Smart Mobility 2016 – Monza
Siemens for a
Smart Mobility world

siemens.com/energy-management

Agenda

Siemens Smart Grid and e-Mobility

E-Car Operation Center

Progetto AEW mobility project

Progetto Smart Recharging Island

Siemens Smart Grid and e-Mobility business

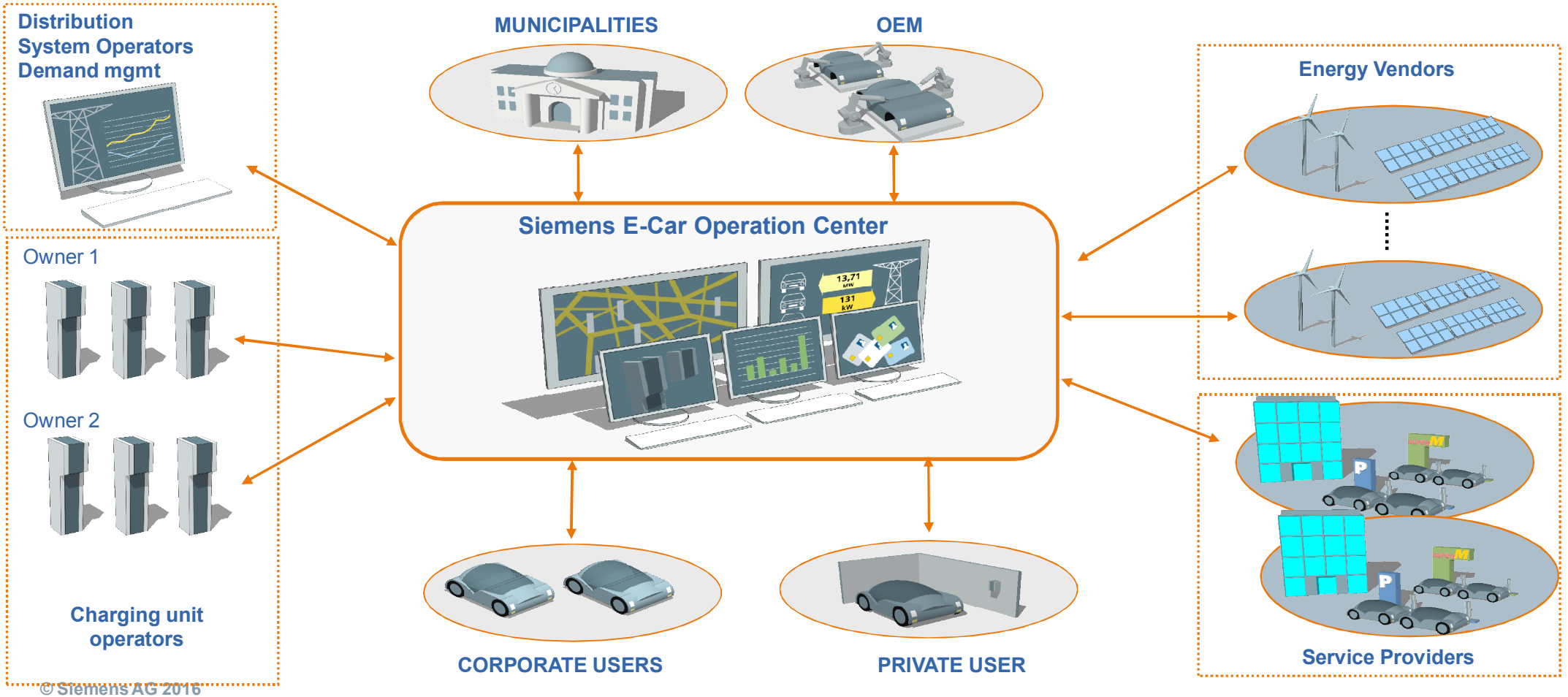
Siemens has a strong R&D team in Italy for smart grid IT product development:

- SCADA system for power grid, deployed in Italy and South America.
- Application for workforce management, quality analysis, reporting, etc.
- Energy management application for: consumption and production reporting, demand management. This application has been the core of EXPO2015 energy management services

For the Smart Mobility world, considering the important role of e-mobility, the **infrastructure for electric mobility** must satisfy the requirements of the grid but also those of all the actors operating in a modern Smart City. Siemens has developed a product dedicated to e-Mobility, called **E-car Operation Center,** that came out of this R&D center, and has a strong integration towards the Smart Grid Siemens applications.

