



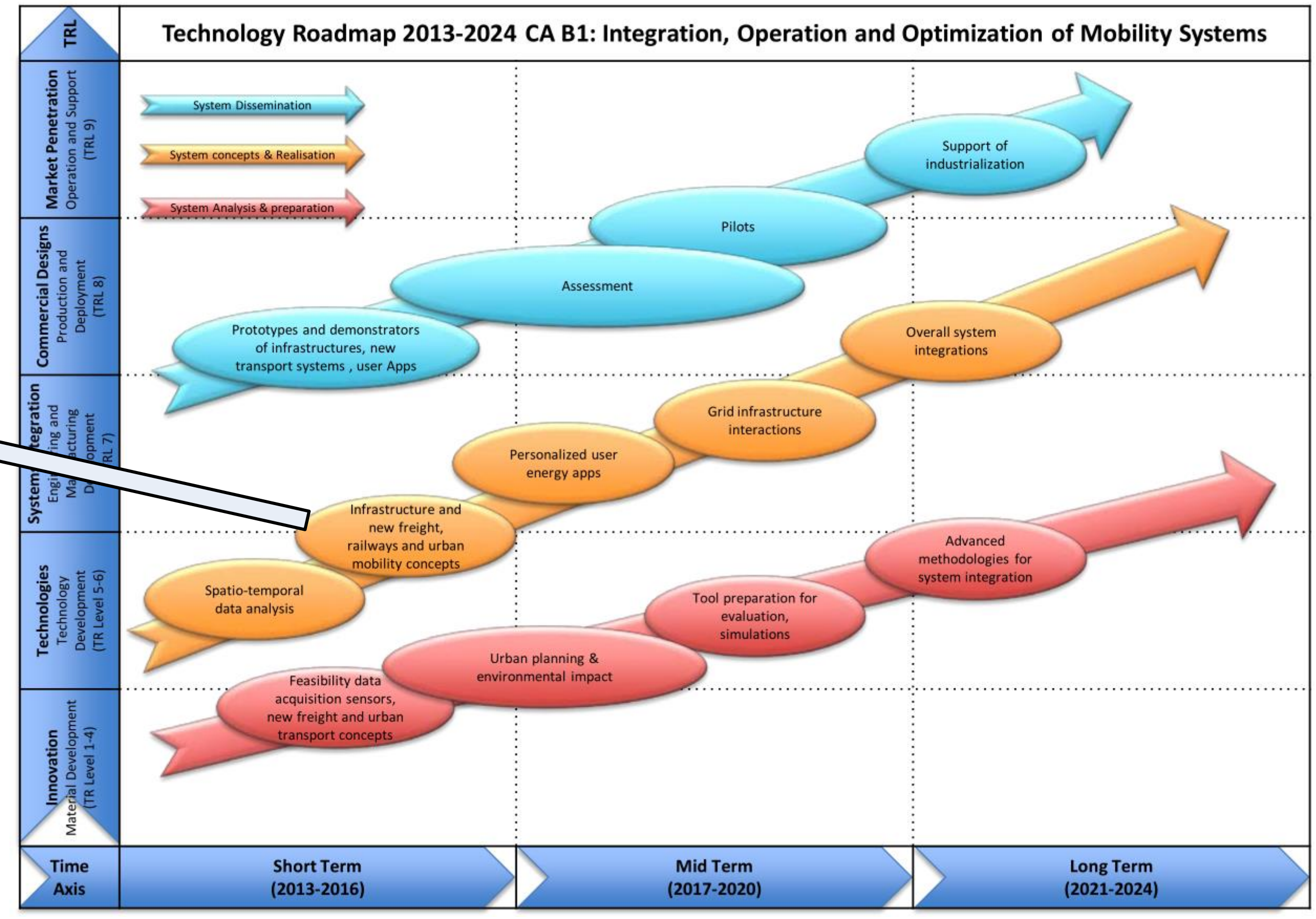
CA B1.1: Integration of new Urban Transport

