

DHL, Westfield, is an established facility that acts as a Regional Distribution Centre (RDC) for Marks & Spencer. Located in central Scotland the RDC services all Marks and Spencer stores within Scotland and North East England for general merchandise.



Lean Team

Stephen Hutchison - Stock-handler
Iain Valentine – Admin & Finance Assistant
Lindsey Martin – Section Manager
Ricky Pender – Operations Manager

The Lean Project

The project was to concentrate on the Boxed Receiving area. On average 6,000 stock rooms packs (boxes) are received during non-peak time rising to 26,000 during peak activity. With 16 workstations throughout the process the business operates to an average of 120 boxes per person per hour. The objective was to analyse activities for improved streamlining and waste reduction.

Lean tools utilised

The Lean tools utilised were:

- Process mapping
- Ishikawa diagrams
- Problem / objective statements
- Low cost / no cost analysis
- Current state and future state analysis
- 7 Wastes analysis
- Spaghetti charting / flow diagrams

Measuring current activity

As the team were utilising the Lean tools they took photographs to capture the current state and also measured non value activity. They calculated that each operator was walking 9,600 metres per day, equivalent to 6 miles – the Spaghetti chart visualised this for all to see.

Issues arising from Lean analysis

The team felt that the Boxed Receiving layout and flow through the conveyor loop was not ideal resulting in stop/start in-feed to workstations. The analysis showed that there was poor use of the grid system for stock once received which was resulting in excessive walking by operators. The overall poor flow of work was making it difficult for operators to optimise their resources. The Tote process and marshalling of stock to drop zones was incurring some significant inefficiencies.

Project Plan tasks

The team devised a project plan (as follows) which will aim to increase overall productivity by 3%:

- Redevelop the conveyor system
- Repair all sensors to improve flow of stock
- Upgrade layout to improve efficiency
- Reduce the amount of walking time (non value add)
- Implement and improve the Tote process
- Improve efficiency when marshalling stock to drop zone

No cost / low cost success

The team quickly engaged with all staff under the new Marks and Spencer 'One Team' concept. This led to small group meetings where staff were encouraged to brainstorm and trial new ideas. The Lean project team became the vehicle to drive forward team building across the site.

Implementing the project plan

After much analysis through the use of Lean tools, the team created a new layout within the Boxed Receiving area. They compared the old layout to the proposed new layout demonstrating an increase in value added activity from 15% to 35%.

They went on to demonstrate how the improved Tote process would work. Pre-Lean activities in this area were compared to the proposed new process highlighting a reduction in labour time of 6 hours per week with an annual financial saving of £2,523.00.

Overall the improved layout will see a significant reduction in travelling time with the improved Tote process and enhanced marshalling process. The conveyor system has been upgraded taking out obsolete motors, adding new sensors, shortening the belt length and creating a sleeper mode for energy saving.

Prior to the Lean project, productivity within the Boxed Receiving area was on average 3,000 stock room pack labels per hour FTE (39 hours). Following implementation, it is anticipated that there will be a 3.3% improvement in productivity resulting in a business saving of £9,500.00.

Environmental benefits of "Lean"

With all the changes that have been made to the conveyor system, the team analysed the impact to the business with regards to energy usage. The current usage of 131,040 kw/h per year will fall to 87,048 under the new system. This is a saving of 43,922 kw/h per year resulting in a financial benefit of £3,284.00 per annum. The team highlighted that this energy saving is equivalent to the running of 7 homes per year and equates to a reduction of 24 tonnes of CO2.

Since the Lean project, the team are now progressing with more efficient energy usage throughout the business which will further reduce their carbon footprint.

The future

The Westfield site is now engaged in the 'One Team' philosophy building Lean Management into day to day activities. A structure from process improvement through employee engagement has been communicated under four pillars:

- Service delivery
- Continuous improvement
- Cost and efficiency improvements
- Customer satisfaction

"Since completing the Lean Management Thinking course there are a few observations:

No one loses from lean thinking.

At Westfield we are now all ABOUT Lean

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Big wins:

- Staff engagement
- Increased efficiency
- Customer satisfaction
- One team ethos
- Continuous Improvement

What business would not gain from Lean Thinking: NONE"

Quote from the DHL Lean team