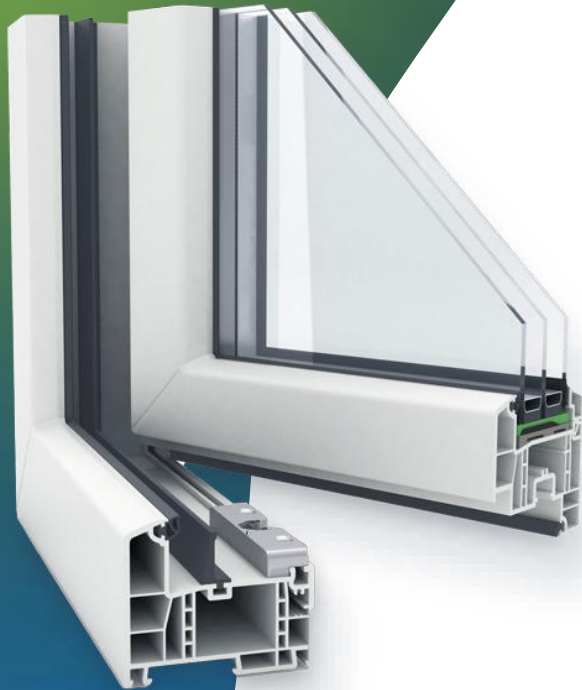




Network Design Network logistics

Structures and processes for cooperative reverse logistics for large load carriers within Europe





Cooperative Network for Efficient Reverse Logistics

The seven leading manufacturers of plastic window systems in the European industry association EPPA each operate their own logistics networks for the return of their large-capacity load carriers.

To sustainably reduce costs and CO₂ emissions, a cross-company collaborative network for reverse logistics was to be developed.

Rothbaum Consulting modeled the existing networks, developed cooperative structures and processes, and used supply chain design to conceptualize the optimal logistics network.

This made it possible to reliably demonstrate the potential of a joint network in terms of cost-effectiveness and sustainability.

Developing a Sustainable Integrated Logistics System

Challenge

The reverse logistics operations of the seven participating companies were characterized by their own multi-tiered networks. The goal was to harmonize structures and processes through greater cooperation and to design a network that was optimized for both economic efficiency and sustainability.

Implementation

Based on a comprehensive data analysis of the current state of affairs at seven companies, a simulation model was created. We then developed cooperative structures and processes, integrated them into the model, and determined the optimal setup for the logistics network as part of the supply chain design. Finally, we assessed the potential savings.

Results

The integrated network that has been developed lays the foundation for more efficient logistics through the shared use of transportation, warehousing, and transshipment capacities. This makes it possible to significantly reduce both logistics costs and CO₂ emissions.

14-25%

Reduction in Total Logistics Costs

bis 25%

Reduction of CO₂ emissions

0,4%

How closely the model
approximates reality

“

Rothbaum's methodical approach and analytical skills have decisively advanced our integrated logistics project.



Charlotte Röber
Managing Director
EPPA



Detailed Results

- To establish the network, Rothbaum developed a two-step implementation plan.
- In stage 1, the transports and consolidation locations are used cooperatively. Rothbaum defined new collection areas and transport modes for this purpose. In some cases, new routes were created. Significant savings can already be achieved in this first stage. As implementation can be carried out by reallocating existing resources, only minimal investment is required.
- In a second stage, new, dedicated network sites will be created at selected locations and integrated into the logistics network. This measure will create further synergy effects and significantly increase savings. The network can now be operated by a joint venture company.

The two-phase implementation plan enables the gradual development of an integrated network with minimal initial investment and lays the foundation for long-term synergies and cost savings.



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