Autors:
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Electro bus for the future (Light Tram)



The Roadmap



Electrical Mobility in 2014: The "Switzerland Explorer"

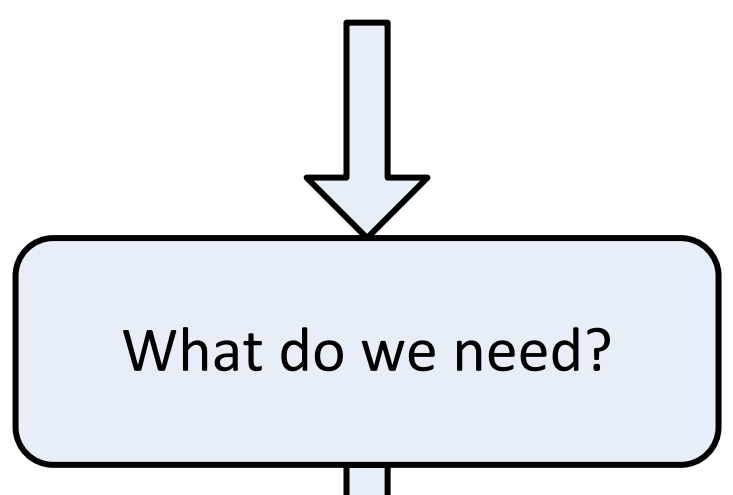


- Electrical characteristics**
- Power: 150 [kW]
 - Max. speed: 100 [km/h]
 - Weight: 4400 [kg]
 - Load: 16 Passengers
 - Battery: 99 [kWh]

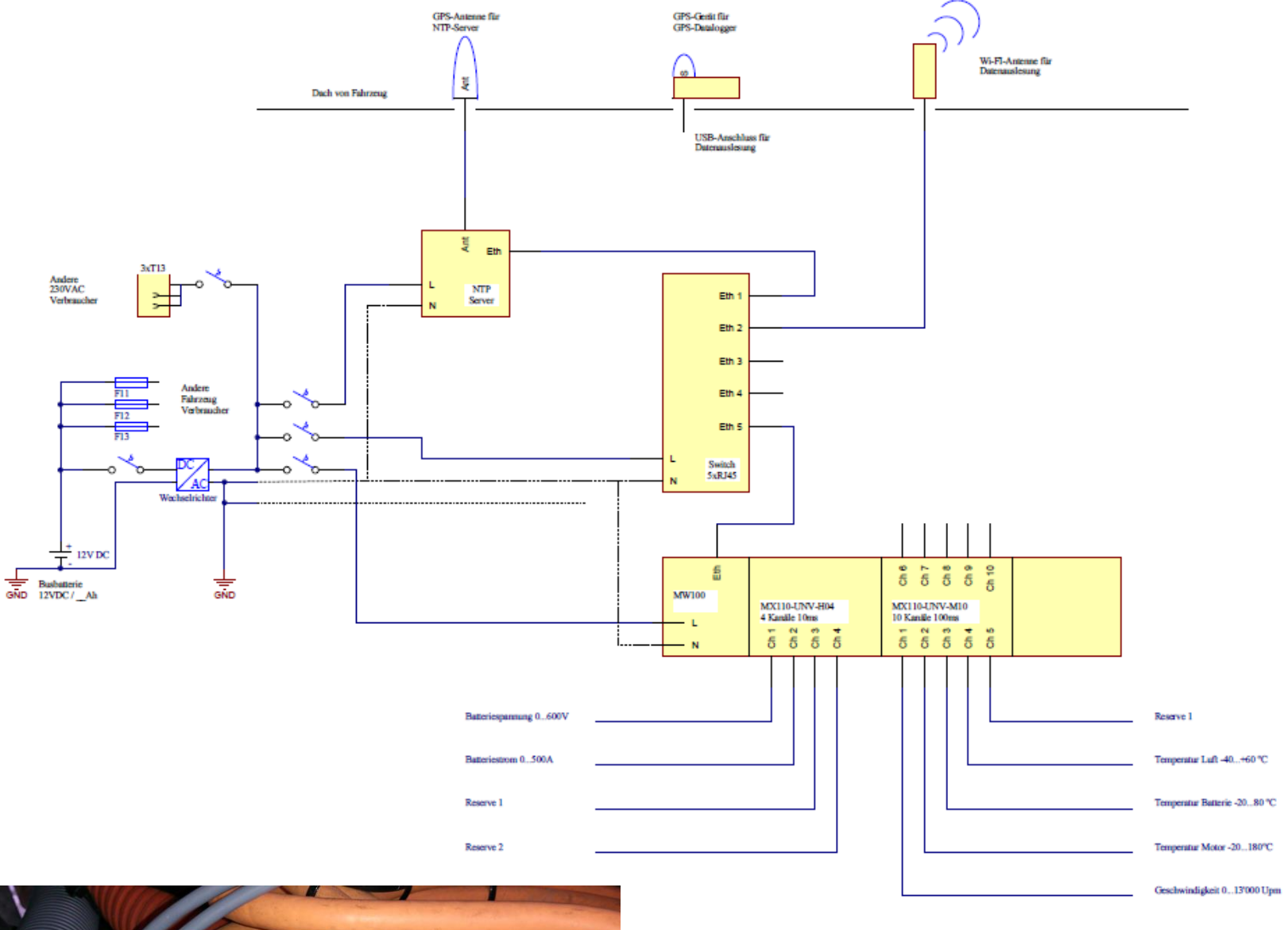
Infrastructure in 2014 PV-Module ↔ Accumulator ↔ Grid



