

New EV Charging Infrastructure for Ukraine – Green Energy Case Study

Luxoft is designing a new EV charging network and universal billing platform to boost electric car ownership in Ukraine.

Partner: Electric Car (EV) Sales and Repair Company

Industry: Energy and Utilities

Project Type: Consulting, Digital Design and Engineering, Green Energy, Technology Infrastructure

Overview

1 Challenge:

The spread of electric vehicles (EV) in Ukraine has been hindered by the fact that each EV charging point operator (CPO) has their own billing system. Confusingly, customers have to cope with several different service options.

Our client specializes in the sale and repair of electric cars and is looking to establish an EV charging infrastructure together with a software platform to improve the customer experience.

2 Solution:

Luxoft's fully customizable, charging-point software platform improves the driver experience by standardizing the whole process. The platform's straightforward interface and flexible settings allow CPOs to create an EV charging network, define the process and develop financial aspects to provide drivers with electricity.

Either cloud-based or on-premise, the platform integrates a payment system with charging point management; an effective method of charging electric cars and keeping independent CPOs profitable.

3 Result:

This new system is establishing the digital foundation for a robust EV charging network. Greater flexibility, plus cost and time savings on network maintenance standardizes CPO operations and increases profitability. Charging point features designed around driver needs – like advanced booking features and charging time calculations for specific electric cars – is encouraging EV adoption in Ukraine.

Challenge

All Together Now

In Ukraine, the lack of advanced billing and green energy management is weakening the case for electric cars. Each EV charging point owner has their own way of billing for services so, confusingly, drivers have to juggle several different billing and service options.

EV registration is growing; however, most of the electric cars are aftermarket, including a sizeable electric taxi population.

So, the logistics and repair companies that support Ukraine's aftermarket economy are vital for the continued growth of EV adoption.

Solution

Powerful Networking Opportunities

Recognizing the lack of standardization and manufacturer support, an EV sale-and-repair business partnered with Luxoft to develop a solution. The result is an SaaS-style platform that simplifies the process of becoming a CPO, making operations more profitable, and the customer experience more enjoyable.

Using an agile approach to software development for distributed, green energy resource management, Luxoft researched and designed a foundational platform for an EV charging infrastructure in Ukraine. The project incorporated open source software, plus prototyping to gain client approval for the user-friendly interface.

Either cloud-based or on-premise (Open Charge Point Protocol [OCPP] network standards apply), the platform integrates a payment system with charging point management; an effective method of charging electric cars and keeping independent CPOs profitable.

Main features:

For management:

- Create an EV charging network
- Manage the charging station, users and bookings in a flexible manner
- Maintain the system and resolve faults
- Develop a matrix of electric cars versus charging port capacity
- Oversee roles and permissions

For EV drivers:

- Register an electric car
- Organize a payment wallet
- Book a charging port
- Locate a station and plan the route
- Find a free port at the station
- Charge the EV using the application or ID-card authorization

Result

Electrifying Benefits for Owners and Customers

Electric vehicle registration in Ukraine grew by 58% (3,185 vehicles) in the first 6 months of 2019. Organic, EV-economy growth of this kind nurtures the research, design, engineering and standardization of software that Luxoft teams are addressing with this platform.

The value of this software research is evidenced by the drive and enthusiasm of the venture's principal players: the sales-and-repair companies that form the spine of the EV support infrastructure.

"Back in June 2015, I traveled to Slovakia by electric car. Ukraine's EV charging infrastructure was very weak and relied on gas stations mainly. Now, Ukraine is not far behind the rest of the world with around 185 EV charging stations already marked on the map."

Oleksandr Kravtsov, CEO and co-founder, ElectroCars

Investing in optimizing the charging-point user experience via human-centered design is an important contributor to wider electric car adoption. In turn, the improved flexibility and optimized system maintenance of EV charging platforms deliver significant savings in both time and cost.

Advanced booking facilities, together with charging time calculation for specific electric cars, provide outstanding charging station benefits for customers and optimized usage patterns for business owners. The main benefits are as follows:

For software licensee:

- User, profit and discount management
- EV charging network maintenance and management
- Tariff and fee management

In general:

- Activity tracking
- Budget management
- Statistics extension
- Advanced notification

Software development decisions depend on several complex factors but, importantly, research for early stage solutions is focused on the user. In Ukraine, electric car drivers simply want to find a charging station quickly, safe in the knowledge that they will be able to access and pay for the charge without hassle.

Enable Your Digital Advantage

Luxoft consultants and engineers draw on a wealth of top-tier industry and technology expertise built up over many years of leading the design and delivery of modern digital solutions. Reach out now and learn how you can partner with Luxoft to develop the right technology for even your most ambitious digital projects.

Looking for a System Upgrade?

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