

CASE STUDY

How a Leading Automotive Components Manufacturer Improved Warehouse Capacity and Outbound Delivery Performance with 3SC

+65%

Increase in inventory stored in HDR

94%

Outbound deliveries completed within 24 hours

+100%

Increase in mezzanine storage capacity from G+2 to G+4

100%

Traceability of all boxes and individual units within the warehouse

About the Client

The client is a leading global manufacturer of aftermarket automotive components, operating 40+ manufacturing plants and supplying major vehicle manufacturers worldwide, with a portfolio spanning across mechatronics, wiring harnesses, and EV systems.

Their engagement with 3SC focused on optimising warehouse storage utilisation, strengthening export inventory management, and enabling faster, more controlled outbound deliveries.

> We needed to make better use of our available warehouse space, improve SKU visibility, and strengthen the speed and control of export order fulfilment. The redesigned storage and packing processes helped us increase capacity and improve outbound delivery performance.
>
> **- Head of Warehouse Operations**

The Challenge

The key challenges included:

- Limited storage capacity for inventory
- Underutilisation of available vertical warehouse space
- Manual packing activities
- Manual weight capturing
- Manual packing-slip generation
- Limited visibility into packing and dispatch status
- Need to improve outbound delivery turnaround time

The Solution

Improving Warehouse Capacity, Packing Control, and Outbound Execution

3SC redesigned the warehouse storage and packing processes to improve capacity utilisation, automate critical dispatch activities, and enable more reliable outbound delivery execution.

1. Warehouse Storage Optimisation

The warehouse storage approach was redesigned to make better use of available vertical space. Mezzanine storage was expanded from G+2 to G+4, increasing storage capacity within the existing warehouse footprint.

2. HDR-Based Inventory Storage

Inventory storage was reorganised through HDR, enabling the client to store 65% more export inventory and improve space utilisation.

3. Smart Machine-Based Packing

The manual packing process was replaced with a smart machine-based workflow. This improved consistency in packing operations and reduced dependence on manual intervention.

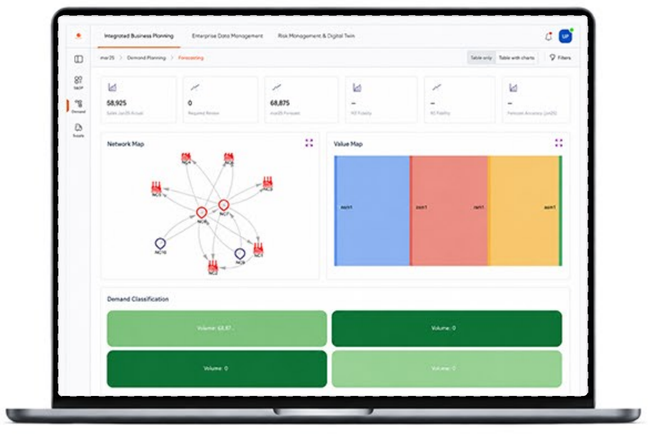
4. Automated Weight Capture and Packing Slips

Weight capture and packing-slip generation were automated to improve accuracy, reduce manual effort, and support faster order processing.

5. Packing and Dispatch Visibility

Video tracking was linked to each packing slip, helping teams verify packed items and reduce disputes related to missing items in the box.

Implementation Scope with 3SC



Warehouse storage and layout assessment

Mezzanine storage expansion from G+2 to G+4

HDR-based export inventory storage design

Smart machine-based packing process
- Automated weight capturing
- Auto-generated packing slips
- Video-link integration for each packing slip

Outbound dispatch process improvement

Why 3SC

3SC combined warehouse process redesign, storage optimisation, and practical automation to improve capacity and outbound performance. By strengthening space utilisation, packing workflows, and dispatch visibility, the engagement helped the client increase export inventory storage, reduce manual effort, and achieve faster, more controlled outbound deliveries.

