



Fuel monitoring system for vessels using Wialon

Challenge

The client is a company that operates in the maritime shipping industry. It has faced the challenge of inefficient boat fuel management. The lack of a comprehensive fuel monitoring system for vessels led to suboptimal fuel consumption and, as a result, increased operational costs. To solve this problem, the company contacted Geoservice, the experienced telematics service provider and the Wialon partner in Central Asia.

Earlier, the customer had attempted to control fuel consumption using telematics by implementing a basic marine fuel monitoring system. Flow meters, fuel level sensors, and Galileo terminals were installed on the marine vessels. Fuel information was displayed in the [GPS tracking system](#). Still, monitoring the fuel usage directly on board in real time was not always possible because of the limited internet availability in open seas. The client's standard systems were also unable to display data from external sensors, further complicating the fuel consumption monitoring. This prompted the client to look for a marine fuel management solution that would allow vessel fuel monitoring directly in the cabin and in real time.

Solution

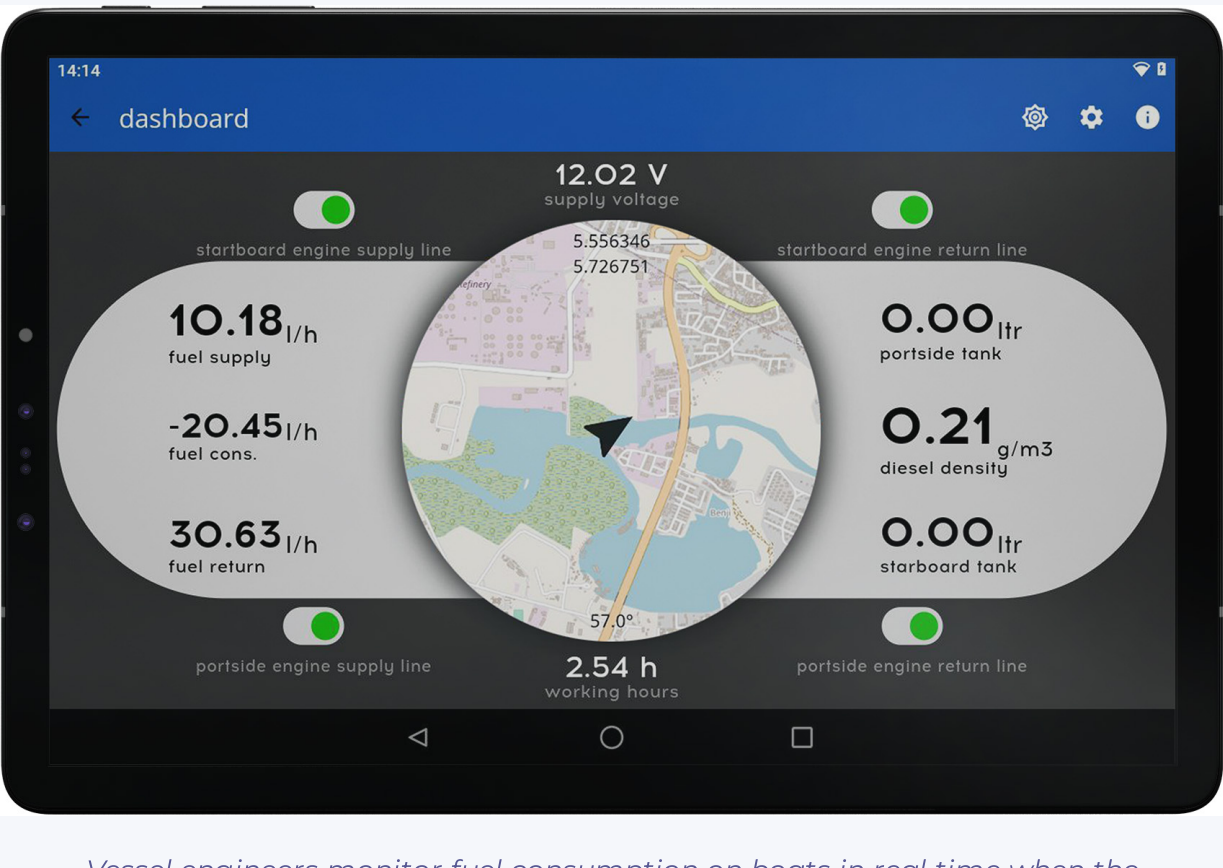
As part of the project, an advanced marine fuel monitoring system was developed. The system collected data from nine flow meters and two fuel level sensors installed on the vessels for accurate measurement and inventory control. The Galileosky 7x Hub GPS terminal and the Modbus RTU RS485 communication protocol were used for data transmission. For efficient operation, Bluetooth Low Energy technology was also used to minimize energy consumption by transmitting only short volumes of data, which is crucial in maritime operating conditions.

To enable engineers to receive online data directly on board and use this information for boat fuel management, the Wialon partner created a universal application for Android devices that can work on the local monitors in the ship's cabin. The application shows real-time information about the fuel consumption of the boat, its current location, and the direction of movement. For convenience, this marine fuel management system also automatically connects to previously used devices.



Mobile application for vessel fuel monitoring

Thus, vessel engineers receive marine fuel data as follows: data is taken either from the Galileo terminal when there is no internet and the application is offline, or from the Wialon system when the internet connection is available.



Vessel engineers monitor fuel consumption on boats in real time when the management system is connected to the internet

Results

The Wialon partner successfully implemented the client's requests by providing a comprehensive marine fuel management system, an effective tool for online fuel consumption control and measurement.

Online fuel monitoring system for vessels

Engineers can control ship fuel consumption directly on board and use this information for vessel management and immediate actions as the data is displayed on local monitors in real time.

Remote tracking

Thanks to the remote tracking capability of the introduced marine fuel management solution, the client has up-to-date information about their fleet: they can see where the vessels are at any given moment and receive accurate data on the vessel performance and fuel efficiency.

Convenient data analysis using Wialon

All vessel fuel consumption data is sent to the Wialon platform. There, it can be analyzed and visually presented in a user-friendly format as a report.

Company profile

Industry: Water transportation

Solutions

 Wialon

 Fuel monitoring system

Hardware

 Galileosky 7x

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