

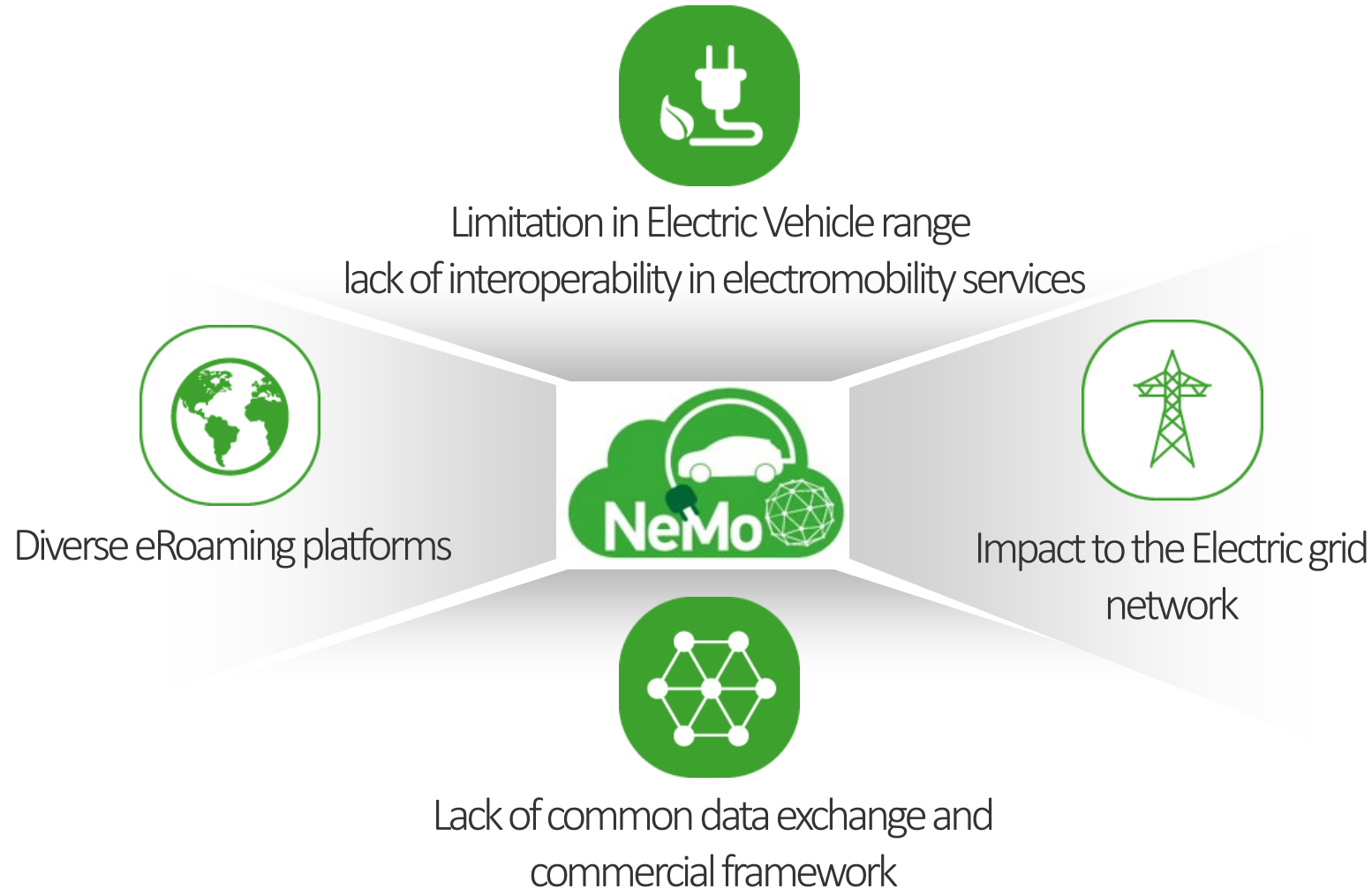
EV CHARGING QOS AND POWER SYSTEM ROBUSTNESS THROUGH ICT APPLICATIONS; NEMO'S APPROACH

