Case study: LEAN Warehousing

1.1. Introduction

One of our premium clients, a major global manufacturing group who we have helped with the implementation of several improvement projects over the past years, had outsourced their warehousing requirements to a third party within a 5-year-contract.

Over time it became clear that the service levels expected by our client could not be matched by the logistics supplier as their operations were just too different from each other. The key issue was that the supplier was not able to handle the highly sophisticated and diversified product range of the vendor, and as a consequence, when the time came to discuss the renewal of the third party logistics contract, our client decided to bring the warehouse operations back under their own management. Our client was also aware that the current warehousing solution would not be able to support the planned 2-digit growth rate for the business.

This case study reflects on the preparation and implementation process of relocating a 28,000 square feet warehousing facility with around 7,000 product lines into a suitable new warehouse. Particular concerns were the 'green' credentials of the facility as well as having a 'best-in-class' warehouse to meet the specific business needs of our client, which included KPI driven lean processes to considerably improve the logistics operations within the existing SAP environment as well as minimising costs.

A project and change manager from FBC Ltd. supported the operations team and provided supply chain and change management expertise for this warehouse relocation project.

1.2. Clients Brief

The task was to 'in-source' the current third-party warehouse within 9 months by the end of 2011 and identify a suitable alternative facility that was both large enough to allow significant growth of the business and also located within reasonable distance of the Midlands Sales Office. Gradually, stocks were to be moved into the new warehouse while maintaining customer service levels and sticking within tight timescales and budget levels.

Support was required for the planning phase; the selection, modification (layout, design and fit-out) and implementation of the new facility; the physical product relocation and the ramping up of the revised supply chain processes in the new unit while preparing the contracted unit for hand-back to the logistics company.

2.1. The Approach

A detailed analysis produced the specific requirements for the future warehouse design:

- A best-in-class, 'green' and sustainable warehouse at industry-leading KPI cost
- Handling requirement: OUT: 800 order lines/day; IN: 300 order lines/day
- High bay racking and low level shelving according to ABC product categories

- Reduce the previous H&S risks of high level picking (15m eaves) and improve the flow of materials which previously went in both directions through only one door, the new warehouse should ideally be lower (max 8m eaves) and wider (separate IN and OUT materials to optimise flow)
- Reduce put-away and pick cycle times and enable a replenishment picking operation
- Minimise MHE requirement and reliance on automated equipment
- Provide the capacity to allow for double digit growth figures in the years to come
- Extended SAP compatibility including RFID and continuous stock control

2.2. Implementation Support during the Realisation Phase

From a scorecard shortlist of 6 potential venues, a fairly new building was chosen, ideally located in a modern Distribution Park. This warehouse together with some supporting investment was adapted to reduce H&S risks, improve material flows and segregation as well as ensure increased service and speed at reduced cost. This involved splitting the warehouse into 2 zones. Zone 1 contained the high bay racks and fork lift traffic, while zone 2 contained shelving and pedestrian access with a 1st level mezzanine floor covering about half the available floor space.

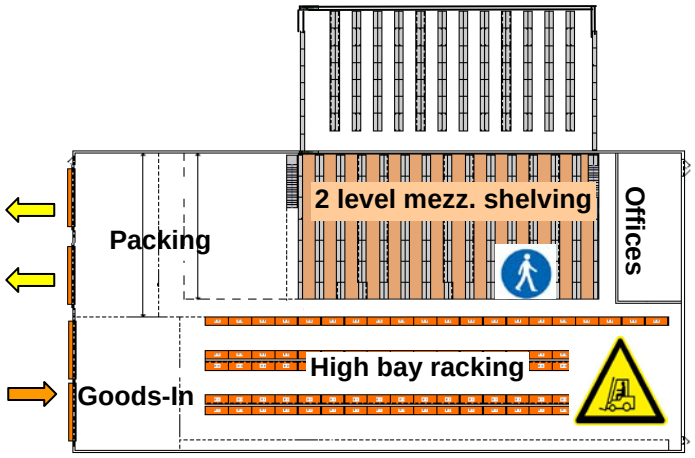

Fig. 1: Lean Warehouse

2.3. Operational Support during Building and Commissioning Phase

While project managing the building work, further preparations for the 'green' aspects of the well-insulated building were designed. Electrics and lighting were to be sensor controlled so they activated only when people were present in those areas, light intensity was automatically adjusted to complement the day light available and picking places in the robust shelves were set up with a system of bio-degradable cardboard separators.

A process review for Goods-In receipts and picking/packing described the programming requirements for the SAP System which was outsourced. In the warehouse, a number of SAP work places were set up at strategic points to ensure short distances to deal with paperwork and quick access to bulk and pick zones. Scanners were introduced and RF data transfer introduced to allow working in a virtually paper-free environment.

3. Results

FBC Ltd. facilitated the harmonisation and alignment of system, tools, processes and the people using them, delivering superb lean results: precision clockwork with no slack, no waste and the efficient use of energy put in to maximise output. Go-live was achieved on time and below budget and the switch to the new system was smooth and 'uneventful'.

FBC Ltd. can also assist *YOU!*

ENABLING change, SUPPORTING implementation,

Making change SUSTAINABLE!