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Artificial Intelligence: DHL algorithm makes e-fulfillment more effective

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The COVID crisis has resulted in steadily growing online sales. Especially online orders of everyday staples, such as food, medicines and other drugstore products, are higher today than before the pandemic. The trend poses challenges for retailers worldwide. In many cases, orders have increased, but the size of shipments is smaller. New and more diversified product ranges means more stock keeping units for online retailers. Moreover, end customers expect fast, sometimes even same-day delivery with high transparency and traceability.

To meet these challenging e-commerce needs, DHL Supply Chain - market leader in contract logistics and part of Deutsche Post DHL Group - is increasingly relying on intelligent, IT-based forecasting and analysis tools to optimize warehousing and processing of online orders for major e-sellers.

"The COVID crisis has shown us that unforeseen volume fluctuations for individual products can put enormous stress on supply chains. Lack of clarity regarding stock levels and incorrect data on availability can lead to bottlenecks for individual products and then delays in delivering to end customers," explains Markus Voss, CIO & COO at DHL Supply Chain. "We are working with our customers - large online stores and retail companies - on more stress-resilient, reliable algorithms and tools to better anticipate demand fluctuations, optimize the allocation of manpower and thereby accelerate the throughput of goods and order cycles."

"Our IDEA analysis tool is one of our many answers to these e-commerce challenges," says Dietmar Steins, EVP Solutions Design at DHL Supply Chain. "With its algorithm, this 'artificial intelligence' solution helps optimize picking routes within the warehouse. Orders are also clustered logically, which helps optimize picking by our colleagues in the warehouses. The integrated, intelligent task planning can also optimize workload distribution for warehouse staff and help prioritize more time-critical shipments. Moreover, IDEA reduces error rates as well as the time required for employee training."

Overall, the IDEA algorithm can significantly improve order-picking processes in DHL-operated warehouses. The costs involved are comparatively low since the software, developed by DHL, is compatible

with most traditional warehouse management systems and can be integrated easily into existing IT infrastructure. In its first commercial deployments, the solution has reduced distance traveled by warehouse employees by up to 50% and increased productivity of individual DHL locations by up to 30%.

DHL Supply Chain developed and designed the IDEA software solution specifically for use in e-fulfillment warehouses. The contract logistic specialist employs a dedicated team of some 350 developers, engineers and solutions designers to develop and optimize warehouse logistics processes on behalf of its clients.

Source: Deutsche Post DHL

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