



WMS for the Food Industry (Beverage)

Together with our partner who manufactures automatic warehouses all over the world, we have implemented a **complete WMS** for a **corporate working in the beverage sector**. The WMS interfaces with company information systems and makes the warehouse completely automated and independent of human presence.

• Customer needs

Fully automate the previous warehouse, connecting it with the company information system. Additional needs: increasing process optimization, *centralization of information, real time monitoring, saving.*

• Our Project

The system we created can **autonomously manage the storage and retrieval of the pallets**; in particular, the forklift driver only has to place the pallet in the warehouse input bays.

The warehouse - with a fleet of **42 shuttles, 8 lifts and a series of roller conveyors and catenaries** - moves each pallet automatically and independently.

The storage location is selected by an **optimization algorithm developed by Taiprora** that considers a series of information such as the expiration date, the type of product, the size, the least traveled route. The system is able to optimize every spaces and locations through a continuous exchange of data between the warehouse and the company information systems.

Pallets in outbound are also managed automatically and the orders come directly from the corporate systems. The operator creates the order and the warehouse extracts the required material optimizing the timing and the slots occupation.

We have installed a **supervisor (developed in .NET)** that allows realtime control viewable on different devices and a very close interaction between operator and storage for maintenance management, request for "ad-hoc" extractions, enabling and disabling the various items.

Microsoft SQL Server is used for data management, web services and **JSON technology** are used for messaging.

SOME NUMBERS OF THE PROJECT

- 5k** 5,000 pallets managed every day
- 40k** 40,000 total stations, all managed by the Taiprora software
- 5** Floors of which it is composed the warehouse
- 51k** 51.000 m²: total flat area of the warehouse
- 8** 8 football pitches: the global dimension of the flat warehouse
- 0** Zero Mistake: management of all operations with zero errors



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