- Scientific questions:**
- What is the maximum range ?
 - How big is the energy consumption for auxiliaries ?
 - What is the specific energy consumption (Wh/km) ?

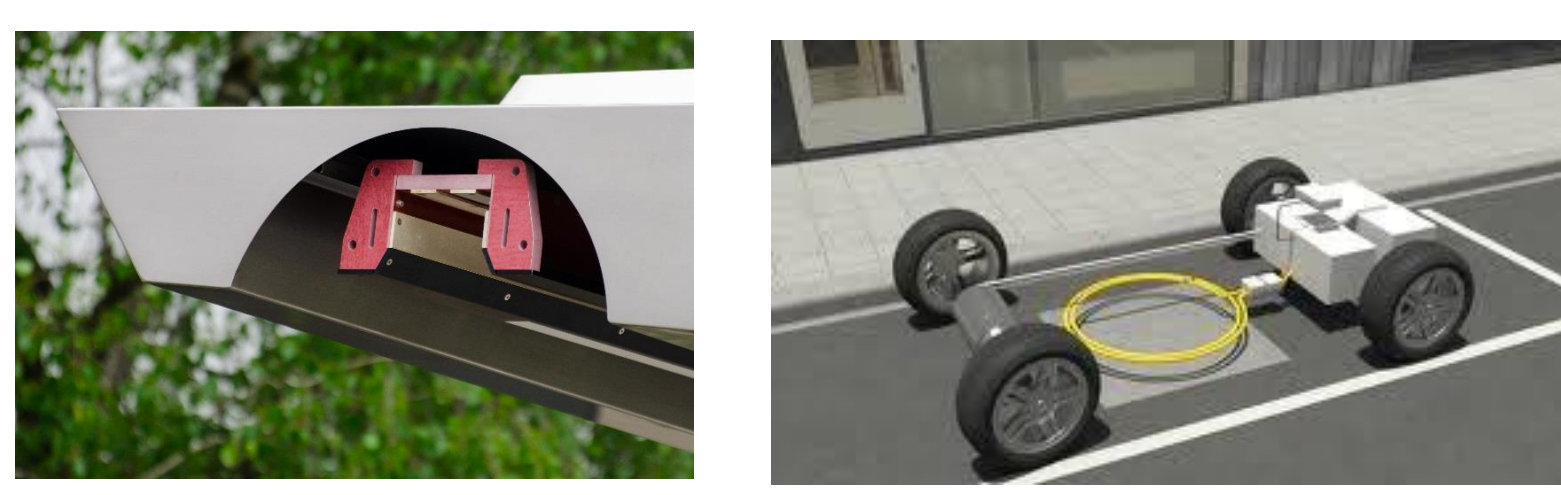
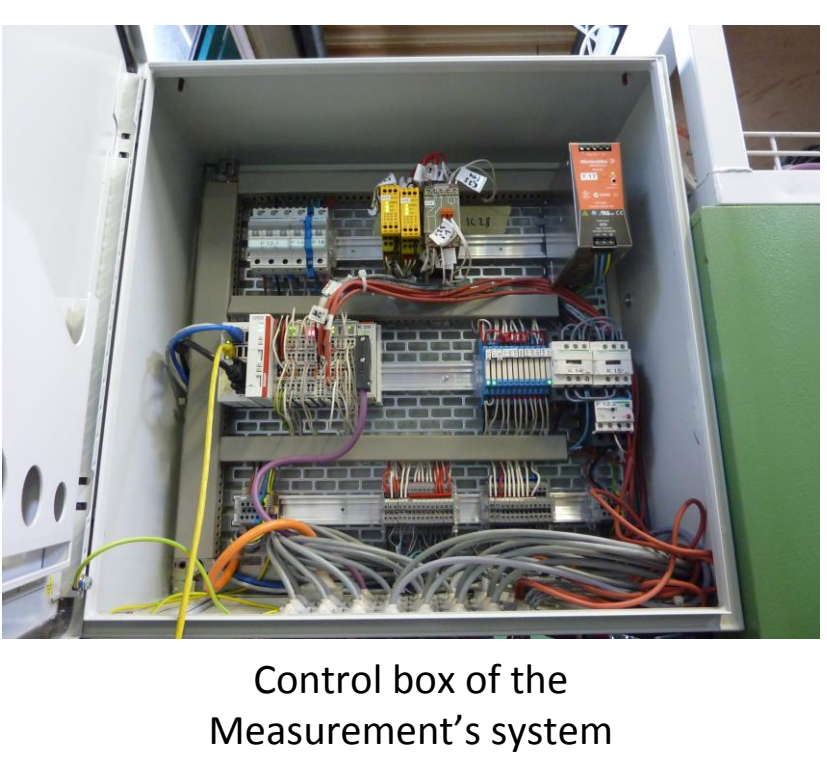
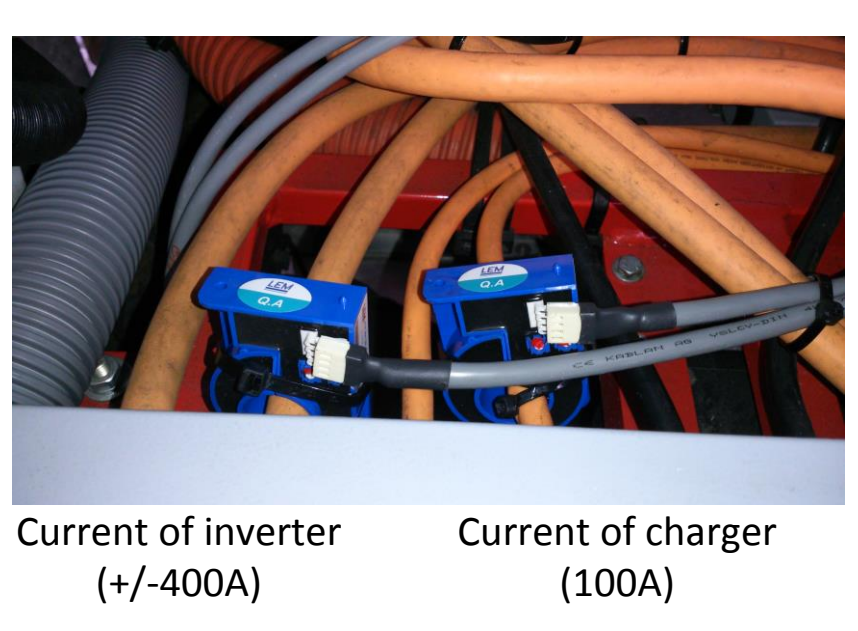