Theodoros Theodoropoulos

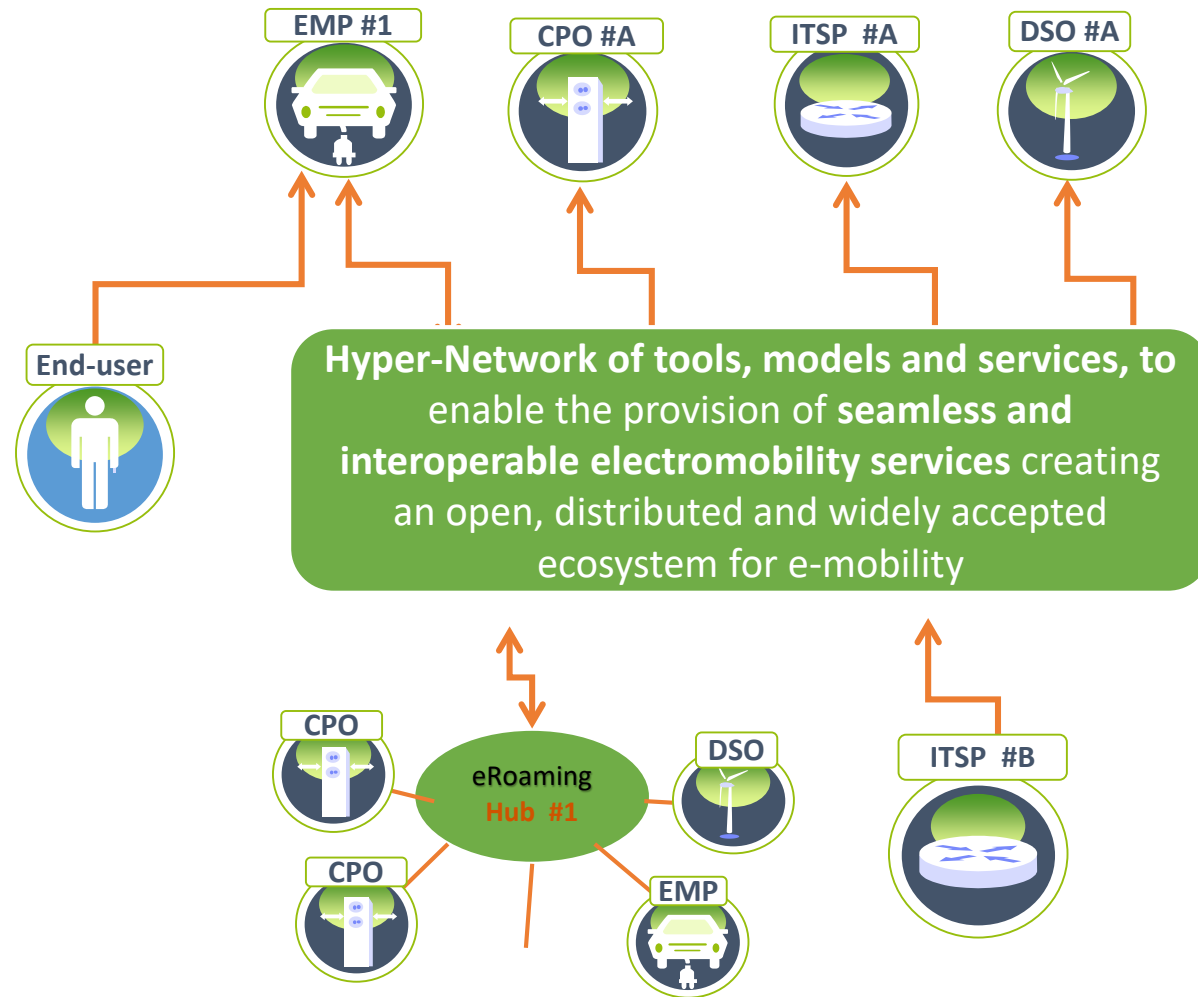
Researcher

ICCS

CHALLENGES FOR NEMO (E-MOBILITY)?



