



CASE STUDY 04

Intelligent Warehouse & Parts Logistics for a Commercial Vehicle Enterprise

Automotive / Spare Parts / Logistics

Warehouse Intelligence | AI Optimization

Business Challenge

A major commercial-vehicle organization manages approximately tens of thousands of different spare-part SKUs across warehouses. The inventory is extremely heterogeneous - from small components weighing a few kilograms to large components weighing several hundred kilograms, cartons, custom plastic containers, bare components and irregularly shaped parts - making conventional warehouse automation difficult to apply directly.

Solution

A warehouse-intelligence layer analyzes SKU dimensions, weight, packaging type, storage/picking frequency, dispatch destination, material compatibility, warehouse layout, loading sequence and carrier constraints, then recommends the most appropriate storage position, picking sequence, loading pattern and shipment configuration.

- Digital warehouse map
- SKU location intelligence
- Space-utilization analysis
- Pick-path optimization
- Loading-sequence recommendations
- Computer-vision assisted packaging validation
- Shipment and warehouse analytics

Solution Flow



Business Value

The objective is not simply to automate the warehouse, but to determine the most efficient combination of people, software, AI and selective physical automation for a highly complex spare-parts environment.

TECHNOLOGY

AI Optimization, Computer Vision, Warehouse Management Integration, Analytics Dashboard