

IoT system with BLE technology for fleet management of large international carrier

Challenge

GLOBALTRUCK is a large road freight carrier. Its trucks are 3 years old on average, making its fleet one of the youngest in the industry.

However, a fleet as large as this required addressing serious problems related to its control and tracking:

- 5 operating companies do business under Globaltruck's supervision, and they had no single solution for transport monitoring until recently. Instead, several applications from different manufacturers were used at the same time.
- A similar situation occurred with monitoring hardware, too. Devices of different brands and configurations were used for the same tasks.
- It was impossible to get all CAN parameters required for the analysis from VOLVO FH, MAN TGS, and SCANIA trucks.
- No GPS monitoring was available for curtain-sided semi-trailers. In particular, door conditions could not be tracked.
- It was impossible to monitor door conditions on semi-trailers remotely. Similarly, temperature and humidity could not be controlled on various spots of refrigerator containers.

The company needed a solution that would unite multiple parameter control for vehicles, a universal telematics equipment stock, and an option of monitoring hundreds of various vehicles using a single software application.

Solution

Tesla Smart developed a solution that met Globaltruck's requirements:

- Tesla Smart's specialists unified GPS hardware protocols to connect them to a single platform, Wialon Hosting. They used Wialon IPS, Wialon Combine, and Wialon Retranslator for this.
- They integrated the platform with 1C and configured retranslators to transmit data to external software, such as Metro, X5, Magnit, Ozon, and others.
- For all 5 operating companies, a central purchase of IoT equipment was arranged under special favorable terms.
- Trucks and curtain-sided semi-trailers were equipped with monitoring terminals having an option of CAN bus data reading.
- Internally developed wireless sensors TESLiOT 4 in 1 were installed on the doors of the curtain-sided and refrigerator semi-trailers. The devices read multiple parameters, such as temperature, humidity, brightness, and so on. That is why they are used both as door open/close sensors and as monitoring sensors for parameters inside semi-trailers.

Additionally, Tesla Smart tested and prepared kits that could be installed with an option of vehicle dispatch immediately after that. The kit included a GPS terminal for the cabin with a connection through an OBD port or cigar lighter and a sensor with a magnet or clamp-band fixation for the refrigerator body. Such kits make it possible to work with rented refrigerators where you cannot install your own equipment as usual.

All the equipment collects data on the vehicle location and condition of semi-trailers and sends it to Wialon Hosting. There, many parameters of the fleet condition can be monitored, from online data related to current trips to the analysis for all the company's vehicles.

Results

Through the efforts of Tesla Smart's specialists, Globaltruck can now use a single monitoring platform, obtain more data on their fleet, and be sure that their cargo transported in curtain-sided trailers and refrigerators will be safe. 2,500 vehicles are under the control of the solution.

Cargo safety

The customer can control the opening and closing of the doors in curtain-sided trailers and refrigerators, and monitor the temperature and humidity remotely.

Lower maintenance costs

Maintenance of single-type hardware is simpler and cheaper.

Unification

The single monitoring platform and single-type equipment facilitate the monitoring of a large fleet.

Data access

Now, the customer can obtain all the CAN data they need.

Company profile

IoT project of the year nomination: Long-haul shipping

Industry: Long-haul transportation

Solutions

Wialon

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