

Maximize Fleet Efficiency with EV Management Tools

By David Gur

Gain complete control and visibility over your electric vehicle fleet with the latest technology. Enhance performance, reduce costs, alleviate driver anxiety and achieve sustainable, efficient fleet operation.

The history of electric vehicles: the rise and fall, and rise of EVs

Although electric vehicles appear to be a relatively new concept, they have, in fact, been around for over a century. In the early 1800s, inventors in Hungary, the Netherlands, the UK, and the US began to investigate the idea of a battery-powered vehicle and built some of the first electric cars. The first major breakthrough was an electric car developed by William Morrison, an Iowa-based chemist. Morrison developed a six-passenger vehicle with a top speed of 14 mph, and various automakers began to experiment with electric vehicles.

By 1900, their popularity had peaked, and they accounted for roughly one-third of all vehicles in the United States. There was even a fleet of more than 60 electric taxis in New York City! In 1914 Henry Ford collaborated with Thomas Edison to investigate options for a low-cost electric car. But due to the advent of gasoline powered cars and the introduction of the electric starter, electric vehicles had all but vanished by 1935.

High fuel prices in the late 1960s and early 1970s, prompted many automakers to investigate alternatives to gasoline-powered vehicles, yet the technology was still insufficient. The advent of environmental concerns and emissions regulations around the world in the 1990s, reignited interest in EVs. Automakers resumed development of EVs, this time with improved performance.

EVs are here to stay

The true revival of the EV occurred at the beginning of the 21st century, with the introduction of the Toyota Prius in 1997, the world's first mass-produced hybrid electric vehicle. Tesla Motors, a small Silicon Valley startup at the time, announced in 2006 that it would begin developing a luxury sports car capable of traveling more than 200 miles on a single charge. Other automakers quickly followed suit. At the same time, countries, private companies, and automakers built the infrastructure to support EVs (charging stations), so that today, because of their environmental benefits, lower carbon pollution, and savings on gas costs, EVs are a viable and popular option for private consumers as well as businesses and commercial fleets.[i] It is expected that there will be 115 million electric vehicles globally by 2030, up from approximately 8.5 million units in 2020[iii]

EVs – both an opportunity and a challenge

Despite their advantages, EVs present some unique challenges. Managing EV fleets requires accurate, real-time data to optimize vehicle routes, monitor battery status, align en-route charging with battery status and range, reduce range anxiety and maximize efficiency.

Ituran takes on the challenge

Ituran, a provider of fleet management systems, values sustainability and offers tools for managing and tracking electric vehicles. These tools aid fleet managers in maintaining a greener fleet as well as managing EVs efficiently and saving costs. With Ituran's EV management solutions, both fleet managers and private owners can reduce driver range anxiety and plan their trips more effectively - based on accurate battery status and charging station location data.

Ituran's EV Tracking solution - efficient management based on real-time data

Ituran's EV solution integrates with connected car systems, monitors and provides the following battery usage data, via a dedicated app supported by unique hardware – Ituran's **Starlink tracking and safety telematics device**, which receives relevant data from the iCAN diagnostics tool that connects directly to the vehicle's CANBUS:

1. Real-time data on battery status
2. Alerts on low battery charge
3. Data on remaining time/distance before charge
4. KW charging rate *
5. Battery temperature *

* Available only for certain car models

In addition, Ituran provides data on the locations of charging stations** and whether or not they are fast or slow charging, and can provide accurate expected battery usage based on the following parameters:

- **Distance:** the number of kilometers/miles actually driven
- **Route:** a drive through hilly terrain uses up much more battery power than a drive on flat land
- **Climate control:** A/C usage
- **Passengers:** the number of people in the car
- **Cargo:** is the vehicle carrying cargo and if so, what is its weight/size

** Available only in certain countries

Having all of this information on hand could be beneficial for fleet owners, managers, or users of electric vehicles in many ways as each and every one of these factors directly impacts battery usage, which in turn affects driving range.

