



## THE WINNER

IOT PROJECT OF THE YEAR 2024

This project is one of the winners of the IoT project of the year 2024 contest. Explore the article and [learn more about all the winners](#).

### Challenge

Eskişehir, a vibrant city in northwestern Turkey with a population of around 800,000, is known for its innovative approach to urban development. Thanks to the forward-thinking policies of its Metropolitan Municipality, Eskişehir has already earned international recognition for their initiatives, including developing the public transport system.

Yet, despite huge advancements, the city's fleet of 320 buses still faced some operational challenges:

- **No real-time tracking or historical data** → No way to monitor fleet performance or react to issues quickly.
- **Driver performance went untracked** → Safety risks and inefficiencies weren't addressed, making driver performance management and improvement a priority.
- **Route and schedule planning was inefficient** → Leading to delays and an uncomfortable experience for passengers.
- **Fuel consumption and maintenance issues** → High costs and operational inefficiencies.
- **No real-time passenger information** → Commuters had no reliable way to check bus arrival times.

That said, the city needed a **comprehensive public transport digitalization strategy** to improve operations, enhance safety, and provide a better experience for both drivers and passengers.

### Solution

To fully digitalize Eskişehir's public transportation network, [Filozof](#), a Wialon [long-time partner](#) from Turkey, built an advanced fleet management system for city buses centered around Wialon's powerful tools.

This solution integrates hardware and software to track the entire fleet, manage driver performance monitoring, optimize schedules, and provide real-time updates to passengers.

#### Key features that changed the game

The platform comprises a broad range of features and capabilities, including:

- Real-time bus tracking with historical data storage
- Route, schedule, and dispatch management
- Driver behavior monitoring
- Advanced data analytics for deeper operational insights
- Fuel and maintenance management for cost control
- Automated notifications and alerts for off-route driving, urgent maintenance needs, and other critical events
- Seamless integration with third-party municipal systems, LED panels, and mobile apps



### Software

At the core of the solution is **Wialon**, serving as the central platform for real-time tracking, data aggregation, and system-wide management. With its powerful capabilities, Wialon enables:

- Real-time fleet tracking and historical data storage to monitor and analyze vehicle movements.
- Route planning and schedule optimization to improve efficiency and reduce delays.
- Driver behavior monitoring and scoring to enhance safety and ensure responsible driving practices.
- Maintenance tracking for proactive servicing and reduced downtime.

In addition to Wialon, **custom applications** developed by Filozof seamlessly integrate the system with municipal and third-party platforms. These applications facilitate smooth data exchange between Wialon and external infrastructure, ensuring that vehicle data is properly utilized across the public transport network.

### Hardware

[Teltonika FMB920](#) tracking devices are installed on each bus to collect and transmit **real-time location, driver, and vehicle data**.

Teltonika [RUT955](#) and RUT956 routers handle the **LED panels at bus stops**, receiving up-to-date arrival information from the software modules. LED panel hardware integrates directly with the Wialon SDK data feed to **display real-time bus arrival info**.

Collaborations with ASİS (ticket validators) ensure the **broader fare collection system** aligns seamlessly with the newly digitalized infrastructure.



This project not only won the IoT project of the year 2024, but also [secured third place](#) in a competition organized by the Ankara Metropolitan Municipality and Ford Otosan

### Support and additional services

To ensure the system runs smoothly, Filozof provided:

- **A fully localized solution** → The software was translated into Turkish.
- **Comprehensive training** → Hands-on training sessions were conducted for all user levels, with detailed documentation shared.
- **Technical design documentation** → Covering custom applications, LED panel integration, and more to support future needs.
- **Regular performance evaluations** → The Wialon partner regularly presents project outcomes to all municipal levels — from the General Secretary to the Operational Center staff — ensuring transparency and ongoing collaboration.

### Results

Eskişehir's city transportation is now safer and fully digital, setting a new benchmark for smart public transport systems in Turkey. With improved planning capabilities, lower operational costs, and enhanced passenger satisfaction, the city has strengthened its reputation for innovation. Future plans to integrate trams, small buses, and additional vehicles promise even greater improvements.

#### 30% fewer traffic accidents

The average number of daily bus accidents dropped from 2.6 to 2, significantly boosting safety on the roads.

#### Reduced operating costs

Maintenance and repair expenses, including scheduled servicing, declined, while fuel costs dropped by 13%. A reduction in traffic fines further helped cut overall operational expenses, making the transit system more cost-effective.

#### Increased passenger confidence

Fewer disruptions, improved scheduling, and real-time updates led to a smoother travel experience. As reliability increased, more commuters chose public transport, reinforcing trust in Eskişehir's transit system.

#### Business growth by ripple effect

The project's success attracted interest from other municipalities, leading to pilot initiatives and planned deployments in Ankara, Malatya, Manisa, and Konya. Thousands of additional vehicles, including buses, trams, and heavy equipment, are now set for integration, demonstrating the scalability of public transport digitalization.

### Company profile

**IoT project of the year nomination:** Substantial fleets

**Country:** Turkey

**Industry:** Passenger transportation

### Solutions



### Hardware

Teltonika FMB920

Teltonika RUT955

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