

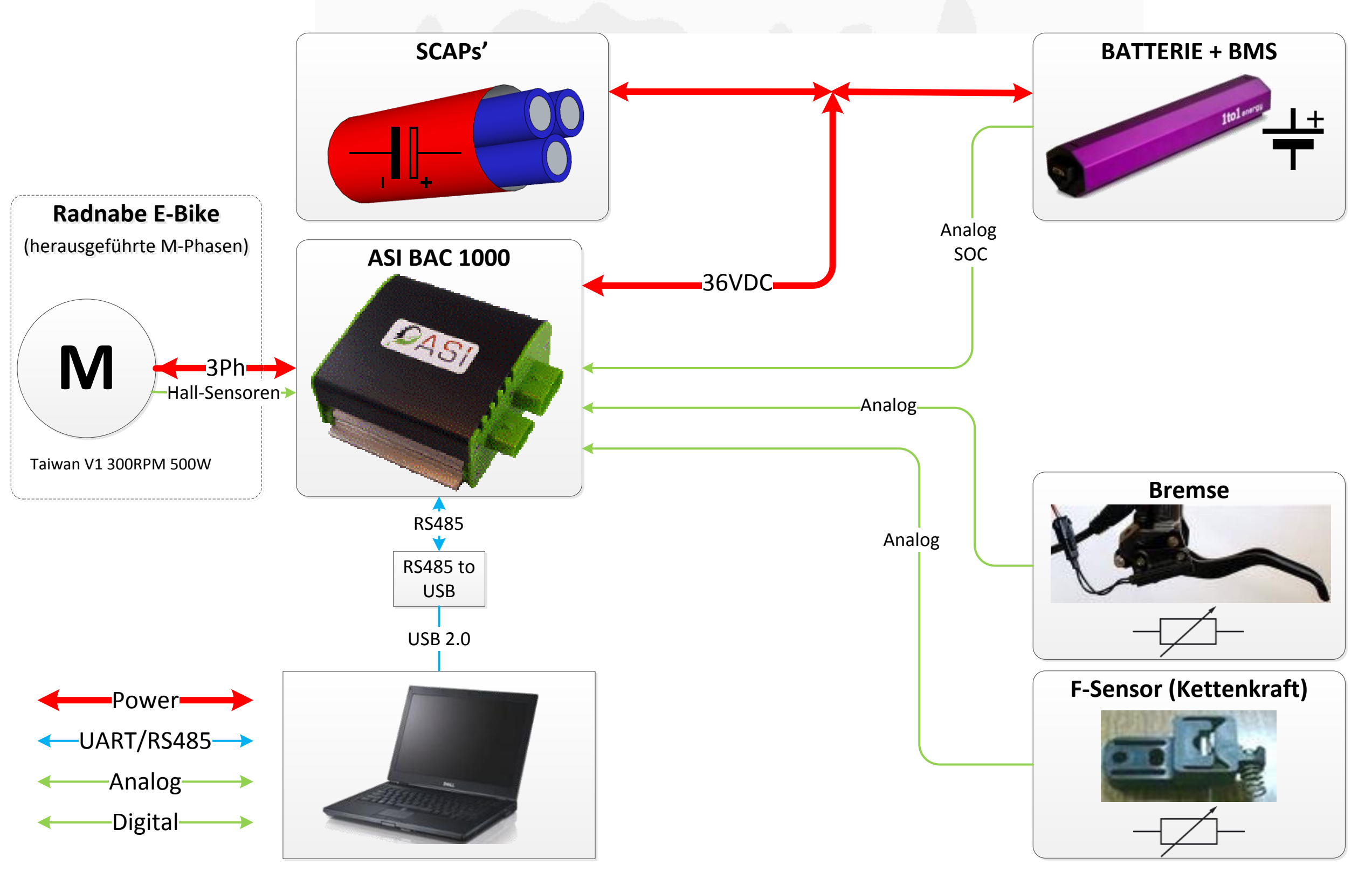


CA A1: Systems and Components for E-Mobility

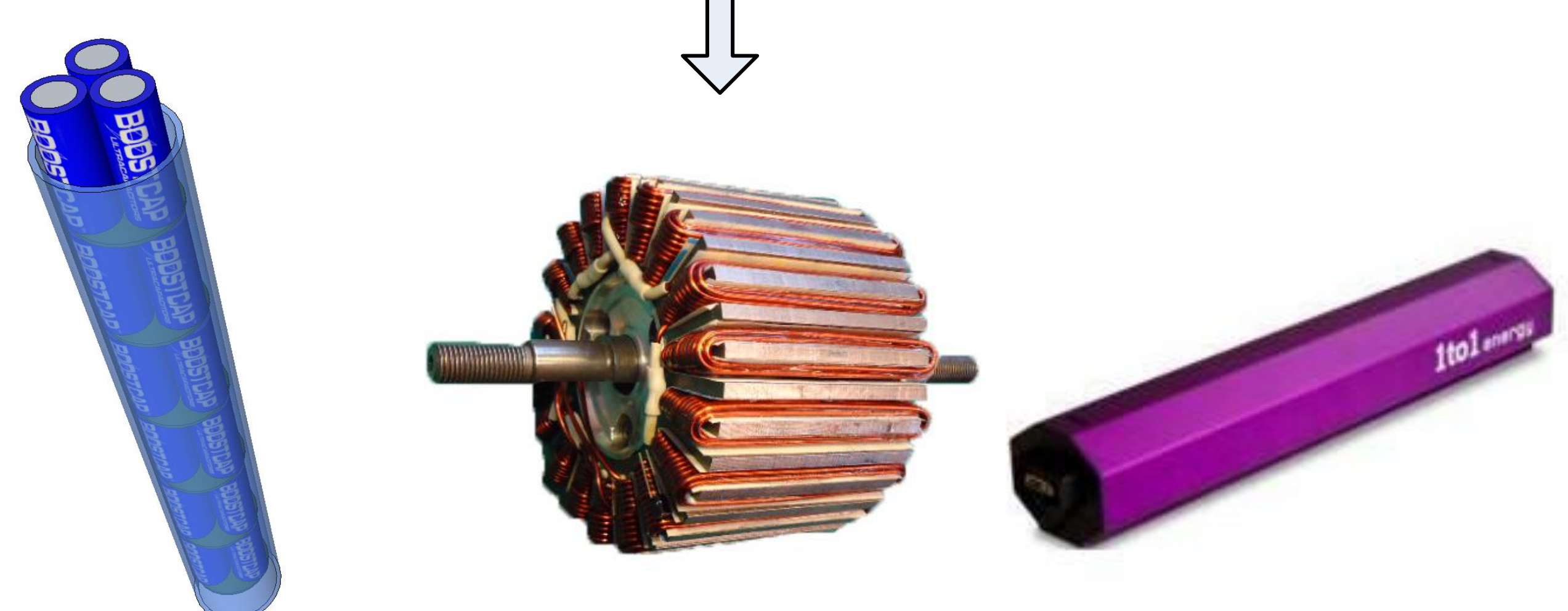
Autors: Prof. V. Härri, O. Duvanel

E-bikes for the future (STROMER ST2)

Main characteristics
 Power: 500 [W]
 Torque: 35 [Nm]
 Max. speed: 45 [km/h]
 Battery: 814 [Wh]
 Autonomy: 150 [km]