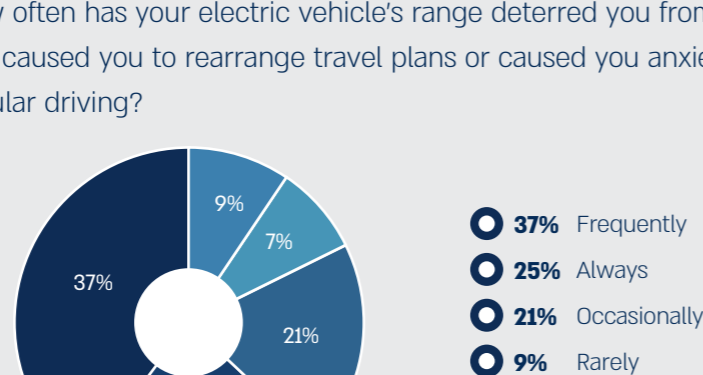
Here are some of the benefits:

1. Alleviate range anxiety

According to [Collins English Dictionary](#), range anxiety is "a concern, experienced by the driver of an electric vehicle, that the battery may be fully discharged before a suitable charging point is reached". A recent survey by [Forbes Wheels](#) found that 37% of EV owners have been deterred from taking a trip, re-arranged their plans or experienced anxiety while driving due to the vehicle's range.

Range Anxiety

How often has your electric vehicle's range deterred you from taking a trip, caused you to rearrange travel plans or caused you anxiety during regular driving?



Source: <https://www.forbes.com/wheels/features/ev-range-cost-confidence-survey/>

Ituran's EV tracking system reduces range anxiety as all of the system's data can be used to plan driving routes based on an accurate estimate of remaining battery power while taking into account all of the trip's parameters (route, number of passengers, cargo, etc.) as well as the location of charging stations and whether they provide slow or fast charging. More data leads to more accurate trip planning, which in turn reduces range anxiety!

2. Maximize battery use and cut back on electricity costs

Ituran EV Fleet Tracking platform optimizes battery use by sending alerts when a vehicle's battery is running low, promotes optimal EV performance by monitoring battery capacity and health over time, and provides all of this information via a dedicated app.

3. Strategic charging station location planning

Ituran's data helps charging station providers in addition to fleet managers and individual users. The optimal placement of charging stations is a major challenge for companies that provide this service. Ituran's data on the various types of EV fleets, their typical routes, cargo loads, and passenger counts can significantly facilitate the optimal placement of charging stations.

4. Support fleet managers/owners in their decision making with historical data

Due to the challenges that come with the benefits of EVs, many fleet managers and owners are currently debating whether to convert all, some, or none of their fleet vehicles to EVs. Which would be their most cost-effective choice?

Besides real-time data, Ituran's fleet management system provides the following data on fleet history:

- Vehicle types
- Cargo weight/size
- Trip length: short/long
- Routes, based on driving history

All of this historical data has a direct impact on future battery usage, route planning and scheduling, cargo and passenger distribution. With all of this data at their disposal fleet managers and owners no longer have to make a decision based on trends or assumptions. They can now make an informed, data-driven decision as to what their best option is.



Micro mobility fleets? Ituran has the solution!

Suitable for any type of electric micro-mobility fleet, [Ituran's Tick Track solution](#) enables access to the real-time location of vehicles and provides electric micro-mobility fleet owners with an advanced set of fleet management tools. Thus, it allows for efficient planning, leading to a significant reduction of operational costs.

Ituran - your go-to solution provider for any EV related issue

Private EV owner? Ituran can help optimize usage of your EV by planning your trips more effectively and by providing real time information on battery charge status and other critical EV data.

Fleet manager or owner? Ituran can assist you in making an informed decision as to whether or not to change some or all of your fleet to EVs. [Contact us](#) and we'll help you make the best possible decision!

Already have EVs in your fleet? Ituran can help you manage your EV fleet more efficiently and cost-effectively. [Contact us](#) to find out how

<https://www.energy.gov/articles/history-electric-car>
<https://www.statista.com/statistics/970958/worldwide-number-of-electric-vehicles/>

About the author

David Gur has been an integral part of the Ituran team for 24 years. During this time, he has gained extensive experience in the development department. For the last year, he has been serving as Head of Innovation. In this role, David is responsible for leading the company's efforts in developing new and innovative products and services to meet customer needs.