

PROJECT REFERENCE



GreenFlux partnership

A service and operations platform for a large scale EV roll-out

The market for electric vehicles is booming. People are attracted by the possibility to use renewable energy to drive their cars in an environmental friendly way. The relatively short distances in the Netherlands are well suited for electric transport; The Netherlands also has an extensive and reliable electricity grid. Therefore, it is not surprising that new models of electric vehicles (EV) are the first to be released in the Netherlands. One of the characteristics of electric vehicles is that they need to be charged regularly. For that reason, GreenFlux is implementing a broad network of charging points. The main challenge is to ensure that drivers can charge their cars in a quick, safe, and cost-effective manner, without overloading the electricity network.

The charging points are placed nearby hotels and restaurants along the Dutch motorways. In this way, drivers can do other things while charging their EV, such as enjoying a meal, meet with others, or work on WiFi hotspots. In addition, GreenFlux also places charging points at home and at work. With GreenFlux at home, at work and on the move, drivers can always charge their EV's simple, fast and inexpensive!



How it works

'ICT Group has built the entire control system of the charging stations, including its hardware and software, as well as the tailor made cloud system.

The main service of GreenFlux consists of an operations platform for a charging infrastructure: a charge point management system that supports charging transactions (start, stop, conditions and constraints) and the accompanying billing process. Next to this, GreenFlux offers a smart charging possibility to prevent overloading of the network and connection and to benefit from dynamic rates of energy suppliers.

To support these services ICT Group developed an IoT cloud platform based on Microsoft Azure where all intelligence for transaction support is located. Besides ICT group developed their own controller for specific functions on the charge point itself.

The communication between the cloud and the charging stations must be reliable. Therefore, Tele2 has set up a dedicated mobile subnetwork, exclusively for GreenFlux. All GreenFlux charging stations have a Tele2 SIM card that is built into the controller. This ensures that the traffic between the charging stations worldwide and the cloud is properly secured and encrypted.'

Our market proposition

With its partner Greenflux, ICT can offer an end-to-end charging infrastructure solution that allows for controlling the charging process, the measurement of the used energy, transaction management and invoicing. We can take the operator role, and provide the charging service to our customers. Or we can provide the solution in a SaaS manner, which allows our customer to take the operator role.

Keywords

MS Azure, OCPI, OCPP, vendor specific protocols, CDR, APN, VPN, GPRS, Linux based processors, ethernet, remote control, pre paid, post paid, Maintenance & Configuration Management multi-tenancy, white labelling, billing, CRM, CIR, EMS, DMS.

With over 9.000 connected charging stations and international customers in over 10 European countries, Greenflux processes more than 220.000 transactions a month with the platform developed by ICT Group. With these figures, Greenflux is one of the largest charge point operators of the Netherlands. ICT group helped them to build the business, maintain it and develop it by exploring new opportunities together.

Technically our system consists of

- A smart charging control unit that controls the charging process and the energy measurement. For LEAP the smart charging control unit needs to be integrated with its WPT system.
- A cloud based administrative back-end that takes care of remote maintenance, customer management and billing and invoicing.

Role of ICT Energy

- Formulation of a joint vision about eMobility
- Developing the business with GreenFlux and exploration of the opportunities
- Developing the charge point system with a lot of scenarios
- Building a controller (hardware) for smart charging
- Supporting the operation

Our Energy and IOT development teams are working together very closely with GreenFlux and our partners Tele2 and Microsoft. With a project that involves IoT and cloud technology, it's extremely important that all parts of the chain are seamlessly aligned, and that everything is done in a secure manner.



About GreenFlux

GreenFlux is founded in 2011 and they strongly believe that all cars will be powered by the sun in the near future. They want to make electric driving a worldwide success and restore the balance in our living environment. They do this by supporting their customers with the smartest charging infrastructure solutions. GreenFlux enables every driver to charge on renewable energy always and everywhere.

For more information, visit their website:

<https://www.greenflux.nl/en/>