

# Case Study

# 3LP



## Objective

- ▲ Order execution optimization
- ▲ Increase customer satisfaction
- ▲ Increase multi-channel sales, with focus to e-commerce
- ▲ Accelerate the speed of stock flow
- ▲ Cables handling flow optimization, including cutting machines + drums
- ▲ Increase storage efficiency
- ▲ Better use of MHE installed
- ▲ WMS compliance with IT standards and client's requirements

## Facts

- ▲ 50,000 m2 of storage space / 2 warehouses
- ▲ 25,000 m2 of outdoor storage area
- ▲ 40,000 pallet locations
- ▲ 35,000 lean lift track locations
- ▲ 90,000 mezzanine locations
- ▲ 14,000 shelves
- ▲ 500,000 SKUs
- ▲ 65 forklifts
- ▲ 2 shifts

## Solution

- ▲ Logistics Vision Suite
- ▲ 200 smart logistics attributes
- ▲ Advanced algorithms for cable cutting machines
- ▲ Advanced algorithms for picking and putaway
- ▲ Pre-cubing
- ▲ Integration with numerous MHEs

## Benefits

- ▲ 31% increase in employee productivity
- ▲ 21% decrease of cost per order line
- ▲ 99% inventory accuracy
- ▲ Order execution errors less than 0.001%
- ▲ 99.9% Quality levels obtained

## 3LP, one of the largest logistics centers in Poland runs on Logistics Vision Suite

### The Company

3LP is one of the largest logistics centers in Poland offering automated outsourcing of logistics services to customers from the e-commerce sector. 3LP runs on Logistics Vision Suite (LVS), the state-of-the-art Warehouse Management System (WMS) by Mantis, achieving the highest efficiency and maintaining costs of individual operations at competitive level.

3LPs distribution centers own perfect infrastructure and the company has a long and proven experience in online sales of the demanding B2B channel.

### The History

The first warehouse was established in 1999 by TIM and included 1,000 pallet positions within an area of 5,700 m2. Then it was considered one of the largest and most modern facilities in Central Europe among companies from the sector of distribution of electrotechnical materials.

In June 2014, apart from logistics services for TIM, there started a cooperation with the company Rotopino, for which it implemented logistics solutions necessary to provide services for the most modern and demanding e-commerce. It was now possible to also provide comprehensive services concerning returns, complaints, labelling, foil wrapping, and co-packing. TIM was now a client of 3LP. This is how 3LP became Logistics Service Provider.

## The Objective

Since the very beginning of its activity, 3LP has been focusing on a dynamic development and continuous expansion of the range of offered services, hence, 3LP needed to increase employee productivity, and reduce errors.

3LP needed a WMS that can be very adaptable and can easily interface with all the advanced MHE the company strategically needed to implement. Furthermore, 3LP wanted to own perfect infrastructure for their distribution center in the demanding B2B channel. It is noteworthy that 3LP for TIM also wanted to reduce cable scraps in order to decrease cable orders cost.



## The Facts

3LP has 50,000 m<sup>2</sup> of highly automated warehouse, fully taking advantage of all the MHE equipment it uses: a Stacker crane for cables, 4 cutting machines connected with conveyors to the stacker crane, 3 mezzanines and conveyors, Pick-to-light, a Sorter push-tray, 9 Lean lifts (ISL Carousels), a Shuttle (SSI Shaefer), 36 packing stations, 8 sorting stations.

LVS by Mantis has successful interfaces with the above MHE.



## The Solution

Logistics Vision Suite is well known for its outstanding flexibility and true adaptability. Because of this adaptability, Mantis team was able to create:

- ▲ Advanced algorithms for:
  - ▲ Picking
  - ▲ Putaway
  - ▲ Replenishment
  - ▲ Pre- cubing
- ▲ Soft allocation of inventory during ERP to WMS order imports
- ▲ Advanced cable management including drum stock management
- ▲ More than 200 Smart Logistics Attributes. In particular, smart logistics attributes were used for the algorithm which proposes what cable drum to select for a specific order
- ▲ Algorithm to calculate packing units requirements
- ▲ Order priority management using Wave and Cut-off times
- ▲ Easy Consolidation Process
- ▲ Implementation of new processes, e.g. Combining Mezzanine Orders with items of XL size



To achieve the above in scope on time in budget there was a need for an impeccable project management, an agile project management approach, a very detailed and realistic implementation plan and a great collaboration between 3LP and Mantis teams.

