



Case Study

Streamlining Warehouse Operations with WareBee

Who Is the Client?

A renowned European automotive leader, known for its extensive operations in manufacturing and distribution. The facility in focus is a state-of-the-art distribution centre handling over 50,000 SKUs and 100,000+ storage locations. The warehouse handled a complex mix of fast-moving and slow-moving SKUs, serving both vehicle production with just-in-time parts delivery and the secondary market with replacement parts. While their processes were functional, inefficiencies led to increased costs, reduced throughput, and employee errors and fatigue.

How Did We Approach the Problem?

WareBee's approach focuses on creating actionable results backed by data. Combining digital twin technology with warehouse simulations, WareBee identified key operational bottlenecks and provided actionable solutions.

What Did We Find?

Replenishment and Location Optimisation

- Storage locations were incorrectly sized for demand, leading to frequent replenishment.
- A large SKU catalogue of over 50,000 items added complexity to slotting and replenishment. In addition to the complexity of managing a large item catalogue, there was a very high percentage of dead stock and slow movers that were ineffectively placed, further impacting operational efficiency.
- Similar SKUs that were placed together created picking errors due to their visual and physical similarities, leading to operational inefficiencies.



Ergonomics Challenges

Fast-moving items were stored at inconvenient heights, causing repetitive strain injuries and lowering picking efficiency. Picking routes required excessive walking.

Labour Challenges

- Workforce distribution failed to align with demand, resulting in overstaffing during slow periods and understaffing during peaks

Technology Gaps

- The WMS lacked advanced capabilities, forcing manual intervention.
- Excel and Power BI tools were limited, preventing accurate performance tracking and optimisation.



What Steps Did We Take?

- **Ergonomic Enhancements:** Reslotted fast-moving SKUs to waist-height shelves to minimise strain and improve picking speed.
- **Zoning High-Turnover SKUs:** Reorganised frequently picked items based on affinity analysis, minimising travel time and improving operational flow.
- **Dead Stock Reorganisation:** Relocated dead stock to upper and lower levels, freeing up prime picking zones.
- **Improved Replenishment:** Assigned larger locations for fast-moving items, ensuring efficient replenishment and minimising stockouts.
- **Continuous Slotting:** Leveraged WareBee's AI to enable continuous monitoring and weekly re-slotting when thresholds were met.
- **Automated Inventory Audits:** Integrated compliance policy monitoring, reducing manual effort by 90%.
- **What-If Simulations for Automation:** Ran simulations to evaluate options like vertical lifts, ensuring the best-fit solutions for automation based on cost, ROI, and operational impact, for both existing and the future.

What Were the Results?

WareBee's holistic approach delivered measurable improvements within six months.

- **Performance Gains:** Picking time reduced by 13%, enabling faster order processing, with picking productivity improved by an additional 8.3 lines/hour.
- **Cost Savings:** Labour costs decreased by 15%, with significant savings from better utilisation of storage space.
- Picking distance was reduced by 42% through improved slotting, further enhancing operational efficiency, while preserving order demand correlation.
- **Enhanced Ergonomics:** Employee injuries related to repetitive strain dropped by 20%, boosting morale and productivity.
- **Optimised Space Utilisation:** Increased storage utilisation by 9%, accommodating future growth without expanding the warehouse footprint.
- **Improved Visibility:** Enhanced data insights and monitoring tools provided real-time visibility into warehouse operations, enabling proactive decision-making and performance tracking

Why WareBee?

WareBee empowers businesses to keep their warehouses "fit" for the future through continuous improvement, data-driven insights, and advanced optimisation tools. By balancing quick wins with long-term strategic initiatives, WareBee ensures the warehouse remains agile and operationally excellent in an ever-changing industry landscape.