

PROJECT

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A SUCCESSFUL RE-LAYOUT OF THE TYCO ELECTRONICS WAREHOUSE ...

Or how to reach an optimal logistics performance with the right balance between an efficient transaction capability and the lowest cost.

On May 5th, the new Tyco Electronics warehouse at Lubbeek was officially inaugurated.

Tyco Electronics

Tyco Electronics is a leading company, located at Kessel-Lo, specialised in high-end products for copper- and fibre networks as well as intelligent broadband connectors, delivering to major telecom providers such as Belgacom and France Telecom.

In the Tcom division, about 30 A customers represent 80% of the total revenues, for a high degree based on customer tailored value added Logistics. At warehouse level, this is reflected in customer specific labelling, cross docks for Belgacom, etc.

The Netconnect division, through a distributor model, offers standard products for (inside) Building Networks based on stock item business and only limited customer specific requirements.

The refurbished Lubbeek warehouse acts as an international distribution centre for Tcom and Netconnect. It is also part of Telag, a European distribution group.

Total revenue represents approximately USD 400M, with an average of 600 pallets in/out per day.

Where do we come from?

Peter Cnudde, Logistics Manager for Tyco Electronics, did explain that, as a result of an important increase of the activities in 2008, a sub-optimal warehouse was at the origin of a loss of efficiency resulting in cost increases.

The warehouse became a bottle-neck with a symptomatic lower score on deliveries, significant overflow (up to 4000 pallets), unsafe conditions and a decrease in customer satisfaction.

Management was very aware of the urgent need for a fundamental reorganisation of the warehouse planning in order to create the necessary flexibility and increase the transaction capacity. Approach and timing were crucial in order to avoid having to continue operating in sub-optimal conditions for a prolonged time. Moreover, the warehouse had to remain operational during the construction period, which proved to be a challenge. Last but not least, it was also decided to take this change as an opportunity to implement the

necessary adaptations in the systems and processes, adding to the challenge.

Tyco did not have the internal know-how to redesign the existing infrastructure. Pieter Klingels, Operations Director of Tyco Electronics said: "It was therefore decided to take on board Zelco Logistics n.v. as an external partner for the design and the management of the project. Zelco knows very well our operational environment and has an extensive experience in this kind of projects".

The design phase

Pieter Van Zele, Project manager at Zelco logistics, confirms that a pre-study pointed out issues such as the narrow aisles, the large amount of double moves, the bottle-neck at the loading zone and the presence of stock on the loading dock. On top of this, the long aisles, without any cross-aisles, caused unnecessary long picking distances. Also the available space was not used optimally because valuable surface parts of the loading zone were taken up by offices, bulk storage and passage to the reception.

The warehouse was divided in different picking zones. The picking of the goods for a same delivery was split between those zones and done by different order pickers in a serial way. This operation mode caused long throughput times and a relatively large transit stock of picked goods that had not yet been processed. Because of these long process times and the feeling that, if picking did not start in time, picking, packing and loading would never be finished in time and the general approach was to start picking quite in advance of planned loading moment. This often resulted in vicious circle or a catch 22 situation: more and more stock in transit of unfinished goods, causing various bottle-necks. Moreover it was almost impossible to fit rush orders in this relatively slow overall process, making it difficult to set and follow priorities.

And last but not least: there was a shortage of space to stock finished good ready for delivery.

After a thorough analysis, the decision was made to implement an entirely new concept, based on a design of wider aisles offering not only a maximum of accessibility and flexibility but primarily a fixed and logical warehouse structure, guaranteeing a dynamic and flexible order processing.

We can also point out the different parameters that have been built in the new warehouse such as: classification fast/medium/slow, controlled put away where possible, classification on customer profile, etc.

Also a dynamic picking line has been provided for less standard make-to-order articles and on top of this it was required to include enough capacity in the shipping area.

In the frame of a dynamic priority management, the planning needed to be optimized in order to have a minimum of orders in transit or waiting mode.

The difference between pallet- and piece picking, in other words, the right job for the right equipment, should also contribute to an increased performance.



The Project Implementation

During the budget round, the entire design was submitted to an in depth analysis, proving that the exercise was largely within budget with a pay-back time of less than two year!

Dirk Asselman, Tyco Electronics Project Manager, even went a step further by not limiting the project to the new layout of the warehouse but to also strive for optimal health & safety conditions and a replacement of the rolling stock. One of the requirements was also the adaptation of the existing SAP systems to the new needs.

An important success factor for this ambitious project was the continuous involvement of the various stakeholders (employees, management, committee for health & safety, etc.) Paul Van Nuffel, Zelco Project Manager said: "It is thanks to the people who have put the necessary priority in this venture that it became a success. From the beginning we felt that the employees were fully supporting the project".

Throughout the implementation of the new infrastructure, we had to shift around in such a way to create new empty spaces to make the total design fit. During the entire transformation phase, the warehouse platform remained operational. A detailed script and a strict planning of the transition were of crucial importance.

At this stage of the project, also the location addressing was tackled in order to create a logical and repetitive numbering scheme. Crucial in every part of the warehouse is a clear definition where an article needed to be fitted in the picking line and how much space it needs. Before starting to move the articles around, a good product implantation plan is required, in order to have most of them immediately at the right location already during the relocation project.

This brings us to Peter Dupont, team member Logistics of TYCO electronics who was responsible for adapting the SAP systems upon the analysis by ZELCO.

He had to take into account different parameters that would increase the overall warehouse efficiency – reserve stock starting from 2.5 m height, picking line at ground level, replenishment at ground level only at the moment of shipment, etc. But he was also confronted with the challenge to engineer a put-away strategy that was non-existent at that point in time.

The results

According to Dirk Asselbergs - who is quite enthusiastic about the quality support from the Zelco team - the initial results look promising.

"Our stock is now much better consolidated in fixed bins, requiring less picks to ship an order. This results in an efficiency improvement of 11%, representing in 6 FTE (Full Time Equivalentents) less".



"This project has taught us a lot about the functioning of our warehouse, where we now have an average on-time-performance of over 95%. We are aiming at even further increasing this efficiency".

This successful project has again proven that an efficient re-structuring of the logistic flows can contribute to additional profitability. These flows translate into improved transport distances, transport labour, warehouse processes and material handling.

The warehouse staff unanimously confirms that a well-thought layout has a direct positive impact on the walking and driving distances and consequentially on the warehouse operation.

The future

Peter Cnudde shares his view on the future...



"Considering the MEDIC principle, Map & Measure, Explore & Evaluate, Define & Describe, Implement & Improve and finally Control & Conform, we can be proud to have successfully completed these steps with a special thanks to the professionalism of the ZELCO team".

"We now need to control and continuously improve through a perfect synergy between the involved parties. Or following the last step and taking into account the Kaizen principle - Japanese for "taking apart" (Kai) and "fixing things" (Zen), we now need to strive for continuous improvement, with the involvement of management and personnel and permanently adapt to changing market conditions and most of all surpass customer expectations".

Edgar Schein in a nutshell...

Alfons Van Zele, founder of ZELCO, concluded with resuming the core principles of Edgar Schein.

Indeed, change is possible if there is a turnaround manager or team with a clear sense of where the organisation needs to go, a model of how to change the culture, and the power to implement the solution.

We were ready for the visit of the warehouse, but first the following words that guarantee a successful change project like here at Tyco Electronics, appeared on the screen:

VISION - COMMUNICATION - TRAINING - CULTURE CHANGE

Pieter Klingels, CEO of Tyco Electronics, endorsed these visions and looked together with his team proudly back on the successful results of the reengineered warehouse.

