Tackling Warehouse Challenges with Artificial Intelligence

Did You Know?

Surging Package Returns

UPS processed **1.9 million** holiday gift package returns in a peak day. The number has more than tripled since 2012.

Damaged Deliveries

As much as **11%** of unit loads arriving at a distribution center have some level of case damage, with the average figure around **2%.**

Material Handling Errors

Misplaced incoming inventory increases picking and order fulfillment time, and risk to the security and integrity of goods.

Costly Picking Errors

Studies show a single picking error can reduce the profitability of an order by as much as **13%.**

High Labor Costs

Up to **70%** of pickers' time can be consumed by travel, which hits the bottom line considering labor is one of the highest costs.

Workplace Accidents

More than **11%** of all forklifts will be involved in some type of accident each year in the U.S.

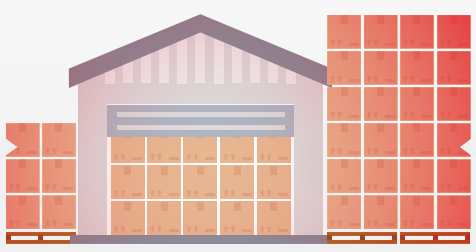


Escalating Warehouse Challenges

Warehouses are stretched to their limits thanks to booming e-commerce orders and shorter delivery times. Transfer, distribution, and fulfillment centers are struggling to keep up with accelerating demand without sacrificing accuracy and productivity. It's time to consider logistics solutions based on artificial intelligence (AI) technologies to help you scale up operations capacity, improve operational efficiency, and ensure workplace safety.

Pressure from the demand side



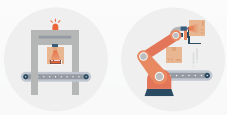


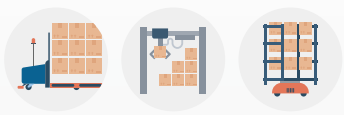
WAREHOUSES ARE UNDER STRESS!!!

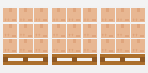
Pressure from the supply side



Improving Warehouse Processes with AI





Warehouse Processes	Goods Detection, Inspection, Identification AI-Based Vision Systems Robotics systems use AI to detect, identify, and select items on conveyors, as well as validate the integrity and quantity of incoming goods.	Material Handling AI-Based Navigation Systems Autonomous forklifts and AMRs use AI for simultaneous location and mapping (SLAM), and collision avoidance to transport goods.
 **Unloading & Receiving**	Automatically detect damaged deliveries Identify and count received items Inspect package returns for missing items	Unload goods from trucks to the receiving area
 **Sorting**	Sort goods based on purchase order, product types or size, or part numbers	Transport goods to the correct shipping docks to increase inventory turnover
 **Putaway & Replenishment**	Read labels, measure dimensions, and sort packages	Put goods in correct locations to minimize material handling errors
 **Picking & Packing**	Perform quality checks Verify packed goods against packing list to lower returns and picking errors	Lower picker travel time with automated material handling Palletize shipping packages to increase efficiency
 **Shipping**	Alert when workers are not wearing the proper personal protective equipment	Load trucks with autonomous robots Reduce forklift accidents

Contact ADLINK to learn more about developing AI-based logistics solutions

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