STRATEGY



OBJECTIVES

- Enhanced driver satisfaction: “Charge anywhere & anytime” across Europe via a single identification, authorisation & payment method
- Easy creation and delivery to a wide audience of innovative, interoperable electromobility services via an **open cloud marketplace**



- ✓ Improved **attractiveness of electric vehicles**
- ✓ **Facilitation of EVs mass adoption**

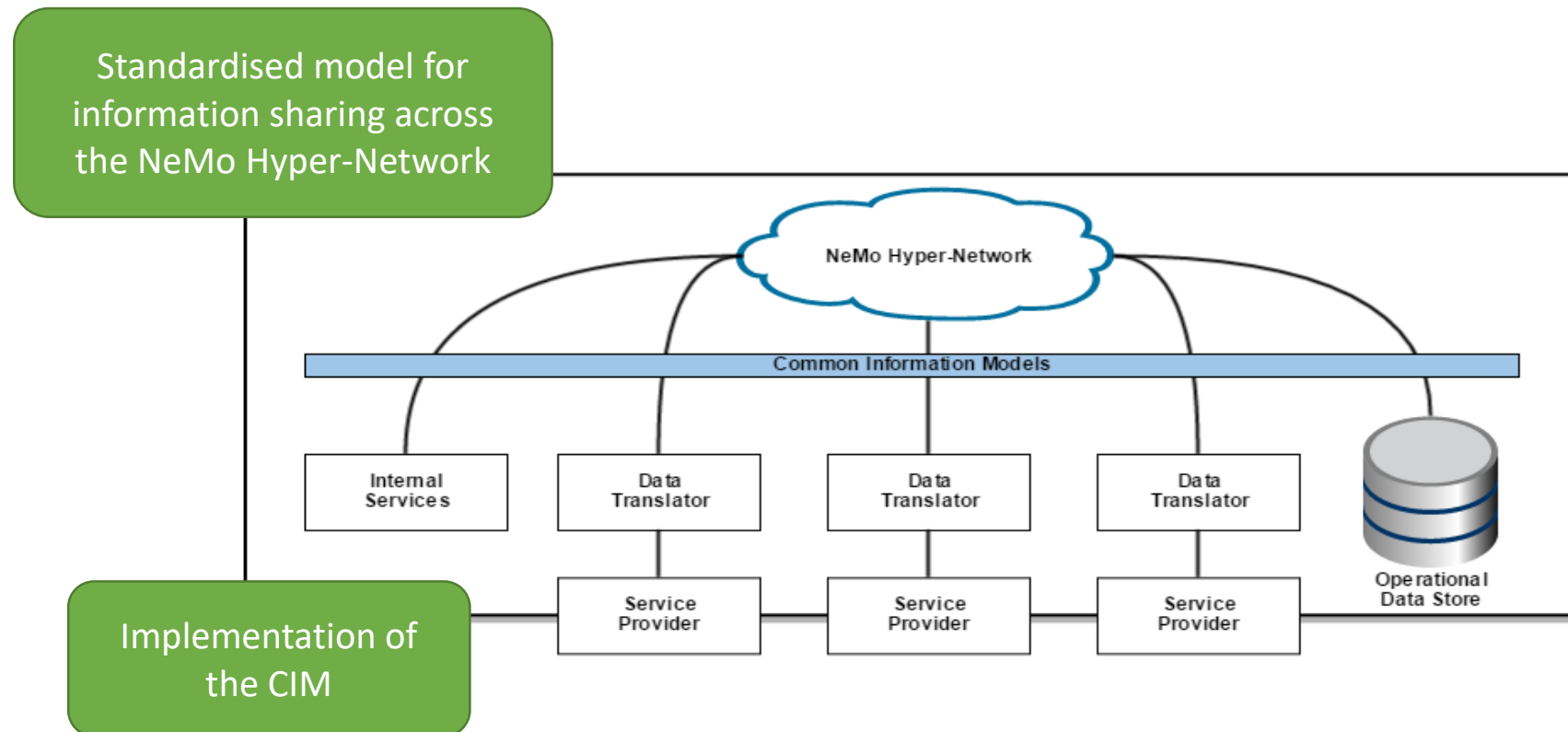
OBJECTIVES

- ❖ Integration of smart-grid applications and services, to support the EVs integration in the electricity grid, by optimisation of electricity supply compared to demand.