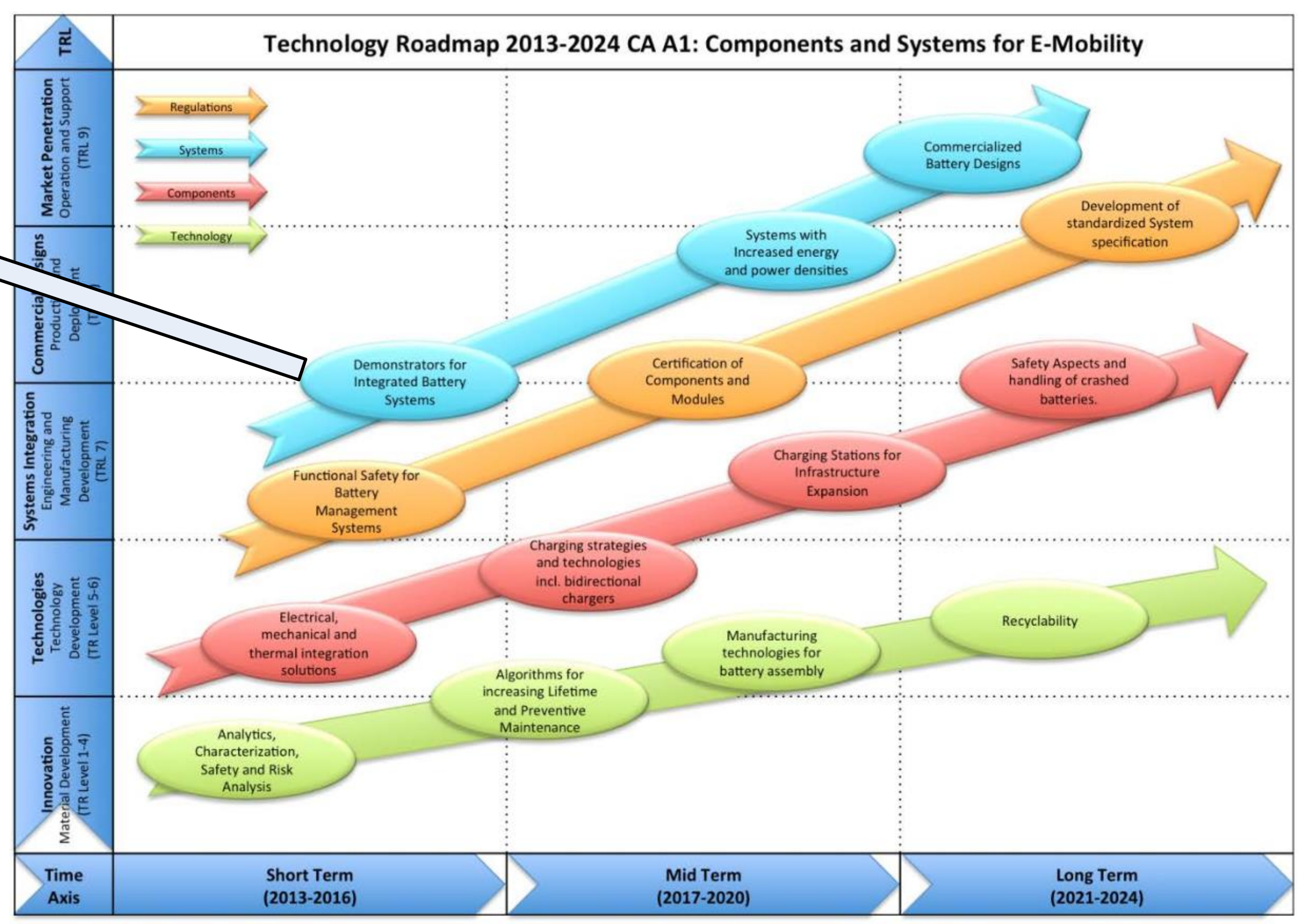


Overview of system



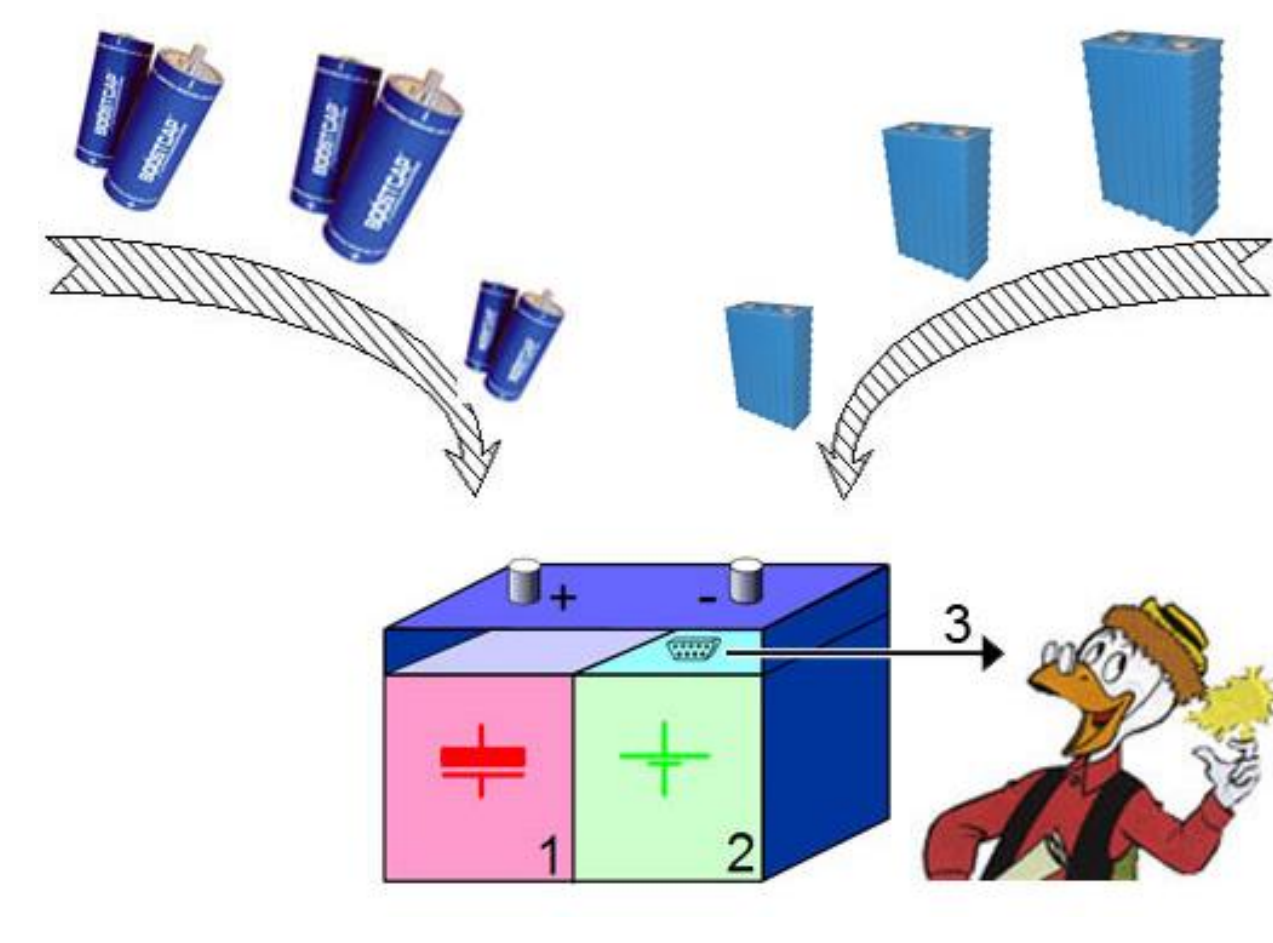
