

Wedgelock Case Study:

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“Strategia helps manufacturer of excavator attachments through a lean cultural change with efficiency improvements from top down and bottom up”

Wedgelock Equipment Limited are leaders in the design and manufacture of world-class excavator attachments, entrepreneurial engineers with an enviable track record for solving some of the toughest earthmoving challenges on the planet! For over 140 years the family have been involved with engineering. With about 50 staff they have 60% market share in New Zealand and they are intent on growing this both locally and on the international front.

Problem

In 2007 Wedgelock were in a growth phase, it was the busiest time the company had experienced. Turnover grew by 10% per month, for 6 months, they had to meet customer demands, deal to cash flow challenges from the growth and raw material prices were sky rocketing due to increase in steel cost. The growing market meant they had to gear up production and due to further global expansion and safety regulation changes, new products and market had to be developed as well as recruit and train new staff.

Wedgelock were experiencing variable product quality, product cost was too high, large of amounts of work in progress (WIP), questionable productivity, loosely defined processes and excessive delivery lead times. However, they had untapped potential in first line leadership and experience in business management from the Operations Manager (Thijs van der Meer) who had recently joined the business. He could see the challenges and needed specific help to implement lean manufacturing techniques. As Thijs describes the problem “Production wasn’t controlled, there was no production plan from a capacity perspective” just the sales team pushing the work through and sometimes changing priorities to get the work past the work in progress pile.

“I needed a good trainer to work ‘inside’ the company who could help the organisation understand and embrace a lean way of working”.

Just prior to Thijs joining Wedgelock three production staff attended an ETP programme run at Biz Wellington, Thijs heard that the lean manufacturing trainer Richard Brathwaite knew his stuff, the staff had been very impressed with him and his lean manufacturing/business process course so Thijs approached him to help Wedgelock effect change within the company. “It was extremely important to have someone with credibility or it would have been a waste of time” explains Thijs.

Strategia helped us identify excessive raw material waste and WIP, bottlenecks at a key process, suboptimal organisation and use of shop floor, a cluttered work environment and subsequent long lead times. A lack of training, a number of business and safety risks and there were morale issues

Strategia’s approach

“It was a co-ordinated approach with Strategia working from the bottom up, with staff on the factory floor, explaining why things needed to change and I worked from the top down, we reached each other in the middle.” It was a culture change and we got excellent results, Thijs explains.

After discussing the company’s vision and strategy, structure, roles and responsibilities, Richard and Thijs developed a co-ordinated plan. Strategia consulted with all the design to manufacturing staff, especially the leadership group and identified where shortfalls were in skills and general capability and recommended, from a

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number of options, the best way to address them. They started an informal in-house leadership programme and lean manufacturing programme which was part funded by NZTE operational improvement programme.

Wedgelock restructured its leadership group and employed a production planner to gain some level of control and to help implement the systems required. Strategia identified numerous types of waste (especially time) and provided simple effective ways to sort that out, and they also suggested numerous visual management techniques to help make work easier and to get right.

Strategia helped design work management techniques that motivate staff to be self managing and implemented layout changes that improved workflow throughout the factory. We changed material handling practices to create better flow, improve safety and reduce work in progress. We adopted a simple maintenance system to ensure that things are done without relying on memory. 5S is now part of the 'day to day' culture of all of the teams, as a result each team has become well organised, scrupulously clean and tidy.

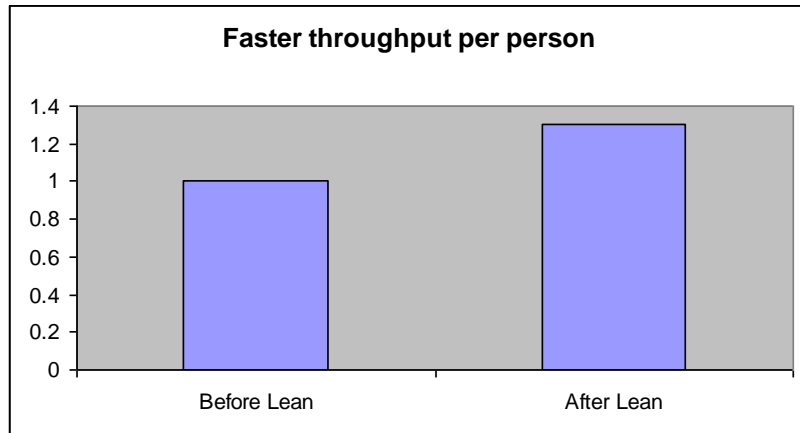
"Richard from Strategia 'talks the talk', gains staff confidence and builds trust, he added lots of value right there, talking day to day on the floor. It takes time for people to accept change; some can look outside the square whilst others struggle to change work habits and processes they've used for more than 20 years." The reaction from staff varied, it has taken time for everyone to embrace the culture, a number of staff have left, those that remain are highly productive, motivated and enjoy their work.