Siemens E-Car Operation Center

The electro mobility ecosystem : actors involved



Siemens E-Car Operation Center

The brain of e-mobility

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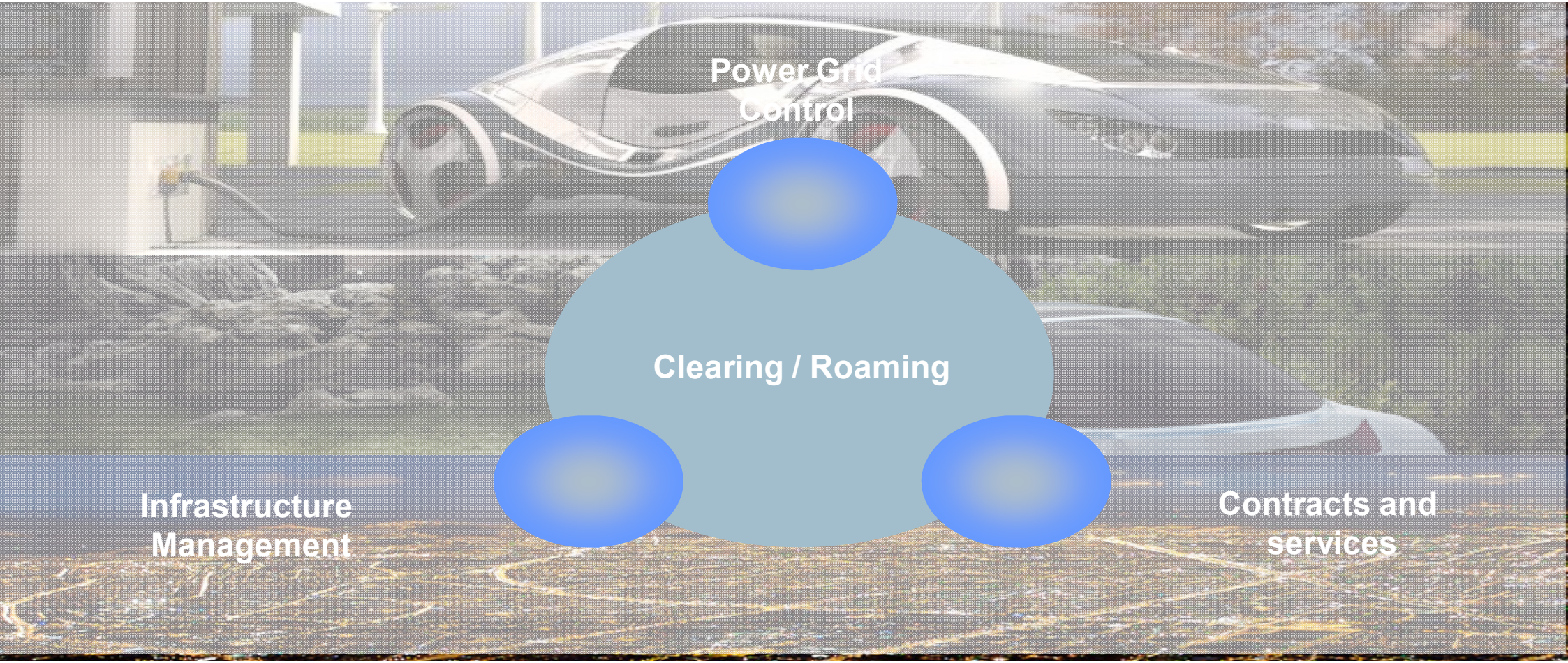