The key factor of on time and in scope project delivery were:

- ▲ Very detailed analysis phase and planning
- ▲ Accurate project management - Use of Project management standards and coordinating the work of tens of people
- ▲ Use emulator created by Mantis to test communication with the Material Handling Equipment
- ▲ Cold runs in the actual environment during weekends

## The Projects

Since 2011, Mantis implemented 7 projects to 3LP. These projects include the implementation of LVS and the integration with MHE, 3-floors Mezzanine, a stacker crane, an automated cutting machine in the beginning and 3 more in later projects, adding 8 Lean Lifts (carousels), conveyors, sorting and packing stations and pick 2 light at conveyors.

Also LVS was interfaced with a shuttle for goods-to-man picking as well as with several carriers for Parcel and LTL management.

Some milestones were:

- ▲ Changing the concept of regional branches to centralized handling
- ▲ Increase storage capacity
- ▲ Carton selection optimization
- ▲ Customer Service + Quality levels increased
- ▲ Moving to B2B and e-commerce
- ▲ Parcel and LTL interfacing with carriers as DPD, GLS, Raben



## 7 Projects

- ▲ 3-floors mezzanine
- ▲ A stacker crane
- ▲ 1 automated cutting machine in the beginning and 3 more in later projects
- ▲ 8 lean lifts (carousels)
- ▲ Sorting and packing stations
- ▲ Pick 2 light
- ▲ A shuttle for goods-to-man picking
- ▲ Conveyors connected with all the above Parcel and LTL management with several carriers



## Results

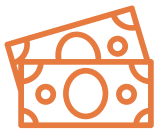
- ▲ All projects were carried out in scope, on time, in budget
- ▲ Errors were dramatically reduced
- ▲ Quality levels obtained are 99.9%
- ▲ More than 200 concurrent users per shift
- ▲ More than 500,000 SKUs managed
- ▲ More than 2,500 order lines per hour



## Benefits



31% increase in employee productivity



21% decrease of cost per order line



Order execution errors less than 0.001%

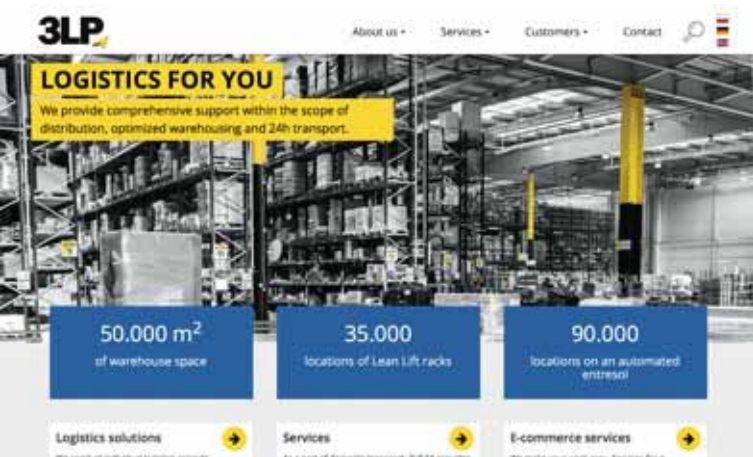


99% inventory accuracy



99.9% quality levels obtained

# Testimonials



“ We provide comprehensive services of various shipments, warehousing and implementation of orders on the basis of world-class WMS system for advanced warehouse operations. ”

