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Dough pieces, tomatoes and frozen food together on the move

Dough pieces, tomatoes or frozen goods each have different cooling requirements. Nevertheless, these foods are transported safely to the store in the same truck. Costly refrigerator trucks are a thing of the past. A smart tracker reports the position and status of the load to the ↗ cloud via Deutsche Telekom's network. It ensures efficient logistics planning. It optimizes inventory management of the insulated containers. What is more, it cuts fuel and fleet costs.

Lettuce gone brown? Fish smelling fishy? Not a trace of it! In the supermarket, customers always find fresh food. Sophisticated logistics processes guarantee this. With the tracking solution from 4smartlogistics GmbH, fresh and frozen goods can be monitored automatically in the insulated containers. End-to-end, 4smartlogistics customers can track all types of goods and loading containers throughout Europe: Location, temperature and vibrations are reported via the cloud to a web platform. This allows to detect deviations on the way to the supermarket and take appropriate measures. Thanks to tracking, the cold chain remains transparent from loading to delivery. Compliance with hygiene and safety regulations can be verified. So, expensive special refrigerator trucks are a thing of the past. The more flexible use of the vehicle fleet and containers reduces empty runs. This cuts fuel consumption and costs. 4smartlogistics offers the smart trackers as a partner solution via the sales network of Deutsche Telekom.

Fewer errors thanks to streamlined processes

4smartlogististics has specialized in tracking non-powered assets, even from within buildings. Where is the truck with the carriers and pallets? Is the cold chain unbroken or has it been interrupted? When has a critical temperature been reached, how long was that? Were there strong vibrations? Are the goods damaged? Do I have to get replacement goods and notify the insurance company? Have the goods been delivered? Can the billing be done? Has the load carrier returned? Can it be cleaned? "Customers who use the 4smartlogistics end-to-end solution for goods condition monitoring always know the location and condition of their goods. They eliminate the causes of errors, streamline processes and can prove and improve their quality," explains Franz Lesch, CEO of 4smartlogistics.

"Added value for the customer"

The system is based on the trackers of Deutsche Telekom's partner SLOC GmbH. Thanks to the software adapted particularly to 4smartlogistics' needs, the devices can be customized to meet individual requirements. "The deployment of this end-to-end solution is a good example of what we mean when we talk about the IoT ecosystem", explains Rami Avidan, CEO of Deutsche Telekom IoT GmbH. "It is the ability to work with partners and customers to create better solutions. This is how we really hit the value that the customers are looking for. Our IoT Hub as the new infrastructure for all players in the world of IoT will be perfect for collaboration".

No own infrastructure required

Thanks to built-in sensor technology, the tracker uses movements and temperature curves to detect which process it is in. Depending on the process step, it jumps to the respective tracking logic for frozen food or meat as well as lettuce. The logic is predefined and configurable. It transmits the DIN-compliant data collected via the 2G or the machine and sensor network of Deutsche Telekom (NarrowBand IoT, NB-IoT). The NB-IoT radio technology standard has been specially developed for applications in the ↗Internet of Things. It uses the public network, no need to build one's own infrastructure. With NB-IoT, locating and transmitting data from buildings is no problem. NB-IoT is very energy-efficient allowing a runtime of up to three years in combination with the SLOC devices. With the recent expansion of its partner network, Deutsche Telekom can offer NB-IoT in 18 European countries being crucial for international goods traffic. Mobile ↗IP ↗VPN, i.e. a closed user group within the mobile communications network, ensures a secure connection to the private corporate network. This secure channel uses the Internet to transmit data.

Scalable solution

The solution is scalable: More than 10,000 trackers can be connected per cell. The 4smartlogistics cloud platform can boot up much more. The trackers have their own power supply. Interfaces enable connection to existing customer systems (ERP). The tracking principle works for all load carriers and goods. Even expensive special load carriers used in the automotive industry can be controlled more easily.

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