An universal measurement's equipment

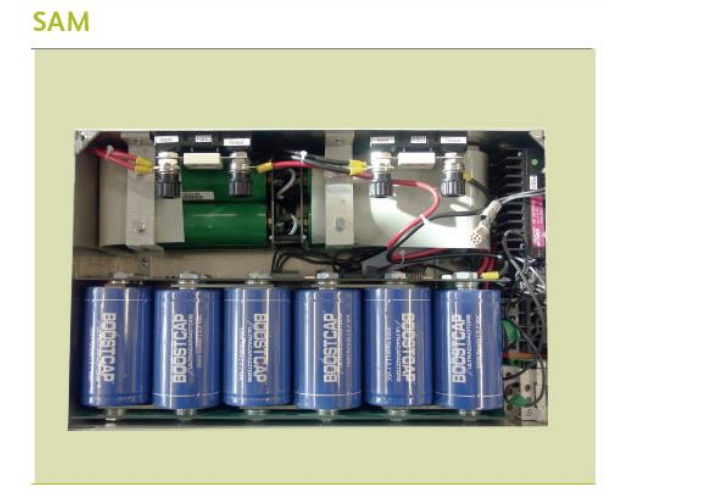
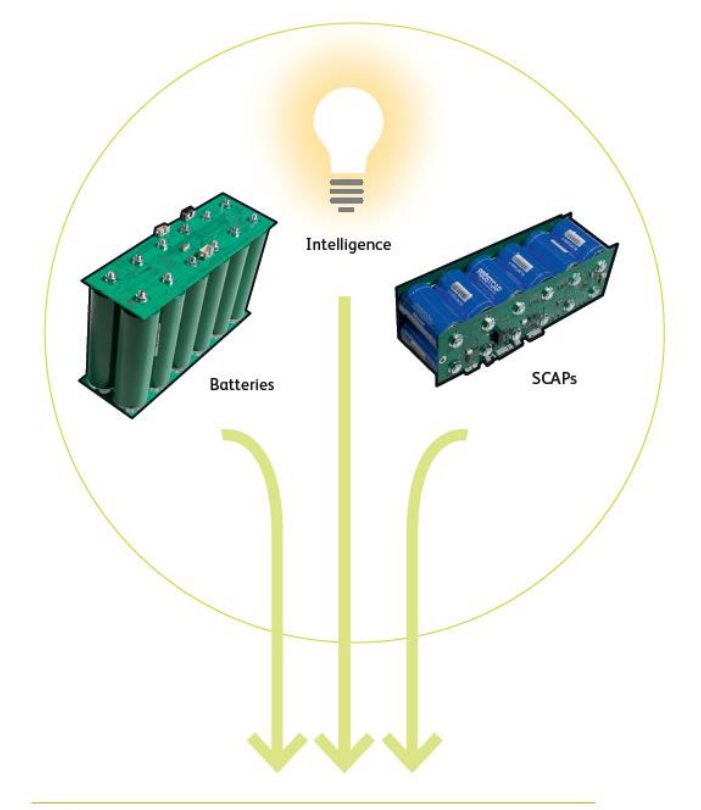


- Main possibilities:**
- Position / time / speed and altitude with a GPS datalogger
 - Time synchronisation with NTP-Server
 - Up to 4 voltage-measurements
 - Up to 4 current-measurements
 - Up to 8 temperature-measurements
 - Interface with internal CAN-Bussystem
 - Counter for energy and capacity of batteries

Implementation in vehicles



New Small Electro Bus for Zürich (VBZ) 2015-2017



1 day in 2030: the Grid-Living & Mobility system relation