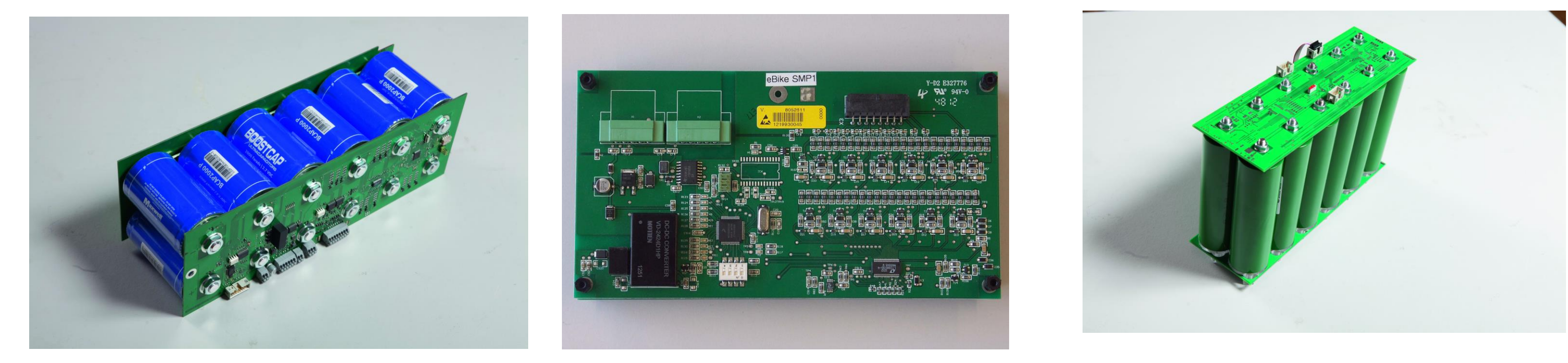
SCAPS and other drives components

