SUCCESS STORY

HOW LIDL OPTIMISES ITS PALLET FLEET LOGISTICS WITH IOT

While the year 2020 was catastrophic in most sectors due to the pandemic, the major supermarket chains saw their sales skyrocket. Driven by food purchases, sales have indeed increased by 8.3% in total (source: Kantar Institute). This situation underlined the **essential nature of the pallet as a logistical asset.**

Managing a fleet of pallets can lead to additional logistics costs: **losses, speed of rotation, clandestine exchanges, etc.** With a view to economic and ecological optimisation, Lidl France has set up a **logistics visibility project for its pallet and forklift fleet.**

KEY FIGURES

25 regional offices
More than 1500 supermarkets throughout France
Each warehouse supplies 60 shops on average

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After 6 months of use, the relevance of the solution has been proven. Everysens stood out not only for its solution but also for its quick understanding of our needs.
Jean-Roch Salançon, Head of the Environment Department - LIDL France.

The implementation of a proactive monitoring of our material was essential. Everysens' packaging visibility solution appeared to be the most complete on the market thanks to their mastery of IoT intelligence.

Ayoub Benzaida, Logistics Project Manager - LIDL France.

Why a visibility project at Lidl?

Pallets: illegally traded load supports

By implementing a pallet flow visibility project, Lidl's objective is to identify trends and areas of illegal trade or resale, to be alerted when entering critical areas, and thus to **minimise pallet loss.**

Europe's largest food retailer uses pallets to deliver products to shops from the warehouse of each regional branch. After unloading, the pallets are returned to the warehouse, where they are collected by the carrier for resale, thus extending their life.

For environmental reasons, Lidl has decided to use only **wooden pallets**. The lifespan of these pallets (7 to 10 years) and their energy recovery at the end of their life make them load carriers with a limited carbon footprint.

However, the resale market for wooden pallets is very dynamic. This easily exchangeable status causes **irregularities in the return flows** (from shops to warehouses). Illegal exchanges can take place and the pallets quickly end up abroad or on other companies' premises.

These losses and abnormal flows represent a **financial loss** for Lidl, but may also reflect malicious intent on the part of the partner carriers involved.

## Forklifts: expensive and strategic equipments

When talking about pallets, we can not ignore forklifts! At Lidl, this equipment belongs to the regional offices warehouses, but it can sometimes be lost or stolen.

Forklifts are both costly (around €4,000) and strategic: **without them, pallets cannot be moved.** Losses of pallet trucks are therefore particularly critical.

The Regional Directions are aware of this, and are pushing for **more visibility on this equipment.**

Their objectives are to monitor the inventory, retentions and rotations, to be alerted in the event of downtime, and thus to **manage the pallet truck fleet more efficiently.**
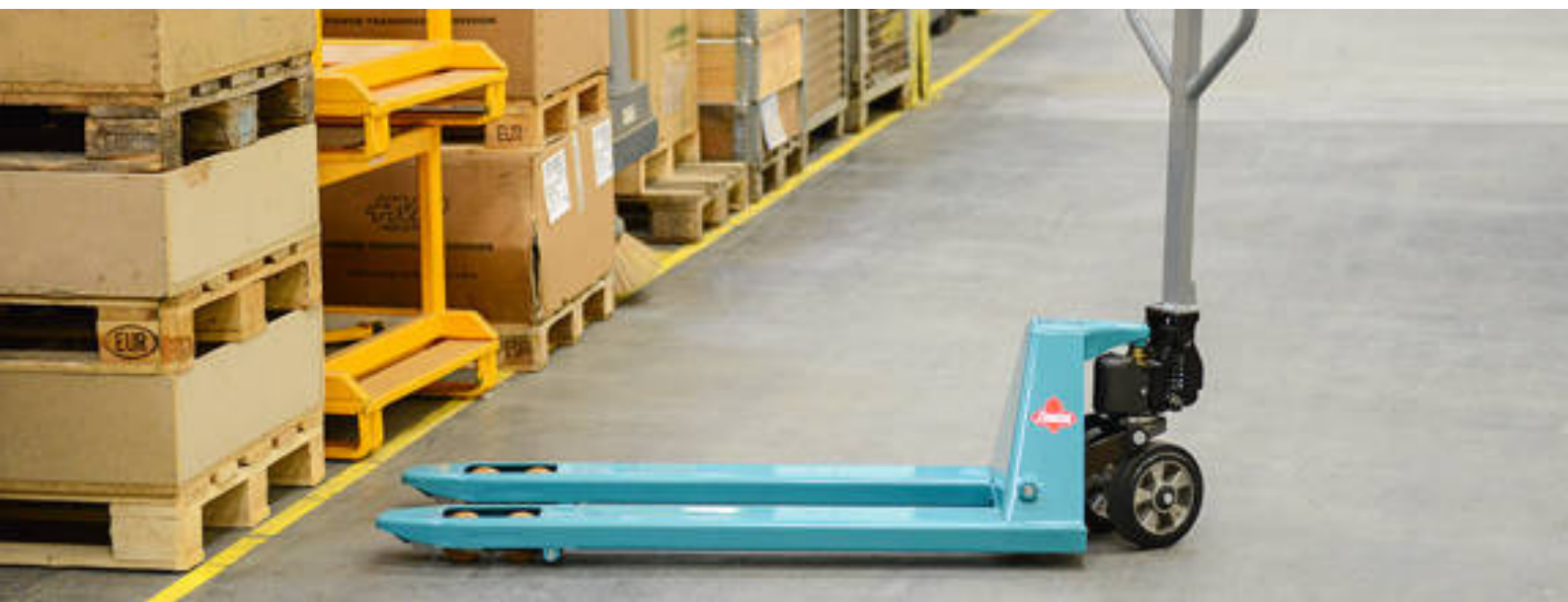
The choice of a double expertise : logistics and IoT