3LP Website

“ I am pleased to say that Mantis duly complied its obligations and was a reliable partner in the implementation. Cooperation with the Polish and Greek Mantis teams was very effective and in a very good atmosphere. We are pleased that Mantis understands our business and supports the dynamic development of 3LP in the competitive e-commerce logistics market. ”

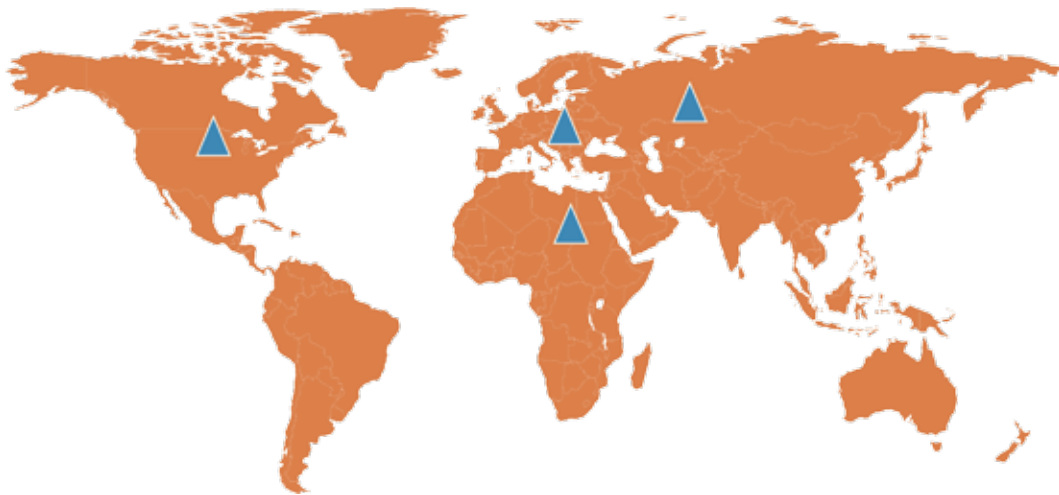
Damian Krzypiec, Board Member, 3LP



“ At Mantis we welcome new challenges which push the boundaries of how we can deliver excellence to our customers and produce amazing results. ”

Kostas Ioannou, Project Manager PMP, Mantis





Mantis, is a leading international WMS / logistics software and solutions vendor, addressing the demanding requirements of large enterprises in more than 20 countries in Europe and Russia-CIS and recently in USA / Canada and Middle East.

Mantis' platform's design represents a great leap in WMS / logistics technology, offering true adaptability + flexibility that is unique world-wide. It meets the needs of even the most demanding large enterprises with ease and helps them to achieve an unbeatably fast ROI + low TCO. The company makes this claim, after having successfully outperformed some of the best competitive WMS on the market.

More than 400 enterprises, many of them leading multinationals, representing all major market sectors (3PLs / 4PLs, retailers, distributors / wholesalers, etc.) and selling channels (traditional and e-commerce) rely on Mantis' software and solutions to run and optimize their warehousing and logistics operations. The system has been successfully integrated with most major ERPs (SAP, Oracle / JDE, Microsoft Dynamics, INFOR, Epicor / Scala, etc.).

Mantis complements its software suite with affordable warehouse automation solutions consisting of a smart combination of proven competitively priced systems and technologies (Voice Picking, Pick / Sort-to-Light, Pick-to-Cart, RFID, etc) that have been significantly enhanced by Mantis and offered as turn-key solutions. Furthermore, the company's platform includes middleware (WCS) allowing its painless integration with material handling equipment such as ASRS, Miniloads, Shuttles, Carousels, Sorters, etc.

Finally, the company provides its customers with sophisticated specialized Supply Chain Management solutions per case such as Inventory Planning + Optimization, Manufacturing Execution, Quality / Safety Planning + Execution (for the Food + Beverage industries), Vehicle Routing-Scheduling + Fleet Management, Container Terminal Management + CFS and Physical Documents Archiving.



Contact Us | [info@mantis.email](mailto:info@mantis.email) | [www.mantis.group](http://www.mantis.group)

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