

Final Event
24-25th of May 2022

Physical Demos

Renault Zoé



Powerful **A**dvanced **N**-Level **D**igital **A**rchitecture
for models of electrified vehicles and their components

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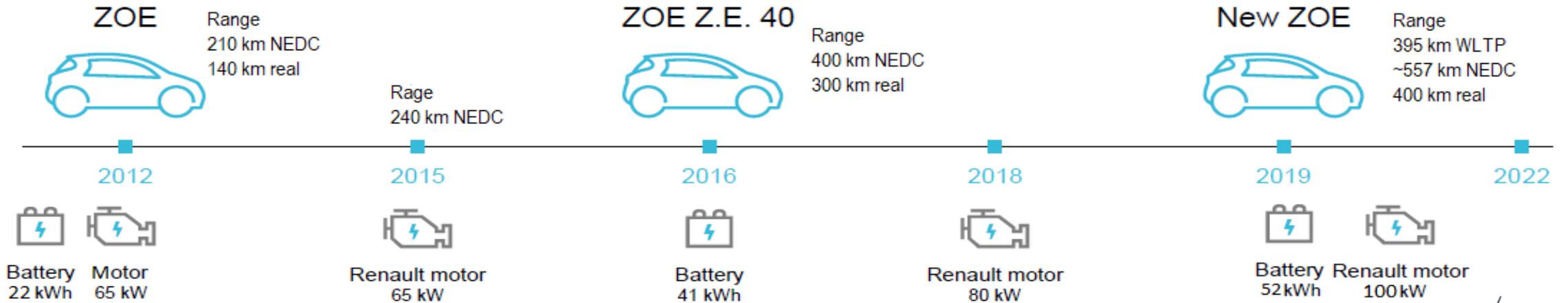


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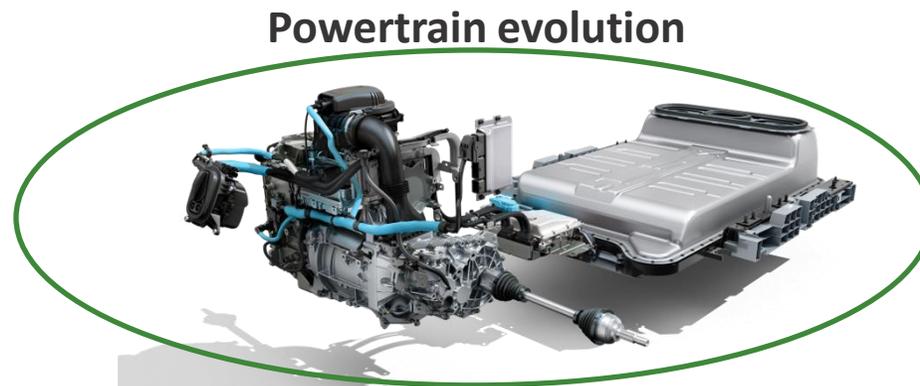


Renault ZOE 2012-2022

same car with different technologies



Renault ZOE 2012



Powertrain evolution



Renault ZOE 2022

Renault ZOE e-Drive evolution



2012

$P_{\max} = 66 \text{ kW}$
 $T_{\max} = 226 \text{ Nm}$
 $n_{\max} = 12000 \text{ rpm}$
Water cooling
140kg

