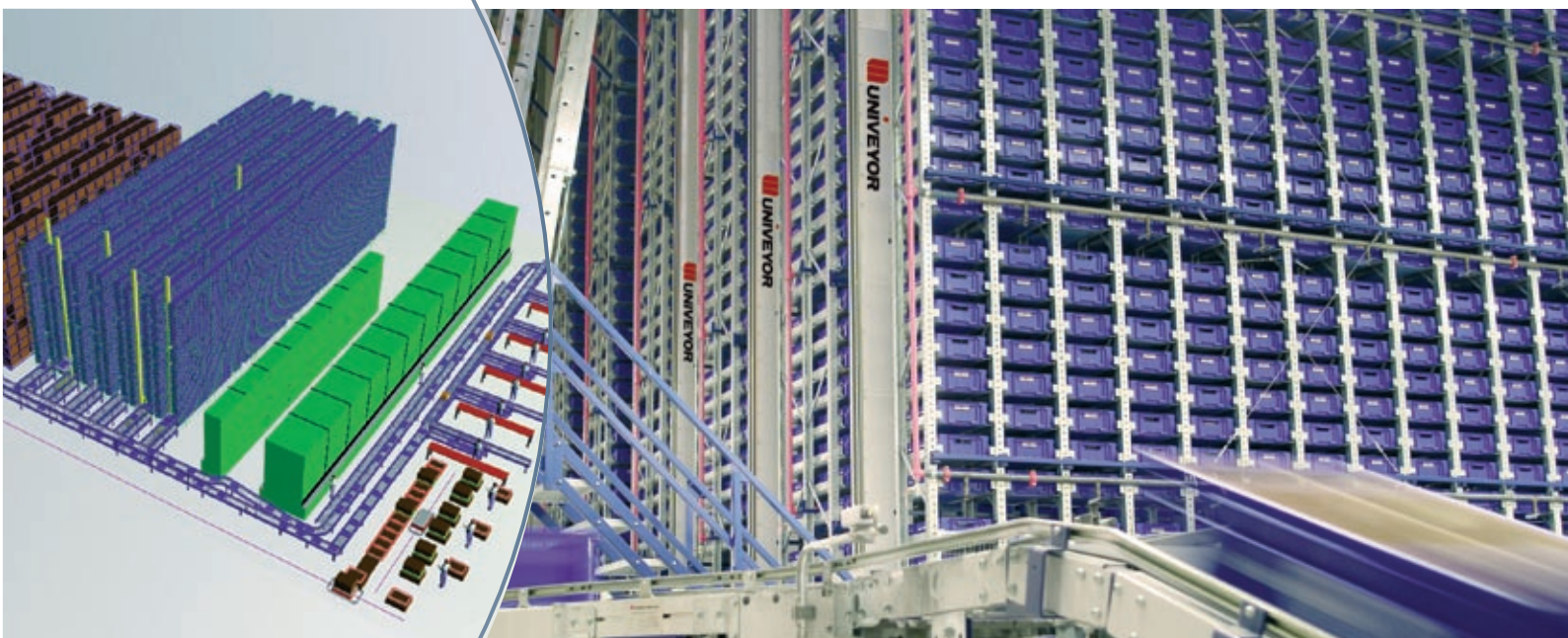


Picking and distribution of spare parts

Tetra Pak



State-of-the-art - storage and distribution



*Julian Guillermo, Project
Manager of Tetra Pak, says:*

*"The system supplied by
Univeyor has given us
cost-efficient logistics
for the distribution of
our spare parts, with a
system availability
of 97%."*



About Tetra Pak

Tetra Pak is a global supplier of processing, packaging and distribution equipment.

Worldwide distribution

The demand for more efficient deliveries of spare parts for Tetra Pak's processing, packaging and distribution equipment throughout the world was the catalyst for the new automated storage and picking system supplied by Univeyor. The warehouse holds 56,000 different spare parts and delivers to customers worldwide. Highly automated and efficient storage management and logistics are essential elements in achieving short delivery times.

Univeyor as total supplier

The storage and picking system was developed in close cooperation between Tetra Pak and Univeyor – a method of working that contributed to the choice of Univeyor as total supplier, as did the low-cost and innovative solution.

