Case Study – Lean Supply
The following case study shows how Jianguo’s Jigsaws adopted LEAN principles to achieve efficiencies, reduce waste, increase profit and support their sustainability goals.
Case Study - MRP Introduction Saves Time and Money

Jianguo’s Jigsaws is a small family-owned business working from a rented unit on the outskirts of a major city.

During 2019 Jianguo, the business owner, noticed that his profits were not where he had predicted them to be despite the business having exceeded the predicted sales forecast.

The mark-up was sufficient in Jianguo’s opinion for an acceptable profit to be made so why was the business only just breaking even?

A meeting was called and representatives from each Department within the organisation were invited. Suggestions were welcomed to try and explain the lack of profit.

Quite early in the meeting it became apparent that the problem was not the selling price of the jigsaws or the cost of materials which went into them but the overheads.

Three important concerns were raised:

1. **EXCESS MOTION**: Shop floor staff were paid by the hour and since Jianguo has moved his business to the new site the employees had a lot further to walk to collect their components to create and pack the jigsaws. In the old unit the warehouse was next to the assembly line but now there was a canteen and an office block between them. This meant that the workers were spending approximately an hour each day walking around to collect components and packing materials.

   Jianguo employed 10 assemblers and whilst at the old site he was paying them 7 hours to complete their daily allocation of jigsaw builds, it was established that now he was paying them 8 hours a day. This equated to 10 hours a week, 40 hours per month, and a significant increase in wages.

2. **EXCESS INVENTORY/STOCK**: Prior to the meeting the warehouse manager had conducted a quick stock take which resulted in him discovering that two jigsaws that were no longer being promoted on the company website were still being made but being put into stock. On the day of the meeting there were over 150 products that would have no demand against them.

3. **OVER-PROCESSING**: Amira, the lady responsible for overseeing the packaging and dispatch of the jigsaws, raised another valid point at the meeting. She stated that it seemed somewhat overcautious to wrap the box jigsaw in a protective plastic coating then put in a padded envelope and finally place in the box for dispatch.

   Jianguo was astonished at how much money these three areas of “waste” were costing him and decided to start a project to try and make his organisation LEANER.

   Whilst three key concerns had been raised during the meeting Jianguo was not naive enough to suspect that these were the only areas that needed attention.

Amira volunteered herself to be project manager with a view to trying to move the organisation into a LEAN culture.

The Board of Directors voted in favour of Amira running the project and she was given three months to try and resolve the initial three issues that were raised during the meeting.
First Amira tackled the concern regarding the distance between the warehouse and the shop floor. Amira knew that finances were quite tight and as such realised that making any adjustments to the layout of the rented unit would not be viable at this time. What she did realise was that the shop floor workers were not only having to walk further but were having to do multiple trips per shift to arm themselves with everything they needed to meet their allocation. To make this process more LEAN Amira asked Jianguo if she could raise a procurement requisition for 10 trolleys. Her idea was that if the workers could just go to the warehouse once and get everything they needed the time spent away from the assembly line would be significantly reduced.

The requisition was approved, and procurement sourced and supplied the trolleys.

The next change made was in relation to the excess inventory. Amira what cross functionally working with the sales manager and the marketing director to arrange for a promotion to be run to try and sell the surplus and redundant jigsaws.

Prior to the promotion going live Amira worked with the planning team to ensure that a process was put in place to stop products being made when the Board of Directors decided to stop selling them.

The final issue raised in the meeting was resolved by Amira working with the product designer to remove additional packaging that added no value. The outcome of this part of the project was that the final box in which the jigsaws were historically placed were no longer used and the product was dispatched by simply placing a printed label on the padded envelope.

Amira was particularly pleased with this outcome because not only did she manage to make the process LEANER, she also helped in relation to sustainability by using less packaging and changing the padded envelope to a recycled product.

Six months after the initial conversation to establish the reasons for a lack of profit Jianguo called another meeting and was clearly proud to announce that two months after Amira had started work on the LEAN project the company was back to showing a profit.

Amira has lots of ideas to further improve the process, create efficiencies and remove waste and has now been given the job title of LEAN Co-ordinator due to the value she has added from her work so far.

(Source: Jarvis-Grove, 2020).

Further Resources

You can also access further LEAN resources here.