Siemens E-Car Operation Center

Real time view and Remote Management

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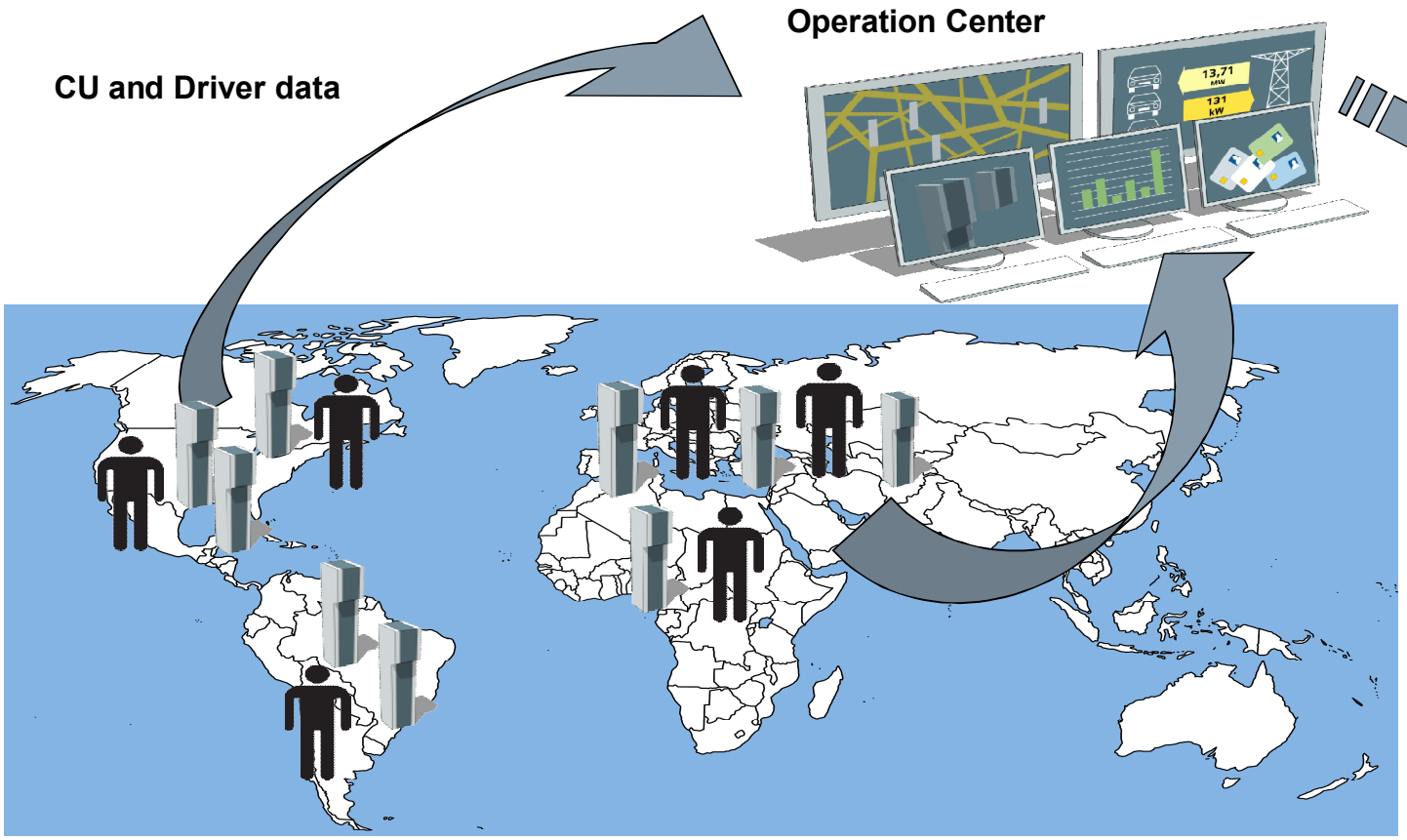


