

## 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.

## CASE STUDY – Central Steel Build

"THE BEST THING WE EVER DID FOR THE BUSINESS"



### A CASE STUDY ON LEAN MANUFACTURING

#### The challenges for Central Steel Build

For steel frame manufacturing company, Central Steel Build, implementing a 12-month Lean transformation program with Vative contributed to an unprecedented 83% increase to an emerging arm of its business.

Central Steel Build General Manager, Gerald Edmonds, says the company was fairly entrenched in the market of buying and selling domestic garages, but wanted to improve its market share for the fabrication (design and construction) of industrial and rural building projects. However, as a fairly young business owner, Edmonds says his workshop in Kyneton, Victoria faced challenges with inefficiencies, with profitability being sacrificed due to several waste factors.

"We were recommended to Vative by a friend, and it was the best thing we ever did for the business," says Edmonds. "We realised that a lot of areas in the business needed improving; we were putting out 'spot fires' fairly regularly with the minimal systems we had established. When I was explained the idea behind Vative

and its Lean business program, it sounded exactly like what we needed in the way of setting up systems. We needed someone to come in, roll up their sleeves and have a look at us from a bird's eye point of view."

Edmonds says when a Vative business consultant arrived on site and introduced himself and his objectives, that's when he realised they were 'on the right track' to making massive improvements.

"Vative showed us value stream mapping, and identified all the areas where our bottlenecks were." After completing a Lean business health check, Central Steel Build was taught how to apply the 5S methodology (Sort, Set, Shine, Standardise, Sustain) to maintain a tidy and functioning workplace. "They set up a series of systems for every business operation, from quoting right through to delivery on site. It was about systemising every process," says Edmonds.

"More than a year on, we still improve on those systems. Every week and month we will put more improvements in place, but the main 'guts' of it was done when Vative were here in the workshop."

#### Record results

Within a year of partnering with Vative, Central Steel Build was able to cut two weeks off a standard eight-week lead time for each fabrication project and reduce errors made in the factory by approximately 50%.

"However the result that we're most proud of is an incredible 83% increase in the fabrication side of

## OVERVIEW

### INDUSTRY

Manufacturing

### CLIENT PROFILE

Established in 1975, Central Steel Build is a family owned steel building manufacturer, based in Kyneton, Victoria. Central Steel Build specialise in all types of custom made steel shed designs such as home sheds, commercial sheds, agricultural sheds, sheds for sporting, aircraft hangars and more.

### BUSINESS SITUATION

Central Steel build wanted to improve its market share for the fabrication (design and construction) of industrial and rural building projects. However, they were suffering from inefficiencies, with profitability being sacrificed due to several waste factors.

### SOLUTION

A 12 month Lean program, with a primary focus on cost reduction, projects and 5S:

- Introduction of quality control systems
- Reduce waste and improve lead time
- Reduce quotation time, eliminate double handling and manual data entry
- Introduce business performance indicator system and create results-based monthly reports
- Create more effective marketing tools

## OUTCOMES

- 83% increase (\$1.8 million) in fabrication arm of business within one year
- 50% reduction in errors made in factory
- 2 weeks eliminated off a standard 8 week lead time per manufacturing project
- Reduced sales and admin processing time
- Enhanced staff engagement through continuous improvement
- Improved visual management (planning board, material storage area)





## 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.

our business, which was previously around only half of what we offered in the market. The dollar value of that improvement is around a \$1.8 million increase in a year, which was absolutely huge for us. I could attribute the bulk of that increase to the work we did with Vative."

With such business growth came a strategic increase in staff, growing from 10 to 16 in about 18 months. Edmonds says learning Vative's processes that enabled each staff member to work at maximum efficiency was another indication of how much wastage had occurred prior to Vative coming on board. "We realised we only needed to put on four extra staff to accommodate that 83% growth, so that was another reminder of how much wastage was occurring - in terms of staff efficiency - before applying 5S."

He says it was easy to justify the investment to implement Vative's business improvement strategies over the 12-month program. "From a return on investment perspective, when we consider time versus savings, it's a no brainer."

### Hands on expertise

What most impressed Central Steel Build about Vative was its combination of theory and practical applications, plus a personal approach at every stage. "We've all done the business training courses that have a strong theoretical component, but the biggest advantage with Vative was that they rolled up their sleeves and got out in the workshop to help us implement

new working strategies," says Edmonds. "Our consultant didn't just give us the theory and the formulas, he spent half his time out on the factory floor, nutting out new ideas."

Vative's focus on optimal safety helped Central Steel Build continue the progress made since an independent Occupational Health and Safety (OH&S) auditor had previously assessed the workplace.

"We found that Lean and OH&S go hand in hand, but Vative really complemented what we'd already learnt by offering the innovation factor. We've never had a reportable injury in our business, but every week when we have our 5S meeting, we make sure to raise any 'near misses' or concerns to ensure it remains under control."

