

Simulation project for a new distribution centre of Philips



Philips

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Koninklijke Philips N.V. is a Dutch diversified technology company headquartered in Amsterdam with primary divisions focused in the areas of Healthcare, Consumer Lifestyle and Lighting. It is one of the largest electronics companies in the world and employs around 122,000 people across more than 60 countries

The goal of this simulation project was in the first place to validate the already performed calculations on the required number of reach trucks and order pick trucks. In the second place what- if scenarios were defined to identify possible bottlenecks situations. Furthermore Philips Lighting wanted to have a 3D representation of the warehouse to use as a reference material and educational purposes.

Simulation and Forecasting Technology role

What-if scenarios, identify bottlenecks, 3D representation

Sector

Engineering and Electronics

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SHOWCASE PHILIPS LIGHTING

OBJECTIVE
The goal of this simulation project was in the first place to validate the already performed calculations on the required number of reach trucks and order pick trucks. In the second place what-if scenarios were defined to identify possible bottlenecks situations. Furthermore Philips Lighting wanted to have a 3D representation of the warehouse to use as a reference material and educational purposes.

BENEFITS FOR PHILIPS LIGHTING
The project's result was a validated simulation model which includes all the distributed processes. The results of this model gave Philips Lighting more insight in the expected performance of the new warehouse. In short the benefits for Philips Lighting from this simulation project are:

- A validated range of the number of trucks required to handle the inbound and outbound goods flow.
- Indication of congestion in some parts of the warehouse. One of the advice was to spread the concerned product type over more aisles.
- The model showed a bottleneck at the confirmation and sealing area. The advice was to rearrange this area and leaving the decision in terminals for full pallets and cluster pallets.
- A useful 3D representation of the warehouse.
- Indication that the number of shipping and receiving lanes is classical, good planning of inbound and outbound flow is required.
- Reduction of waiting for replenishment would improve the performance.
- The simulation model of the warehouse in Acht gives a good starting point to simulate a similar warehouse in Pils (Poland).

INDUSTRY
Logistics

APPLICATION AREA
Warehousing

COUNTRY
The Netherlands

CHALLENGE
- validate the already performed calculations on the required number of reach trucks and order pick trucks, identify possible bottleneck situations.

SOLUTION
A validated simulation model which includes all processes.

KEY TO SUCCESS
The result of this model gave Philips Lighting more insight in the expected performance of the new warehouse.

Philips Lighting used the 3D representation of the warehouse as reference material and for educational purposes

PHILIPS LIGHTING
Philips Lighting has built a new distribution centre at their site in Acht (Eindhoven). Although calculations on processes had already been made, the management decided to simulate the new warehouse in order to validate the already performed calculations and identify possible bottlenecks in the process. ED Logistics contains standard building blocks, which enable the user to build a warehouse in 2D and 3D environment. This suite is used to build a simulation model of the new warehouse. The model has been built in close cooperation between Philips Lighting Distribution and INCONTROL Simulation Solutions.

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