-10% size
+15% efficiency
Similar weight



2015

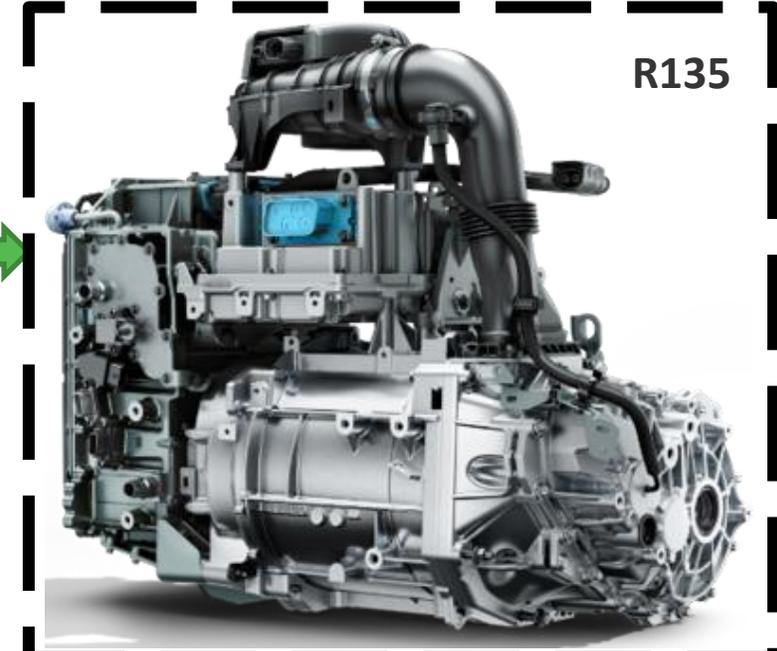
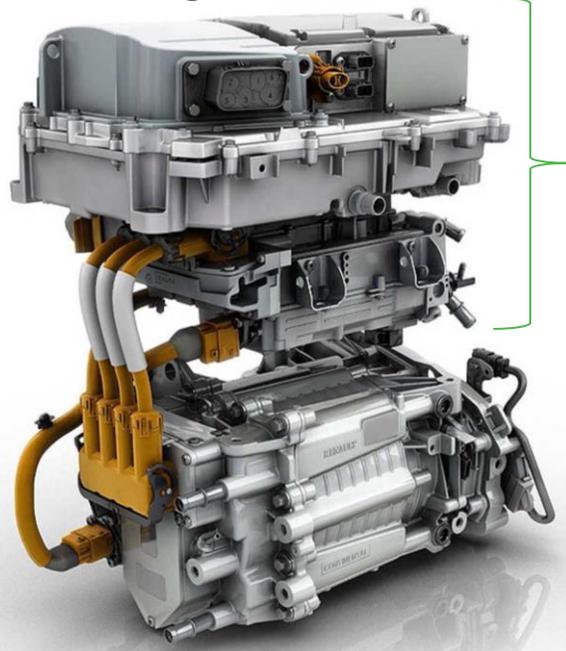
$P_{\max} = 66 \text{ kW}$
 $T_{\max} = 225 \text{ Nm}$
 $n_{\max} = 12000 \text{ rpm}$
Air/Water cooling
140kg

