

Logistics efficiency driven by Digital Twins

Digital Twins are imminent allies of Artificial Intelligence and the Internet of Things. Thanks to these tools it is possible to create a digital replica of some type, object, project, or physical representation to perform tests and reduce mistakes.



Logistics is at a point of inflection with the arrival of the Digital Twins. These virtual representations of physical systems and processes are revolutionizing the way companies manage their logistics operations, enabling more precise planning, more informed decision-making, and continuous optimization.

Learn more about this important technology that is strongly driving the logistics sector!

What does it mean to work with Digital Twins?

Let's focus on the current context, where there are many challenges in finding specialists, there is a material shortage, and sociopolitical conflicts are the order of the day; based on this, it is complex to project and creates standardized processes. To counteract this constant, we can ally ourselves with Digital Twins, which will help us test several production line solutions, replicating the real scenery.

According with Plain Concepts, integrating this technology in logistics sector we found the following benefits:

- **Predictive analysis:** By integrating this tool, companies can anticipate problems, optimize operations, and improve their decision-making. By being anchored in data, digital twins equip corporations to prevent maintenance needs, material shortages, and even demand fluctuations.
- **Real-time visualization:** Digital Twins are so successful since they take the information that is captured by IoT sensors. With this, any possible failure can be resolved, improving the efficiency of the operation.
- **Inventory management:** Is it possible for Digital Twins to improve inventory management by knowing the status, location, and movement of each product in real-time? Yes, it is a reality since you work with the data extracted from the visualization in real-time, by creating a digital twin of a warehouse, it is possible to monitor variables such as location, the quantity of product stock, and environmental conditions, among others.

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According to IoT Analytics Research 2023, the digital twin market is expanding, with a projected compound annual growth rate of 30% between 2023 and 2027.

And although many people compare Digital Twins with Simulation, it is essential to clarify that they are different things. According to IBM, the difference between a Digital Twin and a Simulation is largely a matter of scale; while a simulation typically studies a particular process, a digital twin can run on its own any number of simulations useful for studying multiple processes.

The future of Digital Twins is basically limitless because they learn more skills and surpass their abilities every day. They represent an evolution for the logistics sector, where companies will be able to improve their precision and customize each stage, without significant risks at an operational and financial level.

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