The Roadmap



SAM: Super Accumulator Module

Module (Super Capacitors) + BMS (Batteries Management System) + Module (Batteries LiFePo)

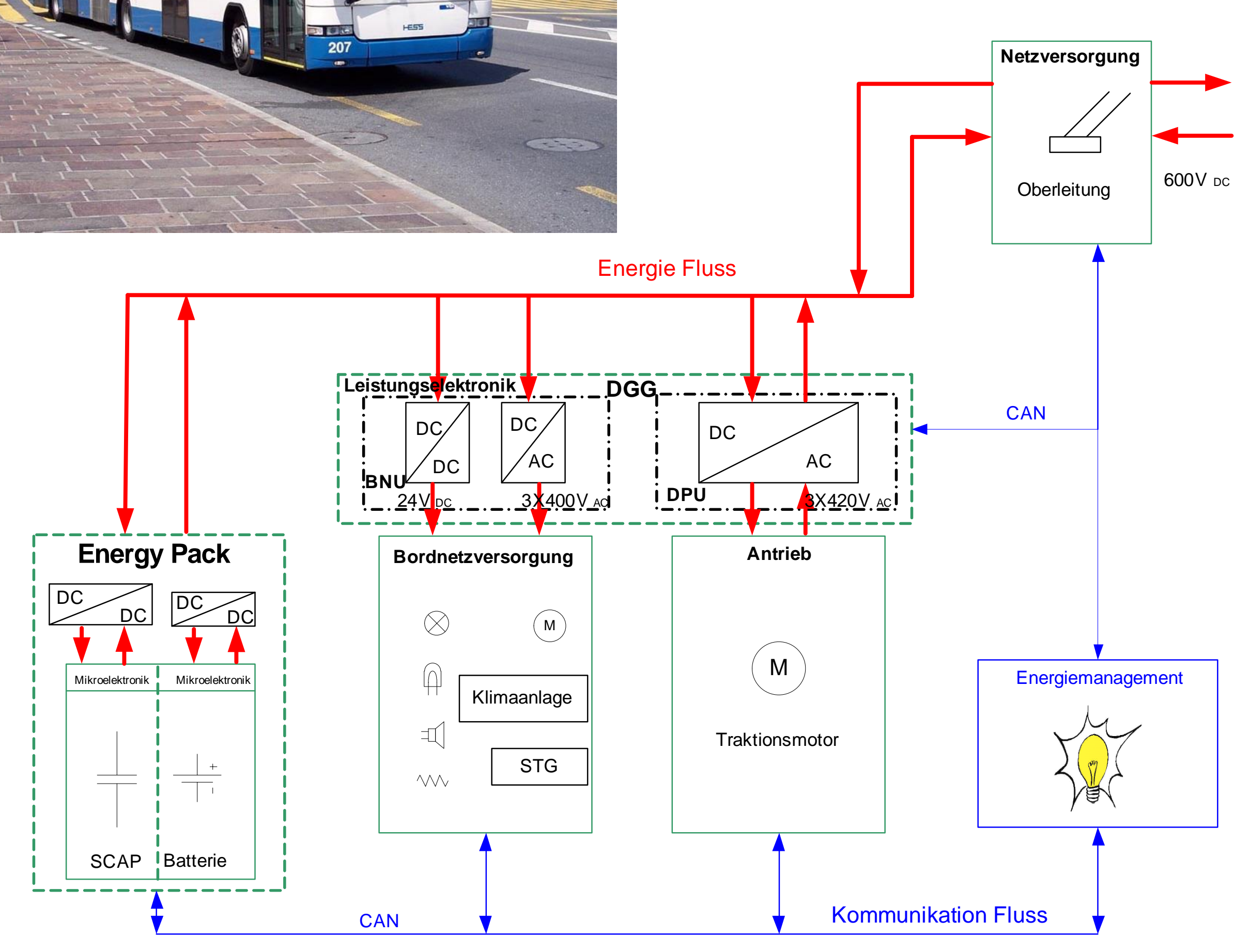


Energy Management
 +
 Power Management
 +
 Efficiency
 =
Energy Efficient System

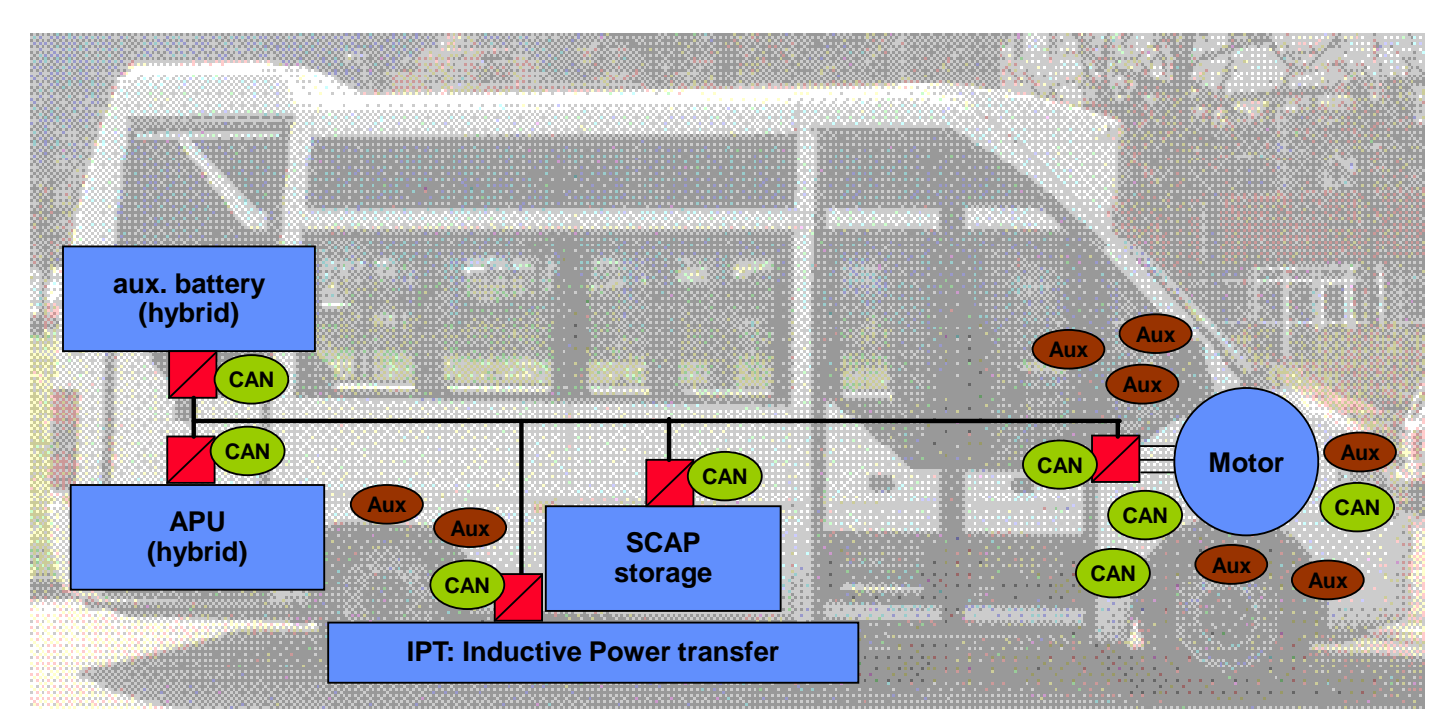


An application: Trolleybus (Multi Use 2 Storage Energy Pack)

1. Emergency
2. "Stop&Go" regeneration
3. Overhead wire stabilization
4. Catenary free line range extender



Overview of system
Swisstrolley 3: (Emergency Drive)



Tohyco-Rider Bus



Stationary Smart-Grid Storage