

A possible glance to what might come up...

Future Vehicle Power Distribution Networks

...but: ...what if the PowerGrid in the vehicle does not need a LV battery at all

Key trends in safe, scalable and efficient automotive power architectures
from the perspective of energy storage devices / batteries

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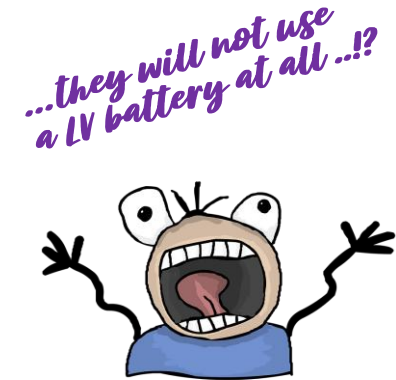
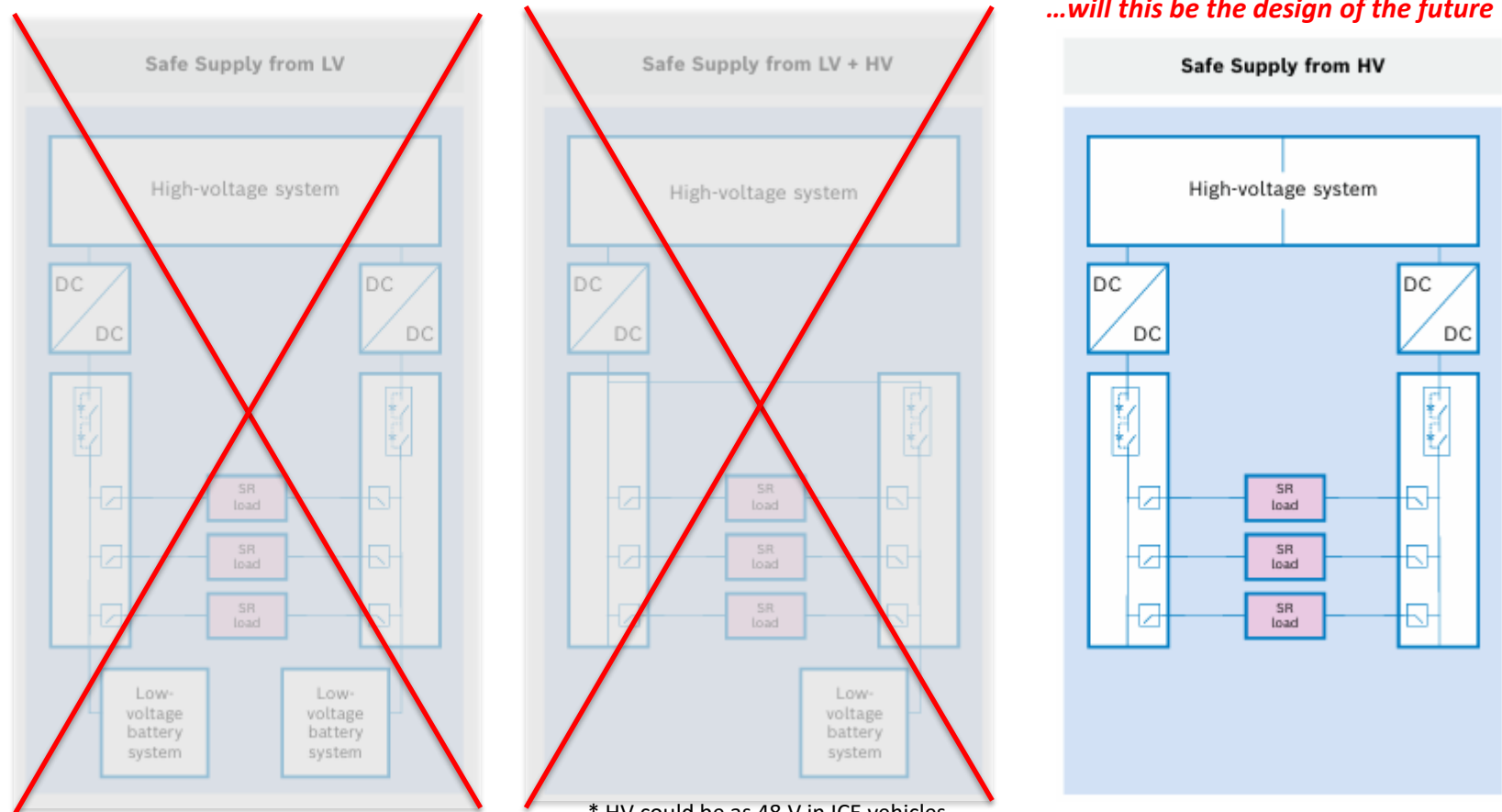
Referring to: White paper from BOSCH:
Gear up vehicle powernets for future mobility

Basic structures / design possibilities

Design change -> formerly by functional break down / demands
new approach: break down in zones / zonal structures [based on SW distribution in Vehicle]

...does one need a [LV] battery at all, when all can be powered by the HV-battery system ?

What energy / voltage levels are to come / have to be brought to maturity ?

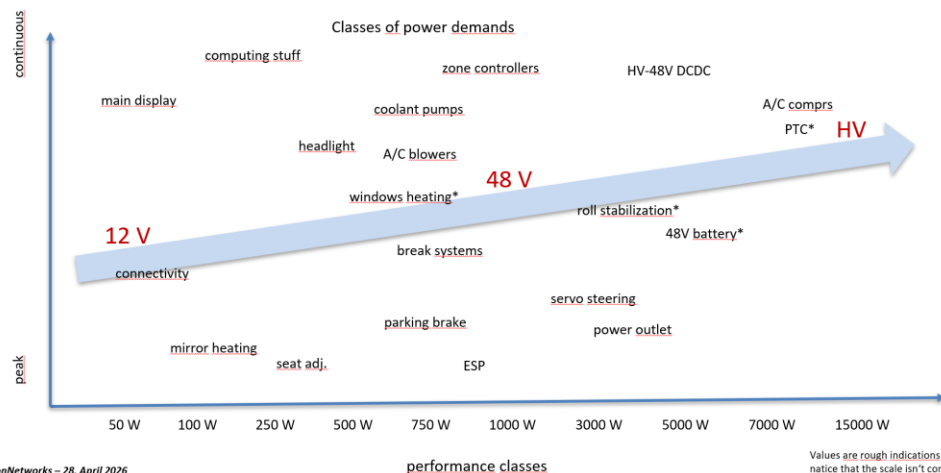


QM loads left out for better visibility

Please check webinar:
Future Vehicle Power Distribution Networks
 for more information

Safety-Critical Power Supply

- Steer-by-wire and brake-by-wire require uninterrupted power
 - Power failures are not acceptable for safety functions
 - Redundancy and fast fault isolation are mandatory



* already in use

Why Power Networks Are Changing

- Software-defined vehicles increase power demand
 - ADAS, automated driving, and infotainment need high availability
 - Traditional 12 V architectures reach their limits

