome

- The result was a turnkey solution taken from initial concept design through to detailed design, site sourcing, supplier selection, project management, implementation, stock migration, staff relocation and go-live.
- A reduction in footprint of 45% from over 19500sqm in total to 11,000sqm in a consolidated National Distribution Centre.
- Streamlined operating processes resulted in a 28% reduction in labour costs as well as significant reductions in operating costs.
- Achieved \$2.5M capital expenditure savings on amount originally proposed by Materials Handling vendor for fit-out of the new distribution centre.

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