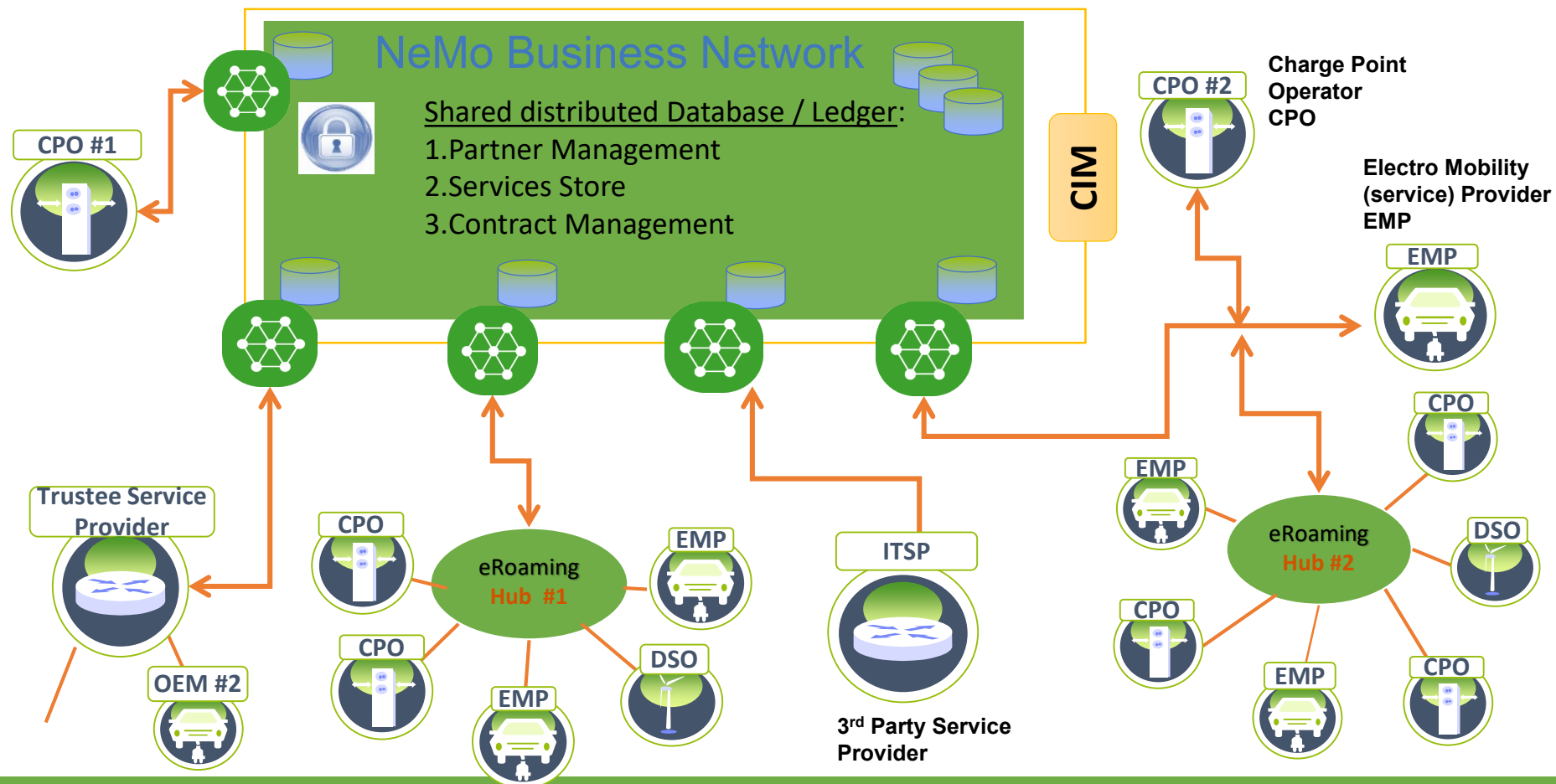


ARCHITECTURE

- New services will generate and exchange data according to the CIM
- Data translators will enable the translation of data to the NeMo CIM