Recharge and meter data

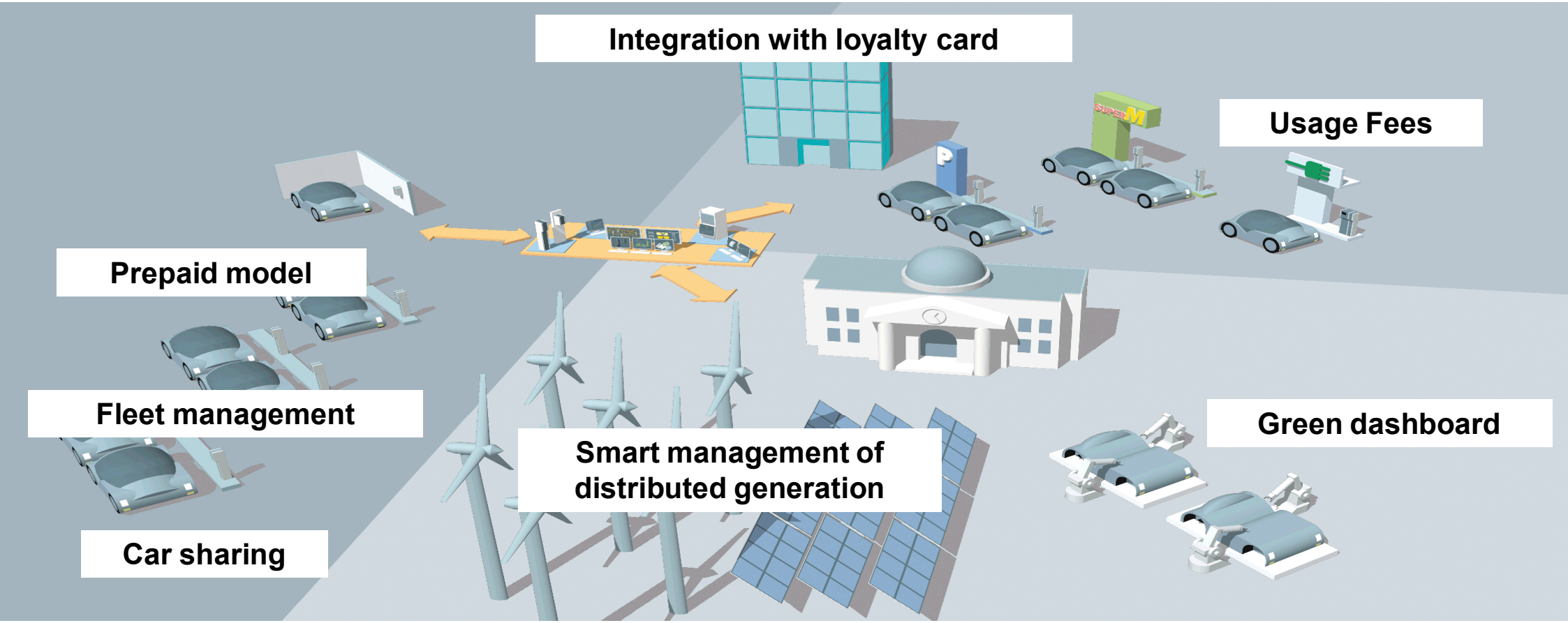
Diagnostic and Alarms

Customer/RFID data

Internal Roaming between different CUs and customer!

Siemens E-Car Operation Center

Additional services



Siemens E-Car Operation Center

AEW mobility project

The electric mobility infrastructure management project of **Azienda Energetica Reti** has been started in 2014.

Currently, charging stations installed are about **60**, both AC and DC, of different manufactures:

ENEL, Efacec, Circontrol, SCAME.

The system manages contracts, RFID cards for the recharge, pre-paid cards in kWh.

The project provides also a web portal for customers and a smartphone application with both public and private sections for registered users.

