



WMS



MES



WCS



VOI



TMS



TSM



EDI



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Software for logistic excellence



# 2XL

## About

2XL, founded in 1999, focuses on Third Party Logistics (3PL) and transportation towards the United Kingdom. Initially, the logistics hub located in Zeebrugge, was built for the supply of Danone waters (Evian/Volvic). This project, as well as the WMS implementation, was the start of the collaboration with C&W Logistics.

Currently, big players as Redbull, Ontex, Asda Wallmart, Tesco, ... are using this innovative DCS (Direct Customer Shipment) process that distinguishes 2XL from other service providers and transport companies active in the UK.

The company, winner of the 2010 Supply Chain Award, is characterized by a young and strong dynamism with an invariable urge towards innovation, and this in terms of business development as well as in logistics integration and automatization. Recently, the next optimization project took shape; the consolidation of distinct customers for delivery to the same destinations in the UK.

## The Project

### IT Environment

- 2XL doesn't own an ERP platform but is integrated with the different platforms of its customers. Next to the integration of the all-known SAP, Axapta and Navision, customizations are possible as well.
- C&W's Supply Connector tool functions as integration-platform for the EDI exchange with the different platforms, depending on the customer. The Supply Connector tool is an in-house development of C&W.
- In order to handle the customs clearance for certain products (Alcohol – EAD), the connection with the customs software was established.

### Inventory and Environment Characteristics

- A plurality of warehouses is managed by one WMS (Zeebrugge/Brugge/Oostende).
- A wide range of diverse products from different customers within the warehouse.
- The handling of food and non-food products (Issues concerning BBD).
- Possibility of SKU picking next to Full Pallet Picking.
- The complete tracking & tracing within the WMS to ensure that the lifecycle of every product on container, lot-level and BBD can be reconstructed on customer(owner)-level.
- Storage infrastructure varies from traditional drive in (RF driven) to completely automated storage.
- The warehouse in Zeebrugge is equipped with railway connection for the (inside) unloading of train deliveries.

### Warehouse Automation

Within the warehouse, a set of different automation methodologies are used.

The following automations were integrated with the WMS:

- Automatic storage (45.000 pallets) handled by cranes and shuttles (orbiters) from SSI Schäfer.
- In- and outbound of supplied pallets by conveyors and AGC (Automated guided Vehicles) from Ceratec and Motum.

### Processes

#### I. Reception

- Deliveries from large customers (Danone, Ontex, Redbull, ...) are, by EDI exchange (DESADV), pre-announced in through the C&W Supply Connector.
- In order to handle deliveries from smaller suppliers, C&W developed the C&W Vendor Portal.
- For non-automated suppliers, the portal facilitates the generation of EAN128 labels, the consolidation of orders and the generation of EDI (DESADV) to the WMS.
- The managing of inbound (truck & train) through the WMS Dock&Yard management, with visualisation and Drag&Drop functionalities for the automatic triggering of actions (arrival start, printing of reception lists, ...).
- Unloaded pallets can be offered to the automation and can be scanned, identified and received through pre-announced (arrival).





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- Returns that were not pre-announced in detail (on pallet), can be recreated by scanning of the EAN 128 label (SSCC/Item/Lot/Qty).
- Crossdocking of pallets (truck-truck/train-truck) whether or not they will be handled by the automation.
- Reception on purchase order by RF with controlling by WMS on the completeness of information, depending on the combination of received customer/item.
- In line VAS (Value Added Services) during reception; sample labelling-QC.
- Products can be received in quarantine, with automatic time-bound release by the WMS or release by the customer through EDI messages.

## II. Storage

- Customized storage logic, driven by putaway groups, rules and conditions in the WMS.
- Storage management of quarantine pallets, blocked pallets, rest pallets with automatic reshuffle.
- Storage management of different lots within the same location based on BBD tolerance.

## III. Picking and Replenishment

- Customers send the orders through EDI to the WMS.
- Freight consolidation of the sent deliveries are handled by the C&W Consolidation tool.
- The WMS manages and splits, the combination of pallet and SKU picking within one order.
- Configured WMS reservation logic (FEFO/FIFO/LIFO/LEFO) by picking groups, rules and conditions.
- FEFO picking takes BBD tolerance into account.
- Customer FEFO, where on item-level/delivery address the last delivered BBD can't be violated.
- Replenishment, whether or not through automation by replenishment groups, rules and conditions.
- Pick&Hold Principle; previously executed SKU picking, staged. (whether or not in the automation).
- Managing of outbound through WMS Dock&Yard management, with visualisation and Drag&Drop functionalities for the triggering of actions (reservation inventory, printing labels, ...).
- Possibility of queueing and monitoring of progress for each dock.

## IV. Offline VAS (Value added service)

- Skimming of pallets product A to product B.
- Products with BOM structure and accompanied transfer orders are sent through EDI to WMS.
- Complete tracking & tracing of consumption components and output registration.

## V. Shipping

- Task driven loading through RF/scanning of to-load pallets.
- Registration of returnable packaging
- Creation of customized shipping documents (CMR, ADD, POD, ...).

## VI. Internal Logistics

- In and offline cycle counting on the base of configurable cycle counting groups.
- Automated (inventory) reports to different owners.
- Complete activity registration for 3PL Billing.

## VII. WMS@2XL Towards the Future

- Automation of SKU picking through combination of goods to men and batch picking.
- Further expansion of automatic storage.

