

## CASE STUDY – Kmart

LEAN LOGISTICS YIELDS EXCEPTIONAL OUTCOMES



### KMART CUTS OPERATIONAL COSTS BY MORE THAN \$3 MILLION

It was the power of numbers at work: Vative's supply chain and logistics expertise, Kmart's Lean project teams and ultimately the entire Kmart distribution workforce involved in continuous improvement programs which delivered more than \$3 million in savings to this huge Australian retailer.

Vative's certified Lean training programs were used extensively, along with internationally certified Six-Sigma Green Belt training. A number of formal project teams then implemented major Lean projects to reduce internal process waste, improve utilisation of resources and enhance key metrics around quality, cost and delivery. A goal of every project was to make the entire workforce more aware of its responsibility in achieving business gains, rather than relying on specialists to bring about operational and business improvements.

The following sample projects show the significant scope of change involved.

#### Project 1: Utilisation of container cube

The common practice of building

pallets which fell short of the full container height generally meant that 25% of container volume was not utilised. To break this legacy thinking, operators needed to understand how wasted space impacted on the business bottom line, as well as being given responsibility for adopting logical waste elimination initiatives.

Several improvements were made:

- New methods of packing pallets manually to full height required design and installation of new working platforms.
- Freight contracts were reviewed to incorporate higher 2.4 m pans. The freight lane rate was also reviewed.
- Loading bay roller doors in distribution centres were raised to allow for 2.4 m heights.

Achievements included reduced freight costs, less pallet use and greater consolidation of customer orders to satellite warehouses. Combined savings in excess of \$900,000 for Perth and Brisbane distribution centres were achieved from a simple, low cost process improvement.

#### Project 2: Improve pick and pack overall work rate

The aim was to achieve a 13% increase in the average pick and pack rate for the Perth distribution centre, from 71 cartons to 80 cartons per hour. Value stream mapping of current processes enabled a number of issues to be rectified, including over-processing, double handling and transport and movement waste. The introduction of faster, simplified

## OVERVIEW

### INDUSTRY

Logistics

### CLIENT PROFILE

Kmart's 25,000 team members serve an average of 2.5 million customers each week in more than 190 stores throughout Australia and New Zealand. The company has a huge and complex distribution network in Australia, with distribution centres in Melbourne (head office) Perth, Brisbane and Sydney.

### BUSINESS SITUATION

Kmart wanted to achieve system and operational improvements in its national network, and retained Vative to advise on reducing internal waste, improving utilisation of resources and enhancing key metrics around quality, cost and delivery.

### SOLUTION

During 2011 and 2012, Lean and Six-Sigma programs were used extensively to assist Kmart transition to a modern, best practice distribution network that could manage growing demand. By mobilising the entire workforce rather than simply relying on specialists to bring about operational and business improvement, Kmart was able to achieve major business gains.

## RESULTS

- Lost sales were cut by 80% due to earlier stock availability in the system.
- Email traffic enquiries from head office dropped by 90%.
- Inventory holdings in distribution centres dropped by 30% due to greater stock turn.
- A \$55,000 investment delivered savings of approximately \$480,000.



## VATIVE

Vative achieves significant business improvement for clients through solutions which are simple, realistic and highly effective. Providing consultancy and training services, Vative's 45-strong team includes Lean and Six Sigma excellence coaches with extensive business management, academic, engineering and trade backgrounds.

reporting from the warehouse management system also enabled more efficient picking.

A saving of \$78,000 for the Perth distribution centre alone resulted from an investment of \$25,000 in standardising new processes, training all personnel and utilising IT resources in designing better reporting systems.

### Project 3: Quick changeover of cluster lines

Cluster changeovers in cross-docking operations were the largest contributor to significant downtime that affected process throughput. The strategy was to:

- Minimise the number of cluster changeovers through scheduling similar products into particular lanes.
- Determine the cluster needs of cluster separation processes.
- Reduce overall cluster changeover times from 13 to 10 minutes, through basic time and motion analysis.
- Reduced cluster changes to 4.6 changes per week
- Improve transport utilisation.

Total annual savings of \$55,000 were achieved, and the cluster changeover times were more than halved from 13 to 5.9 minutes.

### Project 4: Container management and control

Poor container management into and within distribution centres meant stock was held in containers rather

than entering into the system. Sales were lost, and inventory problems resulted:

- Inventories were not promptly receipted, head office visibility into available and allocated stock was compromised and data integrity was questioned.
- Non-value adding email traffic increased from buyers and allocators.
- Inventory levels in distribution centres were incorrect, as stock was held in containers instead of being booked into the system.

Several initiatives based on visualisation and standardisation were implemented including:

- Process analysis and redesign for pre-receipting keycodes in containers.
- Containers with less than four keycodes were receipted and verified separately.
- A new database controlled containers and keycodes and improved visualisation of stock throughout the network.
- Database training for inventory staff increased stock availability and reduced excess inventories.
- Improved team work between receiving and inventory followed staff consultations and process reviews.

## OUTCOMES

Kmart reduced operational costs by more than \$3 million through engaging all levels of its workforce in Vative's continuous improvement programs. While there were many tangible qualitative and quantitative changes, the intangible changes in the workforce were just as critical. Through its strategy of total staff involvement and shared responsibility for success, Kmart's distribution centres began their Lean journey with a workforce that is integrated, mobilised and in alignment with the overall Kmart business plan.