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4,000 vehicles, maximum uptime: how DHL eCommerce keeps its fleet running

Case Study | DHL eCommerce

Managing availability in an electric fleet

DHL eCommerce delivers large volumes of parcels and pallets across the Benelux every day, to both business and private addresses. More than 10,000 drivers are on the road in the Netherlands and Belgium daily, operating a fleet of over 4,000 vehicles to ensure deliveries reach customers on time. In the last mile, more than 90 per cent of the fleet is now electric.

This electrification has changed the dynamics of the operation. Vehicle availability is no longer only about planning and maintenance, but also about battery capacity, charging infrastructure and the timing between different shifts.

At the same time, the operation grew rapidly. During the Covid period, parcel volumes doubled and that growth continued in the years that followed. More parcels meant more routes, more vehicles and ultimately an expansion of the fleet.

In such an environment, everything comes down to one key question: are all vehicles ready to drive tomorrow?

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Fleet details

Sector:	**Parcel delivery and pallet logistics**
Region:	**Benelux**
Vehicle types:	**Vans, box trucks, tractor-trailers, terminal tractors and passenger vehicles**
Fleet size:	**More than 4,000 vehicles (>90% electric in the last mile)**
Team:	**12 fleet specialists**

The challenge

Gaining insight into vehicle availability

With 132 CityHubs handling last mile delivery in the Netherlands and more than 20 larger facilities across the Benelux, the fleet is highly decentralised. Each CityHub has its own volumes, routines and charging situation. What works well in one location may not automatically work in another.

Availability therefore goes beyond a simple planning overview. It means knowing in real time:

- Which vehicles are ready to operate
- Which vehicles need to charge or top up
- Which vehicles are at a maintenance partner or need to go there

The first step towards a solution was clear: gaining insight into the vehicles' current state of charge. How much battery capacity does a vehicle still have after completing a route? In an operation with multiple shifts per day and changing drivers, battery status determines whether a vehicle can continue operating directly or needs to be charged first. Without that insight, planning quickly becomes based on assumptions.

"We needed a complete overview. Our routes are relatively short, but the usage is intensive and varies by location. In that situation, you need facts. We wanted to see in advance what was happening, how much capacity remained, where vehicles needed to charge and which vehicles could still take on an additional route," says Lucia Kleiman, Fleet Manager DHL eCommerce Benelux.

The implementation

From insight to structural control

Moove did not start with technology, but with the operation itself. How is the fleet structured? Which vehicles operate where? How is planning organised per CityHub? Where do bottlenecks occur? Only once the picture was clear was the platform configured.

The core was the creation of a single, up-to-date overview of the entire fleet. Battery status, vehicle location and maintenance signals were brought together in a single environment. Each CityHub gained insight into its own vehicles, while the central fleet team gained oversight across all 132 locations. Availability became visible, measurable, and directly integrated into daily decision-making.

According to Kleiman, this is where the real value lies. “Our processes were the starting point. Moove first looked at how we work and adapted the system accordingly. That meant it immediately aligned with our daily operation.”

Availability in practice

The new daily operation

With real-time insight into battery status, planning shifts from assumptions to informed decisions. The fleet team can immediately see which vehicles have sufficient capacity for the next route, which need to top up during the day and which must charge first.

The value quickly became clear after implementation. During the rollout, a CityHub manager noticed one evening that vehicles were not charging due to a power outage. In another case, vehicles were available but had simply not been connected to the charger. In both situations, action could be taken immediately.

"Without that insight, forty vehicles would have been standing still the next morning. That immediately creates a problem in the operation," Kleiman explains.

Smarter use of fleet capacity

Charging is only part of the story. Fault codes and maintenance signals now show early signs of wear, dropping tyre pressure or upcoming maintenance. The system also highlights vehicles that remain at a maintenance partner longer than planned. This allows the fleet team to intervene earlier, combine maintenance activities and actively manage turnaround times.

At the same time, the team can steer more effectively on actual vehicle utilisation. By analysing usage and idle time, it becomes clear where capacity remains structurally underused and where shortages occur. This enables targeted redistribution of vehicles between CityHubs and prevents unnecessary additions to the fleet.

"With 4,000 vehicles, you simply cannot afford to react afterwards. You need to know what is happening in your operation. Technology helps us do that, but only when it fits the way we work. That is when insight becomes something you can truly rely on," Kleiman says.

The role of Moove

Thinking along with the operation

Once the solution and the insights became part of daily operations, the collaboration also evolved. The conversation is no longer only about data, but about improvement. About organising utilisation more intelligently, planning maintenance more effectively and preventing downtime instead of reacting to it. Kleiman emphasises that this way of working makes the difference.

"What stands out to me is that Moove has been thinking along with us from the start. Not only technically, but operationally. What do we need to steer the fleet better? From that question, the solution keeps evolving."

Moove therefore provides more than insight alone. It acts as a partner in fleet performance. Not an additional dashboard, but a partner that understands how DHL eCommerce operates and makes decisions.

Looking ahead

The next step focuses on deeper integration. DHL eCommerce is working on connecting vehicle data directly to its internal systems. Through API integrations, insights will become available automatically within the existing working environment of CityHubs and operational teams.

This means less manual work, faster follow-up and greater consistency in decision-making. Insight becomes part of the daily workflow rather than a separate platform.

Safer driving, less downtime

Safety has also become an increasingly important focus. With more vehicles on the road and growing volumes, the responsibility to ensure drivers operate safely and return home safely at the end of the day continues to increase.

With that in mind, DHL eCommerce is exploring the use of the MooveDriver app. The app supports drivers with targeted feedback on their driving behaviour and translates data into practical insights. Safe driving is actively supported in day-to-day operations.

This focus on safety also has a direct operational impact. Fewer accidents and incidents mean fewer vehicles taken out of service, fewer route disruptions, and less pressure on replacement vehicles.

“We mainly want to support our drivers, not control them. When you provide feedback on driving behaviour in a positive way, it can contribute to safer driving and fewer damages,” Kleiman concludes.

For DHL eCommerce, it ultimately comes down to predictability in an increasingly complex operation. With real-time insight into battery status, maintenance and driving behaviour, vehicle availability is no longer a matter of chance, but something the organisation can actively manage every day.

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