Results

"The results have been fantastic, there has been a great cultural change from the top down and bottom up we have cleaned up the factory enormously. We have experienced significant incremental improvements across the entire manufacturing process specifically efficiency, lead time and throughput."

The first quick win was the elimination of waste raw material. Processes to maintain and improve LEAN processes have been implemented and are audited regularly.

Our throughput time became much faster, the sources of the causes of raw material waste were found and eliminated along with a massive drop in WIP. A large proportion of unneeded materials, machinery and components have been dealt with, this freed up storage and factory space and achieved better utilisation of area.

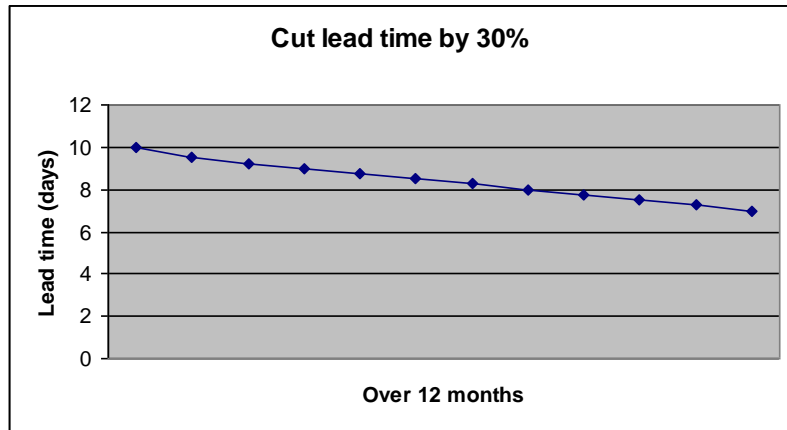


Additional benefits achieved include an increase in product quality, optimised processes, speed to market, improved health and safety and ultimately less stress on people.

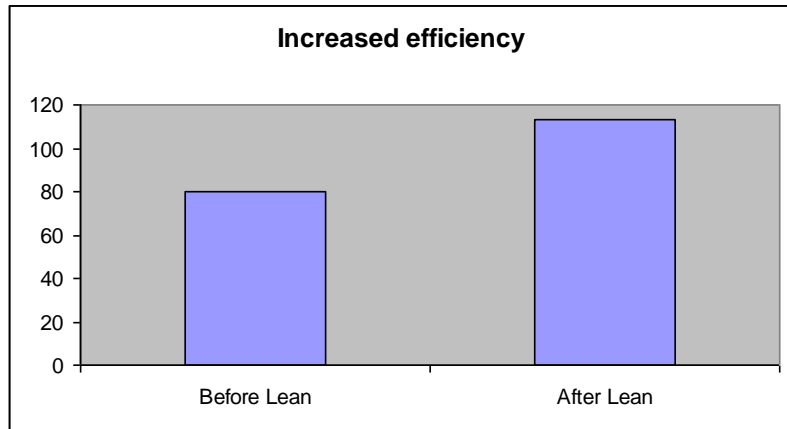
Key Performance Indicators / metrics (allowing for change in conditions)

- Productivity improvement, efficiency – standard hours per product
- Throughput improvement, work in progress reduced to 30% of original (1mil, 6 weeks)

We drastically cut our lead time



Efficiency improvement is a main driver to achieve capital gain and all of these results contribute to that.” We ran with Strategia’s suggestions, sped the implementation and achievement of improved processes from the ground up and top down.



- Better utilisation of space (50% of original)
- Steel sent to scrap and converted to cash
- Cost of goods sold trend

A continuous improvement process has been established, staff capability and motivation have improved, work processes are simpler and internal audits maintain systems. We’ve eliminated waste and increased throughput as well as productivity.

Our customers have noticed the changes, there has been an increase in customer confidence in our ability to provide a high quality product and consistently, meet delivery times. “Customers who have been visiting us for years comment that the factory looks clean and well organised” summarises Thijs.

Strategia and Wedgelock developed a very effective working relationship, Richard brought a lot of benefit to the company. “He is a very knowledgeable, positive, and optimistic guy and he is well connected, he has helped us enormously. If I found myself in the same situation I was in almost 2 years ago I would do the same thing, hire Richard Brathwaite, no regrets or hesitation. Should a potential Strategia client wish to visit us here at Wedgelock, I would welcome the opportunity to show them around.”

The improvement as an ongoing process, we meet with Richard about once a fortnight. The process is a journey, “we have more training to do and will be assessing ISO 9001 2000 certification.” Our company culture epitomises the entrepreneurial spirit that New Zealand is known for, Wedgelock customers can be assured they are dealing with a company that is continually discovering ways to improve in order to maintain its leadership in the market. Strategia have been key partners to achieving this.