### Continual learning

Edmonds says his employees have demonstrated a keen commitment to ensuring Vative's 5S efficient workplace systems remain effective. "Both our workshop and office staff have really taken everything on board, they enjoy sticking to their procedures and referring to the effective checklists every day. The team is often coming up with their own innovative ideas about quicker ways to do things or suggestions to eliminate waste - it's excellent."

Central Steel Build has committed to an additional 18-month program with Vative. "We're now dedicated to continuous improvement as we want to keep the ball rolling," says Edmonds.

### Gerald Edmonds General Manager Central Steel Build

*"The result that we're most proud of is an incredible 83% increase in the fabrication side of our business, which was previously around only half of what we offered in the market. The dollar value of that improvement is around a \$1.8 million increase in a year, which was absolutely huge for us. I could attribute the bulk of that increase to the work we did with Vative."*

## CASE STUDY – New Touch Laser

"WE'VE MADE A VERY CUMBERSOME PROCESS A LOT SIMPLER"



### DELIVERY PERFORMANCE HITS RECORD HIGHS AND OVERTIME PLUNGES TO RECORD LOWS

Shortly after commencing its Lean manufacturing project with Vative, New Touch Laser Cutting experienced its biggest sales month on record. Two months later, it broke the record again, with delivery performance at record highs and overtime at record lows.

"Our delivery performance went from about 60 per cent of jobs on time or early to around 90 per cent," says New Touch Managing Director, Brad Drury. "Before we started with Vative, I was actually looking at buying two new machines. But once I understood the value stream mapping, I realised I didn't need more machines. The bottlenecks were in other areas of the factory."

Value stream mapping tracked New Touch's processes from the time of order receipt to order dispatch, and established that the average job was only on a machine for about four hours.

"I've been involved in laser cutting for 15 years and the bulk of that time has always been focused on reducing that four hours," Mr Drury says. "Not



much time was given to tracking the two days before and the two days after. We've now streamlined our processes where we receive an order, and instead of taking two days to get it on to a machine, we can now do it in two hours. Doubling up has been eliminated, lead times have been cut and we've made a very cumbersome process a lot simpler."

## OVERVIEW

### INDUSTRY

Manufacturing

### CLIENT PROFILE

An industry leader, New Touch Laser Cutting is widely known for high quality laser cutting and marking, and for its extensive fabrication and finishing services. The company employs some 60 staff at factories in Bayswater and Clayton South in Victoria, and operates six machines 24 hours a day.

### BUSINESS SITUATION

New Touch was achieving increased sales and rapid growth, but realised that waste and overtime were also growing. The company was considering the purchase of additional machines, but turned to Vative to see if Lean manufacturing could increase capacity on its existing production line.

### SOLUTION

Vative implemented a formal 12-month Lean program that enabled New Touch to establish and bed down its Lean manufacturing processes. 5S workplace organisation was introduced, machine utilisation was improved and delivery performance increased markedly.

“Our delivery performance went from about 60 per cent of jobs on time or early to around 90 per cent.”

**Brad Drury**  
Managing Director  
New Touch Laser

**Brad Drury**  
Managing Director  
New Touch Laser

*"Vative were amazing to deal with. They applied their skill sets and knowledge, and have really helped us... so we can take what we have learned about implementing Lean and 5S for many years to come."*



Value stream mapping showed that machines spent 4 per cent of their time waiting for materials. This was cut to 1.2 per cent, resulting in a massive improvement in machine utilisation.

Lean manufacturing changes and achievements included:

- Improved housekeeping and workplace organisation through 5S methodology.
- More visual material flow with clearly defined WIP (work in progress) areas between critical processes, resulting in significant inventory management and control improvements.
- Much lower WIP levels from raw material through to finished goods, which freed up valuable shopfloor and incoming goods space.
- Improved OHS outcomes, with no sharp, sheet metal inventories lying around. Lost time injuries were essentially eliminated by applying 5S in a logical and area-specific manner.
- Improved machine utilisation, with an emphasis on quick changeover, production planning/scheduling and delivery of incoming materials to key work cells.
- Much shorter internal lead times, which led to significant delivery performance improvements.

In addition to cutting overtime, quantifiable savings in labour were achieved in other areas.

"We used to waste a lot of time looking for tools," Mr Drury says. "After we implemented the shadow boards (a component of 5S organisation), we saved about \$30,000 a year in labour costs because people were no longer walking around looking for tools."

Mr Drury was impressed by Vative's understanding of his business and its ability to customise a program to suit the company's processes.

## 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.

"We do low volume, quick turnaround jobs. We needed a program to suit the jobbing environment – we're not into mass production like automobile manufacturers. Vative were amazing to deal with. They applied their skill sets and knowledge, and have really helped us by providing training so we can take what we have learned about implementing Lean and 5S for many years to come."

New Touch has achieved a significant improvement in morale and housekeeping, as well as in delivery performance and the adoption of a culture of continuous improvement.