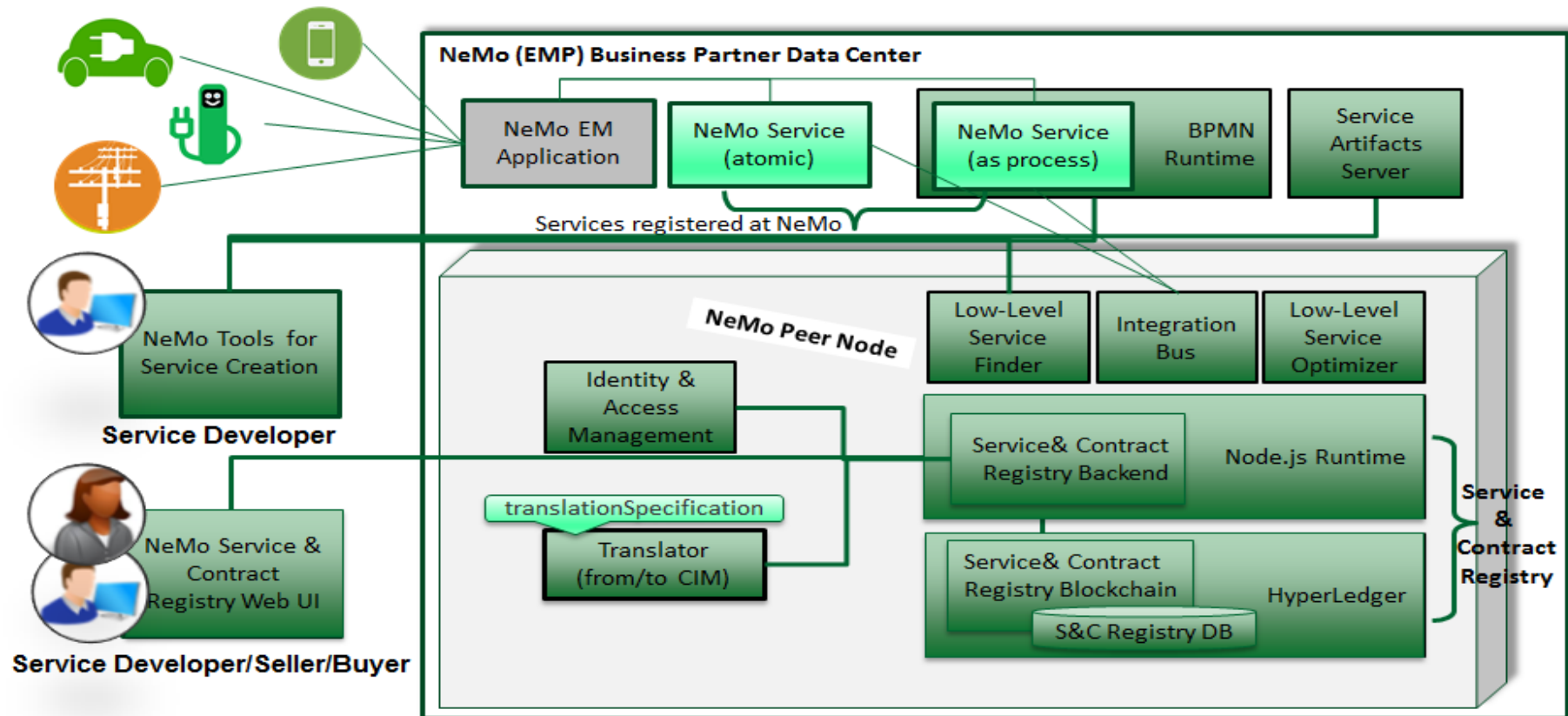


ARCHITECTURE



NEMO NODE CLOSEUP

- Service lookup-Service creation-Service execution



GRID SERVICES

Navigation to CP based on user and grid power requirements

Vehicles are routed to the appropriate charging point, according to vehicle and grid quality of service criteria

Global customer charging behavior

Profiling of end user charging behavior in order to enable demand forecasting

Load management

Ensure quality of service of charging operations according to user requirements and grid constraints