At the beginning of 2020, Lidl carried out a pilot phase with Everysens on its **Packaging Visibility solution**. The IoT technology was then validated for pallet tracking, and the software solution confirmed as relevant for detecting losses and measuring rotations and retentions.

Lidl then chose to switch to a contract model, in order to validate their logistical hypotheses concerning flow anomalies on pallets and forklifts.

A "test" approach adapted to Lidl's needs

With this packaging visibility project, Lidl France wishes above all to identify anomalies and monitor the performance of a fleet. Everysens provides Lidl with a fleet of sensors that can then be used to **validate hypotheses on the equipment of their choice**. The objective is not to equip the entire fleet. This 'test' approach is what makes the project so special.

How does such an approach work in practice? Everysens stores Lidl's sensors on its premises and sends them on request to the regional offices of their choice. The pallets and pallet trucks are often indoors. This was the reason for choosing sensors with wifi-based geolocation.

Proactively monitoring the use of reusable materials

Thanks to the data sent back in real time from the sensors, Everysens solution detects all of Lidl's **recurring hazards**, whether it is in terms of rotation time per shop or equipment immobilisation, without equipping the entire fleet.

Alerts are also programmed to warn about losses, entries into critical areas and downtime in real time. In the event of downtime, the company makes the parties concerned accountable.

A **behaviour history of materials is drawn up**, enabling Lidl to analyse the behaviour of its flows effortlessly. Everysens' solution calculates directly the number and duration of retentions and rotations carried out.

On the platform, Lidl has a **complete analysis solution** to identify areas for optimisation. Lidl can, for example, understand the waiting phases and where they occur (recurrent misuse, shop responsibilities, etc.). The data can therefore be used quickly to optimise its logistics and the use of its fleet.

Why Everysens ?

Managing the complexity of IoT technologies

Selecting the right sensor

On the complex market of IoT sensors, how do you choose the one that best fits your use cases? The selection of the sensor requires a good knowledge of the IoT networks and the business needs for which it will be used. Everysens advised Lidl on the choice of an external sensor: **a small, inexpensive, autonomous sensor** that geolocates thanks to WiFi networks.

Configuring the sensors according to the use case

Everysens' mastery of IoT, particularly the associated wifi networks, enabled us to advise Lidl on the **best configuration** for a given case. Thus, Lidl benefits from a personalized remote parameter setting. Everysens controls the frequency of the sensors' transmission to adapt to the different cases of use and thus test different hypotheses.

Making the data reliable

To make the raw data from the sensors more reliable, Everysens has implemented various **data cleaning algorithms**. Informed decisions require reliable data. Finally, Everysens monitors Lidl's sensor fleet on a daily basis: technical alerts, sensor life span, redundant messages, reboots, etc.

ZOOM

5 weeks to deploy the solution, stopwatch in hand!

On the project management side, Lidl has a logistics expert dedicated to the account: he monitors the sensors and their statistics. He also manages the deployment of the solution.

In 5 weeks, all the sensors were installed. In 1 week, the software solution was delivered, fully configured and the users trained. Every 6 months, Everysens reviews with Lidl its satisfaction and ROI on the project.

6 months of use: what are the impacts?

Several suspected dealers identified

The illegal exchange of pallets represents a financial loss for Lidl and can derail its transport plan.

Thanks to the tracking of the pallets, several suspect resellers were identified. Lidl was also able to verify the passage of certain pallets and pallet trucks through one or more of these retailers.

Measuring pallet rotations time

Lidl wants to know the rotation time of the pallets to answer several questions. Are the pallets within the theoretical transport time? Which shops keep pallets longer than average? The shorter the pallet rotation time, the more goods Lidl will be able to transport, thus optimising its transport costs. Thanks to Everysens' Packaging Visibility solution, Lidl detects full rotations, identifies trends, and knows the average round trip time of materials.

Detecting forklift retentions

The solution enables the precise tracking of pallet trucks and thus tracks potential retentions of this expensive equipment.

Since the implementation, 975 full rotations have been detected, with an average retention time of 0.22 days. 17 shops where the rotations are much longer than the average duration have been made aware of the issue. Lidl manages its fleet more efficiently and avoids unnecessary renewals.

Discover Everysens

Everysens offers an automatic control and analysis software designed for tracking load carriers. Detect anomalies in real time (immobilisation, transport plan, rotation time). Track the performance of your equipment in a granular, reliable and effortless way. Balance your fleet to reduce indirect transport costs due to shortages.

Visit everysens.com to schedule your demo.