



## **Case Study**

### **GWA Heating & Cooling**

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# Case Study: GWA Heating & Cooling

Australian manufacturer of hot water systems

## Project Details

**Client Name:** GWA Heating & Cooling (Dux product range)

**Project Location:** Moss Vale Manufacturing Facility, NSW

**Project Value:** Confidential

## Background

The company planned to build a new manufacturing facility incorporating lean manufacturing principles and adopting a different approach, by incorporating “Lean Principles” to and towards the goal of reducing inventory and supply chain costs.

This led to a re-evaluation of the company’s supply chain network in an effort to understand the impact of a lean manufacturing capability on operating and inventory costs in the new lean supply chain.

## Challenge

To identify and address the four key aspects of warehousing performance, in terms of people, processes, systems and infrastructure, and develop solutions which would meet the needs of the business over the short, medium and long term.

. The tasks to be addressed included:

- Changing from a “Push Replenishment” to a “Pull Replenishment” model
- Focusing process and performance improvement on different methods of replenishment, reduced lead times, lot/order sizes, and safety stocks to improve supply reliability.
- Determining the optimal number, locations and capacities of warehouses within the distribution network
- Adopting a ‘Lean Principles’ focus on replenishment based on actual shipments to customers, rather than a forecast

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## Approach

- Designed and built a detailed multi period inventory and network model based on current production lot sizes and demand profiles to profile existing inventory levels and costs in the current network.
- Collated transport transaction and warehouse throughput data for all current operations. Data was from multiple sources that were standardised to ensure consistency across operations.
- Built a model to replicate costs in current supply chain network.
- Built a lean inventory model to calculate optimal inventory allocations, holdings, production lot sizes, replenishment quantities and frequencies in 'lean' network.
- Prepared and validated various network scenarios including centralised and decentralised options to determine optimal network configuration and costs
- Prepared a business case with capital and operating cost budgets for recommended network

## Outcome

- Analysis identified one off inventory cost savings of 40% based on pull distribution model and incorporating lean manufacturing and supply chain principles
- Network modeling confirmed that a decentralised network would deliver higher service levels with minimal additional operating costs.
- Inventory savings funded \$7mil in capital required for manufacturing plant upgrade.

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