

## **A Shining Example of Technology: a Pharma products warehouse entirely designed by Solving Efeso NetLog**

**NeT-LOG Consulting** played a leading role in the design and implementation of the warehouse.

Some of the main characteristics are:

- ✓ **High level of automation in storage systems:** the warehouse is 29 meters high and the racking is designed to be an integral part of the building structure. The facility is served by 7 Automated Guided Vehicles adapted for pallet handling and 5 Miniload systems adapted for package handling. The pallet racking is double-deep for added storage capacity
- ✓ **High level of technology and automation for material handling equipment**
- ✓ **Safety:** robust site security standards to detect break-in and theft, as well as firefighting systems which reduce the volume of oxygen in the warehouse in case of a fire
- ✓ **"Green":** the use of geothermal energy was a key advantage in locating the building and the structure has increased insulation to minimise the amount of heat loss

The operational complexity that exists in the Pharma sector led NetLog to an automated solution for product handling and storage. In order to deliver the expected benefits, the decisions needed to interface the plants and systems became strategic, as the technology employed would eliminate "bottlenecks". Thanks to the previous experience of NetLog in using simulation software, they were able to refine and improve the initial modelling of the design solution conceived by Neologica.

NetLog were able to define a new optimal solution which was implemented in the actual building and development of the plant.

Due to the need to separate the flows between pallets and packages, NetLog provided a solution of a **"warehouse in the warehouse"**, with shelf racks, served by Miniload systems, which are part of a double deep pushback pallet shelf rack system, which in turn is fed by the Auto Guided Vehicles.

As a result of the design and solution modelling NetLog supported the development of detailed technical specifications for rack systems (self-supporting warehouse), equipment handling systems and management information system. Finally, NetLog completed the process by providing assistance during the **supplier selection** phase.

The plant has been fully operational for one year and NetLog is provided ongoing support with performance monitoring and adjustment of automation and system parameters driven by changes in business requirements.