

Cold chain IoT solutions: last mile delivery optimization for Amazon and Carrefour

⚠️ Challenge

Transcorp International is a leading provider of cold chain IoT solutions across the UAE. It works with the temperature-controlled last-mile-delivery programs backed by cutting-edge technology. Transcorp handles 15,000 deliveries per day across the UAE using 252 vehicles, working 24 hours a day, 7 days a week and is chosen by global companies such as Amazon and Carrefour.

The company was looking to adjust its operations and visualize what was happening on the ground to take corrective actions. Its previous experience with telematics and IoT fleet management software was ineffective. The new solution required advanced visibility over the fleet.

- Before, fuel control was carried out manually.
- Their preventive maintenance relied solely on the drivers' memory.
- The routes were created only according to a specific zone without taking into account the optimization of space and fuel.
- Drivers used random vehicles from the company's fleet.
- The temperature was measured offline, and actions were taken only later when the items were already delivered.

There was a real need for a set of robust cold chain IoT solutions that would help the company to:

- optimize fuel consumption management;
- maintain temperature and humidity for deliveries;
- revise the delivery routes considering essential parameters;
- authorize vehicle usage for specific drivers within specific time windows;
- share the delivery's live location with the end customer and delivery status with third parties at the end of the day;
- get notifications for any route or temperature deviation;
- send an SOS alert in case of emergency.

🔗 Solution

Transcorp turned to [MaliaTec](#), a leading enterprise solution provider from Beirut, Lebanon.

Hardware

As any IoT project starts with data, the vehicles should be equipped with devices to collect and transmit it to the client. MaliaTec installed and connected a range of devices, such as:

- GPS tracking devices, [Teltonika FMCI30](#) among them;
- mobile DVR units, [Hero-ME31-08](#) among them;
- temperature and humidity sensors;
- engine blocks;
- driver ID readers;
- analog fuel readers.

Software

To collect and display the data from the devices, MaliaTec used [Wialon, the GPS tracking system](#), in its full capacity, including features for maintenance management, logistics, video telematics, and many more. Also, MaliaTrack route optimization solution was employed for the project to improve the company's cold chain logistics management.



Transcorp claims to offer visibility and flexibility to its end-users, and first, they needed a cold chain IoT solution to get full control of their fleet

The combination of multiple solution features and heavy data flow from the vehicles provided a huge data set and tools for the customer:

- Sensolator, graphs, and reports help **track and manage fuel consumption** and digitize the process.
- Reports, alerts/notifications, and Sensolator allow for **maintaining an accurate and correct temperature and humidity for the deliveries**. If there's a deviation from the nominal numbers, dispatchers and drivers can act immediately to prevent or shorten transportation under incorrect conditions;
- Reports are also used for **sharing delivery status** with third parties every end of the day. End-users get a Locator link to **see and track the delivery drivers**, which makes the process of ordering goods more transparent for all parties.
- Alerts and notifications allow for **getting a SOS signal** when needed.
- The company now **optimizes their delivery routes** with the help of the software.
- Video telematics and Eco Driving features help **track, assess and improve driver behavior**.
- Preventive maintenance of vehicles is now automated and digitized.
- Features for working with drivers and geofences allow to authorize vehicle use for specific drivers within specific time windows.

Maliattec provided training for end-users and responsible staff, and offers 24/7 support to make sure that the cold chain IoT solution performs effectively in the long run.

🏆 Results

The implemented cold chain and IoT management solution allowed the company to optimize their deliveries, automate and digitize processes, and offer transparent and high-quality services to their clients.

✔️ Increased success rate

The company has achieved an average success ratio of 98.2% for guaranteed next day deliveries, while the industry standard rate is 70%. Transcorp is offering 15,000 in-time deliveries a day.

✔️ Optimized waiting time

The company has narrowed down the waiting time, being able to increase the delivery windows to 4 per day. This indicator is very high in terms of cold chain logistics management, as the industry standard is 2 windows.

✔️ Zero road accidents

There have been no traffic accidents on the roads in the past 5 months since the implementation of this IoT cold chain solution with a feature of [driver behavior tracking](#).

✔️ Mileage reduction

The reduction of 6.2% driving kilometers per month was achieved with the same number of orders and deliveries. Less mileage means less fuel consumption and scheduled maintenance.

✔️ 4% reduction in delivery time

Thanks to the delivery route management software added to the project, the goods are now delivered faster.

✔️ Market leadership

The company now is a market leader in cold chain deliveries thanks to the results and quality they are offering to businesses. This opens new opportunities, further scaling and increased revenue for the company.

Company profile

🏆 **IoT project of the year nomination:** Cold chain transportation

Country: United Arab Emirates (UAE)

Industry: Local deliveries

Solutions

 Wialon

Hardware

 Teltonika FMCI30

 Hero-ME31-08

[Read more case studies](#)

[Get started](#)

Follow us