Load forecasting due to EV charging

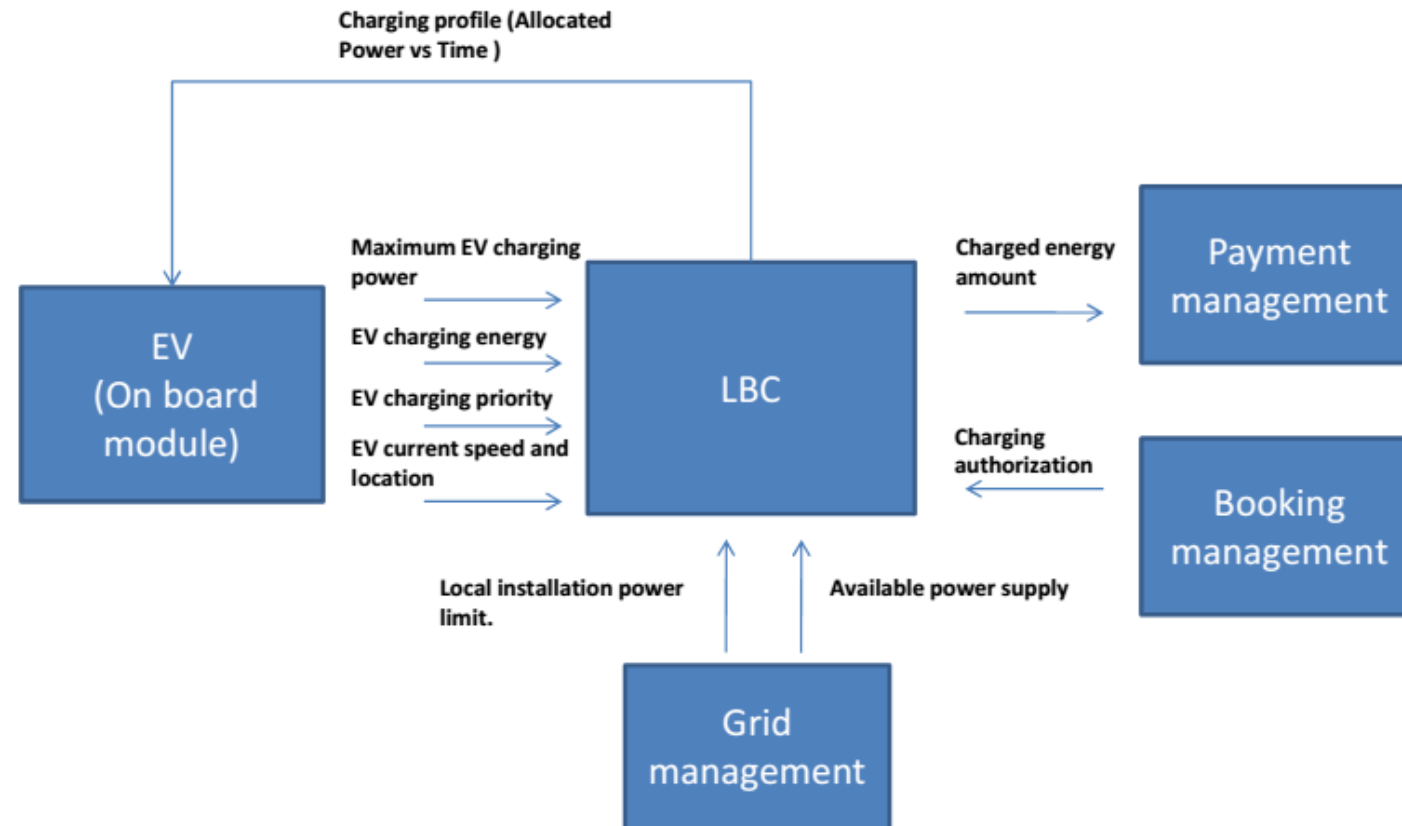
anticipated load information to the DSO for energy generation planning and energy pricing

Local energy management

Include local energy providers to the energy mix provided by charging operations

GRID SERVICES

- Load management



THANK YOU QUESTIONS?

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