

# Digital engineering in logistics

The increasing acceleration and digitalization in intralogistics can quickly become a major challenge, especially when feeder production areas operate more slowly than the subsequent final module production. In a case like this, onoff supported a customer in alignment and implemented a storage system in the material flow that ensures continuous production. Specifically, the project involved a high-bay storage system with corresponding interlinking (conveyor technology) as a storage system. It was the many years of expertise of onoff engineering that helped seal the deal, and onoff was awarded the contract to develop a digital real-time solution and provide support for the engineering phases up to the FAT.

## Project Goal

- Increasing productivity by integrating a high-bay warehouse between production areas
- Designing the new productivity comprehensibly, without the plants being built fully in real terms
- Visualize and optimize feasibility and cycle times
- Minimize planning risks and errors and qualify software on the digital twin
- Implementation of cross-border cooperation

## Technical Realization

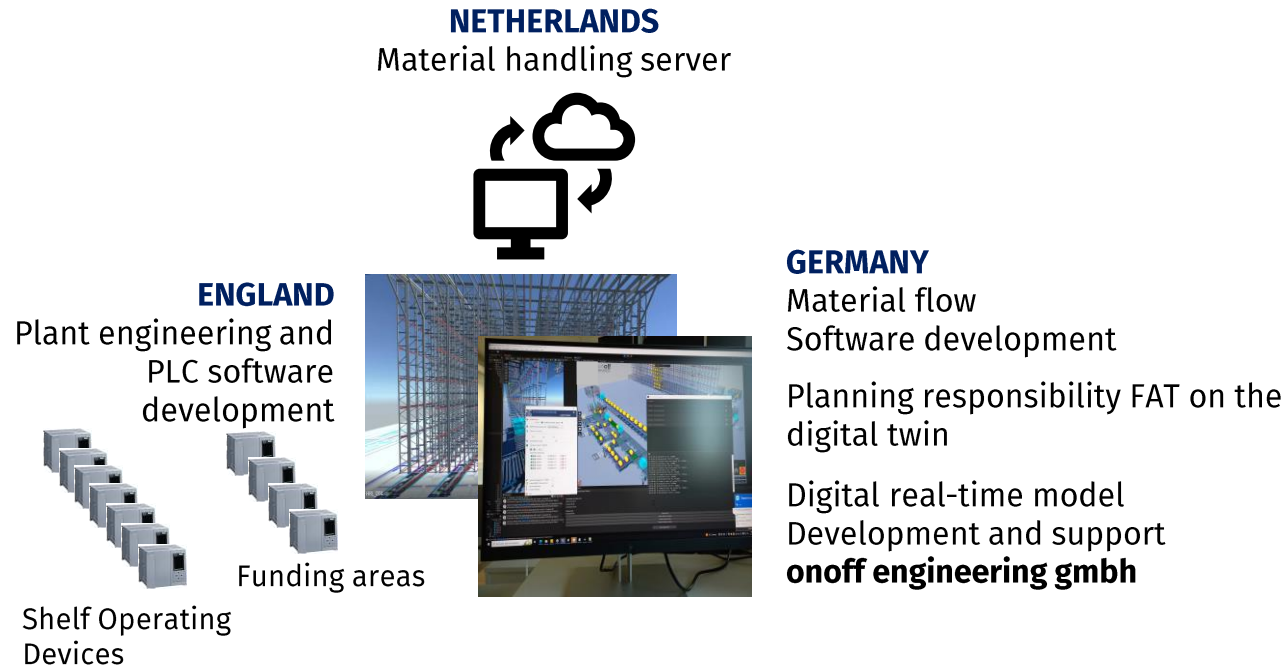
- Simulation of all processes in real time by mapping the complex logistics with the digital twin
- Acceleration factors in the digital twin for time-optimized testing
- Management through a higher-level material flow system (MFR, LVR)
- The control is done with more than 10 PLC systems
- All subsystems are permanently communicating with each other
- FAT (Fabric Acceptance Test) takes place on the digital real-time model - the digital twin



### Features

- Increase in productivity
- Designing large plants digitally
- Display functional content in 3D
- Qualifying software

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## Summary

The digital real-time model developed by onoff offers great added value for the operator. The productive system as a real plant as well as a quality system are available. This is used to test the complexity in logistics (such as the change of product pallets) in parallel, from the material flow system or warehouse management computer to the implementation in the plant controls before the integration into the productive system takes place. This offers a significant increase in the quality of the software for real operations.

With this solution and the support of onoff, the customer can be sure that the right product is always in the right place at the right time. Productivity is ensured while risks are significantly reduced.

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