Siemens E-Car Operation Center

AEW mobility project – global roaming

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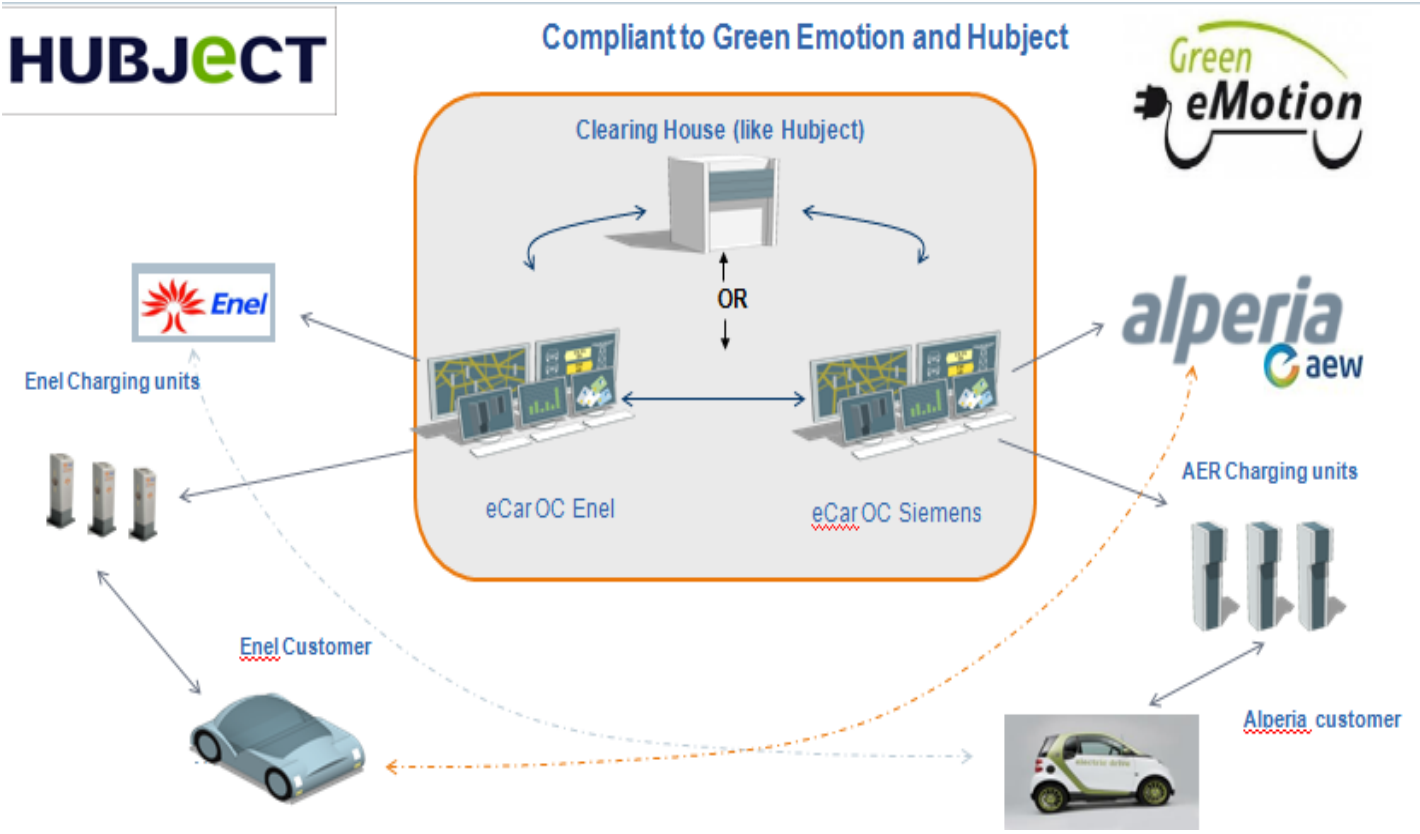
The project includes the development of **interoperability** with other service provider, at Italian and European level.
The platform now supports a connection with **Hubject** and **GeM**, peer to peer connections between control centers, European service provider as **PlugSurfing** e **TheNewMotion**.

It enables a network of thousands of charging station in Europe.



Siemens E-Car OC and Monet

Smart Recharging Island Project

The **Smart Recharging Island** has been developed for Regione Piemonte in Turin and the installation site was the Environment Park a Torino.

The proposed system is a **Microgrid** connected to an **existing solar plant**, **two charging stations** for e-car recharging and a **storage system**.

The project has realized a tight integration between **E-Car OC**, platform for the electric recharge management, and **Monet**, energy management system, developed in Siemens Italy and used for EXPO 2015.

Distribution Electric Network

Monet

Provide to the grid the energy produced by the PV in **excess** of the **request to charge electric cars** and the availability of accumulation

Take from the grid only when, in case of absence of PV production, there is not enough stored energy to provide energy to electric cars

Optimization problem of the energy exchange with the electric network with following constraints:

- Satisfy customers needs about recharging of their electric vehicles
- Respect the technical limits of network elements

Contact

Thank you for your attention.

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