Total supply with WMS - ready for growth

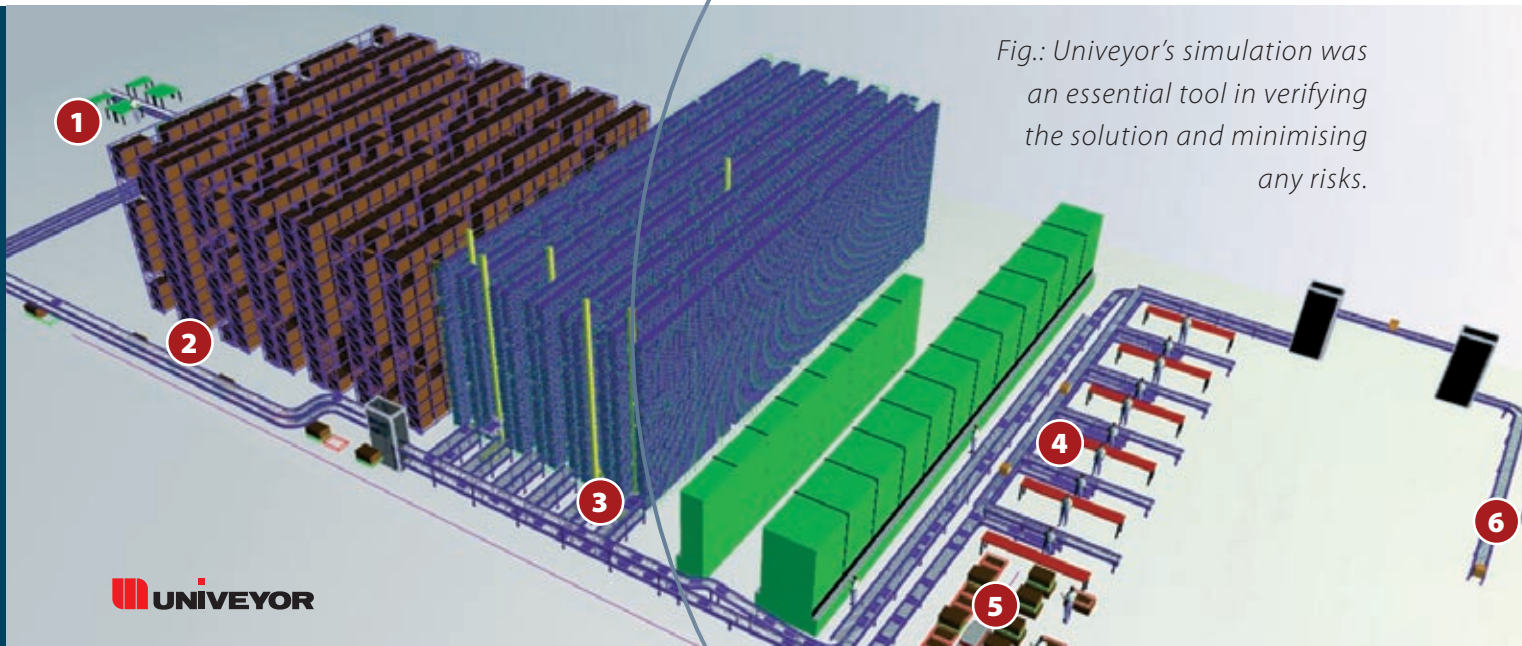


Fig.: Univeyor's simulation was an essential tool in verifying the solution and minimising any risks.

Today the system handles nearly a million deliveries a year but it is designed for substantial future growth.

Automation of the entire logistics flow

The system delivered from Univeyor, automates the entire flow - from goods receipt, infeed to and outfeed from storage, order collation, packing and sortation for despatch. A state-of-the-art conveying system and a complete Warehouse Management System integrate and control the entire process.

Scope of delivery

- **Miniload storage:** 6 fully automated miniload cranes with specially developed double retrievers. 33,000 plastic boxes with the possibility of up to 264,000 locations (depending on the internal arrangement of the boxes).
- **Ergonomic picking stations** with "box tilt" and touch screen operation.
- **Complete conveying system** - from goods receipt to despatch.
- **Warehouse Management System (WMS)**, controlling the entire logistics flow.
- **A 4-year service and hotline contract** with Univeyor guarantees a 97% system availability.

Efficient logistics

- from goods receipt to despatch



1

Goods receipt

In this area, arriving items are recorded and scanned. Small items are packed in plastic bags with bar codes, and the main part of all arriving items are packed in spatially arranged plastic boxes and stored in the miniload storage.

Low-demand items are stored in the paternoster storage, and large items are stored in the pallet storage. The entire process is bar code-based and controlled by the WMS system.



2

Pallet storage

The pallet storage is primarily intended for large items that are difficult to handle. The shuttle car handles pallets between the pallet storage and the picking area.

Infeed to and outfeed from storage is handled by manned FLT's. The FLT's have built-in displays with online information on items to be fed to or picked from storage, item location, destination etc.



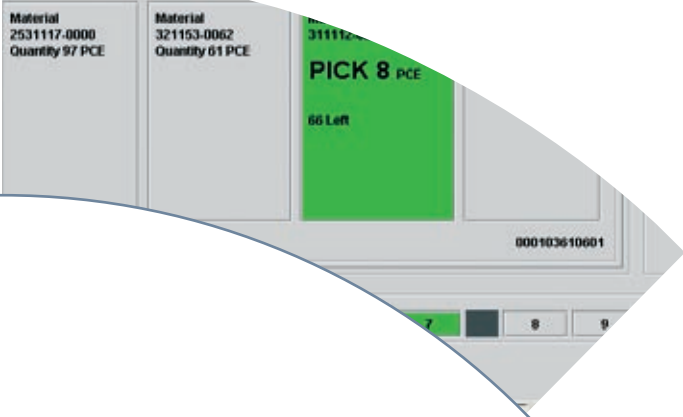
3

Miniload storage

The fully automated 12m high miniload storage is optimised for high-demand items. The WMS distributes boxes 'randomly' whilst taking the picking frequency into consideration.

The double retrievers of the miniload crane ensure maximum picking frequency.

Boxes are available in two heights, and the spatial arrangement required is selected by the operator.



On-screen picking

Univeyor has supplied a complete Warehouse Management System which handles orders from across the world. User-friendly, graphical touch screens show the exact data on locations, quantities, destinations etc.



4

Picking from miniload

When a picking order has been activated, a box automatically arrives at the workstation.

The information contained in the bar code enables the display to show the operator (graphically) which area in the box to pick from, as well as quantity, order number, destination, route etc.

Picking is made directly to the despatch cartons.

5

Picking from pallet storage

The article pallet is picked up from the pallet storage by an automated shuttle car, transporting it to the picking area. Typically, picking is made to wooden boxes of varying sizes.

The packed order pallet is collected by FLT and transported to the despatch area whilst the shuttle car either returns the article pallet to storage or takes it to the empty pallet magazine.

6

Despatch

In the despatch area, items from the two picking areas are held. Orders are then prioritised by delivery date, destination and route.

The system also considers the shipping routes and costs. When collating orders, if there are a number of separate orders i.e. for USA, it will group them together hence reducing international freight charges.



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