



ROTHBAUM
CONSULTING ENGINEERS



Spare parts logistics concept

Agile project approach for short-term
layout planning during the search for
warehouse properties

An overview

Due to the conversion of a Frankfurt coal-fired power plant into a gas-fired power plant, the existing spare parts warehouse had to be dismantled at short notice and the stored goods completely relocated. A replacement building was not yet available. Parallel to the search for rental properties, Rothbaum was asked to plan the logistics concept and put the individual trades out to tender

Mainova AG

- one of the largest regional energy suppliers in Germany
- supplies around one million people in Hesse and the neighbouring federal states with electricity, natural gas, heat and drinking water
- 3,100 employees generate a turnover of over 4.5 billion euros (2022)
- High availability of spare parts at short notice is essential for security of supply

Services

- Development of a logistics concept for the future storage of spare parts in temporary rental warehouses
- Creation of a functional tender
- Analysis and plausibility check of stock levels in SAP and breakdown into different product ranges with unclear data situation

Results

- Analysing SAP inventories and material flows
- Dimensioning of the various storage areas (long goods, heavy goods, small parts, pallets and pallet cages)
- Examination of different storage types and allocation according to access frequency
- Most important premise: 100 % availability
- Layout planning parallel to object search for short-term realization
- Tender for the technical warehouse equipment



Project description

Mainova AG operates several spare parts warehouses in the Rhine-Main region to ensure the security of supply of gas, electricity, district heating and water to the population. Due to the conversion of a Frankfurt coal-fired power plant into a modern gas-fired power plant, the existing warehouse had to be dismantled. However, in order to restore supplies at short notice in the event of an incident, all spare parts must be available in a central warehouse. A new building was out of the question due to the tight schedule. Rothbaum was therefore commissioned to plan two temporary rental warehouses and to invite tenders for the warehouse equipment (shelving and forklift technology).

Procedure

Rothbaum worked closely with the Mainova warehouse team to create a planning database with the relevant product range data. Numerous layouts were developed and detailed in joint workshops. The variants were then compared from a technical and economic perspective, the preferred variant was selected and the technical equipment was put out to tender.

Results

Together with the Mainova warehouse team, the master data of the stored goods was enriched and pragmatic assumptions were made in order to obtain a valid database.

Two storage facilities were planned with cantilever, pallet, shelf and floor storage, taking into account various planning assumptions: Floor load, size of the lift in the existing building, hall height, fire protection specifications, redundancy and reliability.

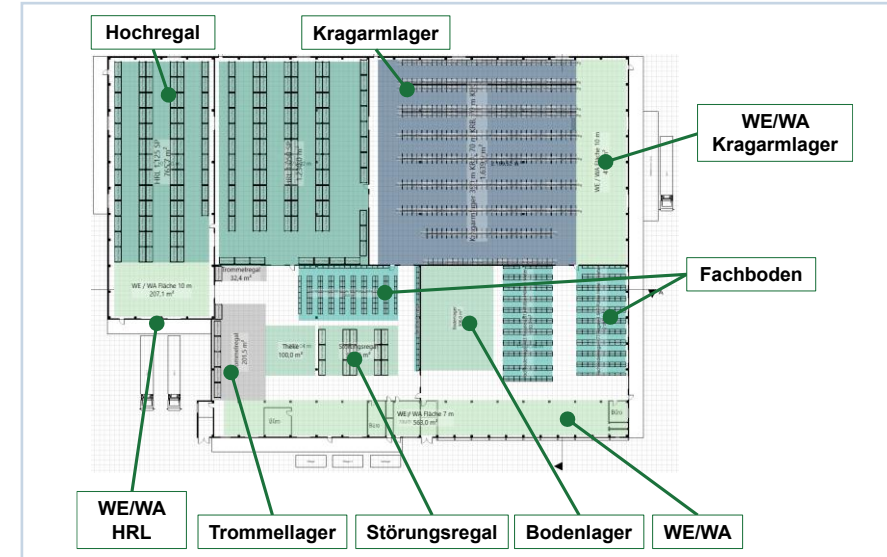
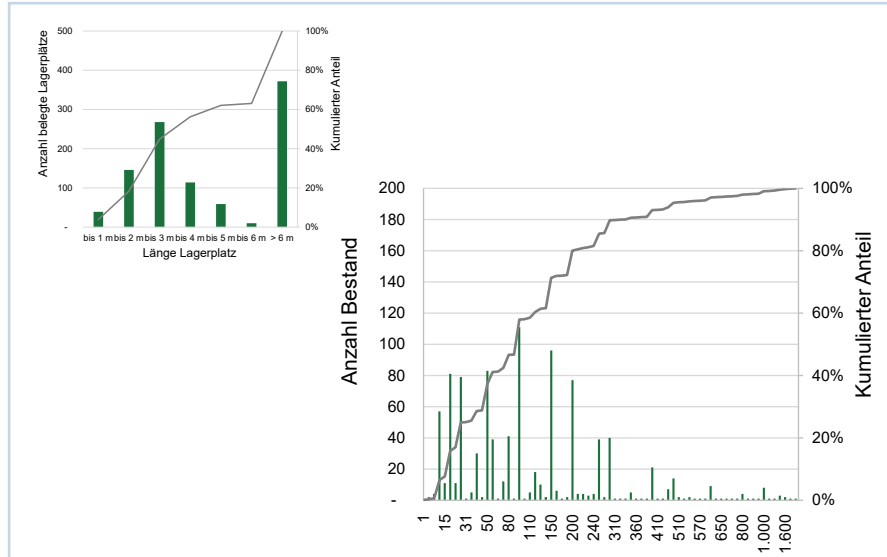
Based on the Mainova specifications, Rothbaum prepared a vendor-neutral tender for the logistics equipment and carried out a technical comparison of the bids received.

The warehouses were occupied in mid-2022 and the warehouse to be dismantled was handed over on time.

‘Thanks to Rothbaum's expertise in warehouse planning and project management, we were able to stabilise the tight schedule and use the project results for rapid implementation.’

Dr. Mark Jacquemin,
Head of Logistics Department

Exemplary insights



Analysis of the inventory with insufficient master data quality with regard to storage space requirements and weight requirements, division of the inventory according to responsiveness in the event of incidents

Parallel to the search for a rental property, the ideal layouts developed were adapted to various building requirements (e.g. floor load, fire protection, installation of shelving) and feasibility tests were carried out.

Preparation of a functional tender document for the technical equipment of the warehouses, neutral comparison of the offers and advice in the award decisions

100% availability of the stored goods in the event of a fault

Flexible and short-term warehouse planning parallel to the search for rental property - from project start to signing of rental agreement and allocation **< 3 months**

I look forward to your questions!



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