wialon

Public transport fare collection control in Ecuador

PROBLEM

Quitumbe S.A. is a public transport operator from Quito, Ecuador. The company started using NimBus some time ago and quickly achieved better client service and improved compliance with the schedule.

The client wanted to take one step further and establish complete control over cash collection between a driver and a passenger to avoid money theft.

The passenger transport operator also wanted to avoid speeding and unscheduled races.

SOLUTION

Preciso GPS, a telematics service provider, designed an automatic passenger counting system to identify the entries and exits through each bus door.

The provider installed a passenger counting infrared bar at each door with a built-in magnetic sensor that monitors the door opening and closing. Arduino devices collect passenger fares and store the money.

Infrared bars and Arduino devices are connected to Queclink GV300W GPS tracking equipment through an RS232 port. The equipment transmits the number of passengers and the money collected from them per bus to Wialon. There, the data is processed, filtered, and presented in reports so that the dispatcher and management can track passenger flows remotely and accurately.

NimBus also makes part of the solution. It tracks the route and ensures that passenger buses work according to the schedule, with early or late arrivals and according to the speed limits.

Due to a legal request by the Ecuador Government, Quitumbe S.A. developed a web service to transmit unit data to the state-run Mobility Secretary monitoring platform. Developers used flespi, a telematics backend platform by Gurtam, to ensure data transmission by a token.

COMPANY PROFILE

COUNTRY:
Ecuador

IOT PROJECT OF THE YEAR NOMINATION:
Public transport

BUSINESS SPHERE:
Passenger transportation

MONITORING UNIT:
Passenger vehicle

2021 WINNER IoT project of the year

RESULT

Now payments and passenger flow, as well as the accuracy and safety of the bus fleet, are under complete control.

The client is satisfied with the project results so far and is considering its further development and evolution. For example, now they are thinking about turning the solution into a full-fledged automated payment system with magnetic cards and implementing driver assignment automatic validation with magnetic keys. Fuel level and consumption sensor installation is also on the agenda.

UP TO 25% IN FARES

The client achieved a significant increase in the amount of money collected from the sale of tickets.

50% ACCURACY INCREASE

The passenger counter allows the client to obtain accurate figures on the maximum permitted capacity of the bus.

SERVICE QUALITY

Thanks to controlling now available for the fleet, the company can adjust the operations to ensure the buses are safe, arrive on time, and that the money the customers are paying comes to the company.

IMPLEMENTED PRODUCTS

NIMBUS   **FLESPI**   **WIALON HOSTING**

POWERED BY GURTAM