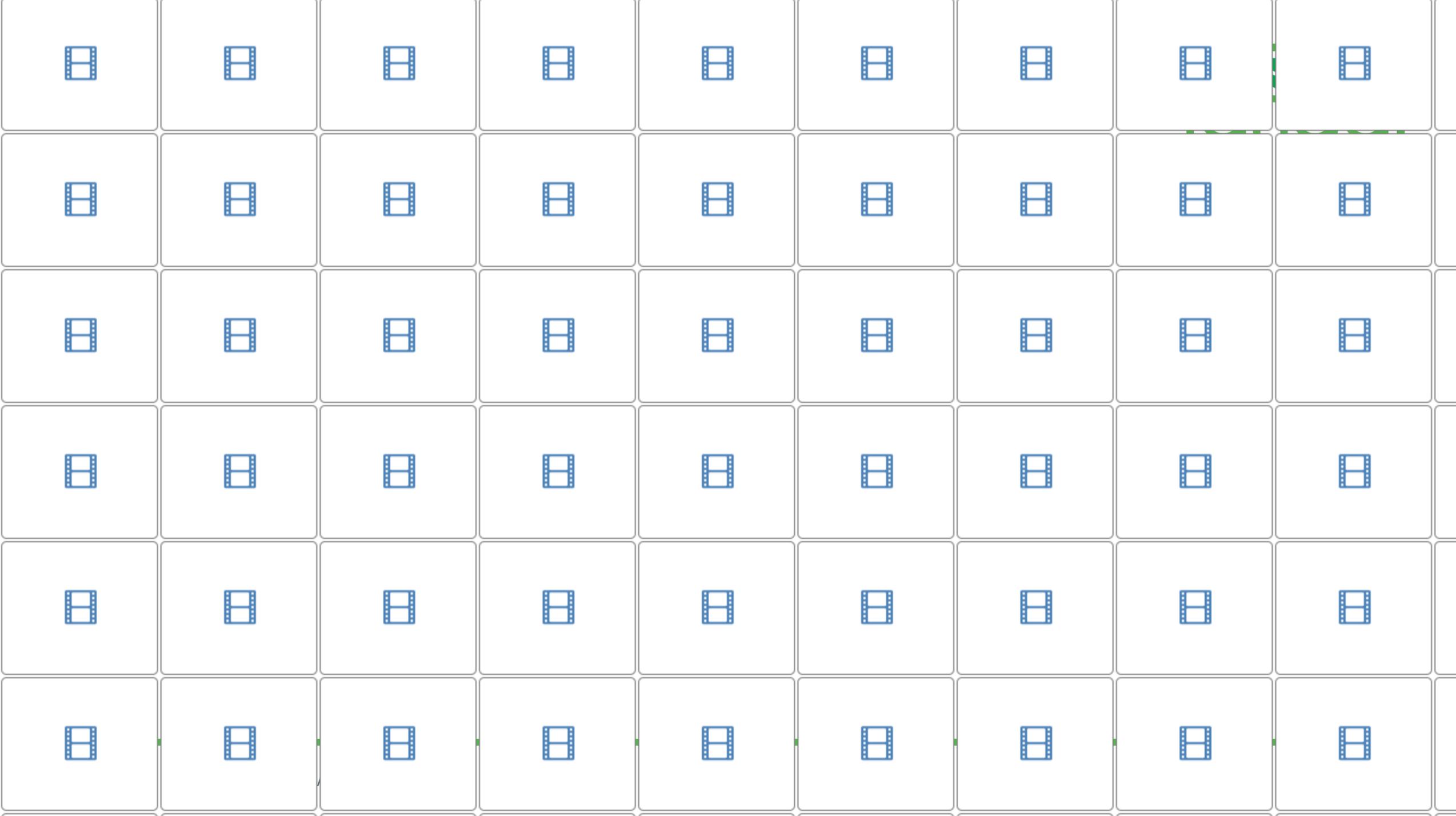
+20% / + 50% power
Similar weight



2018+2019

$P_{\max} = 80 \text{ \& } 100 \text{ kW}$
 $T_{\max} = 225 \text{ \& } 245 \text{ Nm}$
 $n_{\max} = 12000 \text{ rpm}$
Air/Water cooling
140kg





Renault ZOE Battery evolution



2012

Energy = 22 kWh
V = 400 V
Ncells = 192
Air cooling
286kg

+86% Energy
+5% weight
Same size



2016

Energy = 41 kWh
V = 400 V
Ncells = 192
Air cooling
305kg

+27% Energy
+7% weight
Same size



2019

Energy = 52,2 kWh
V = 400 V
Ncells = 192
Air cooling
326kg

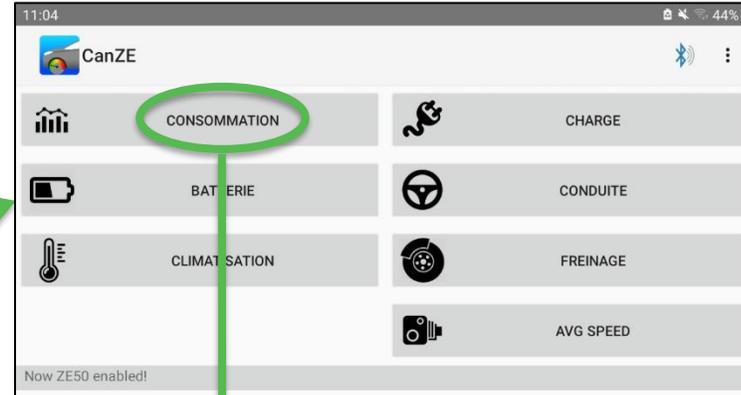
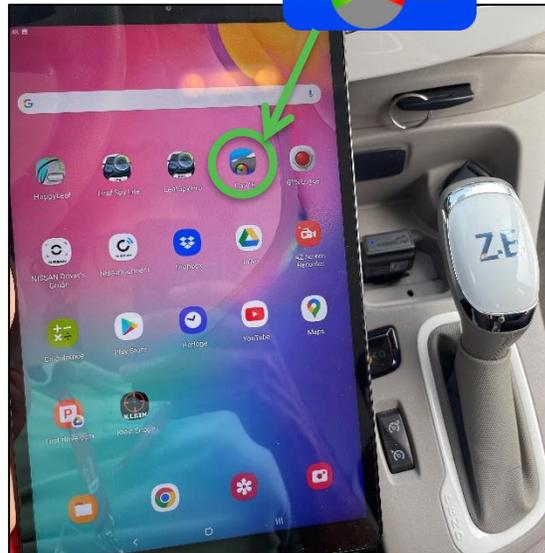


Getting data from Renault Zoe with the CanZE app

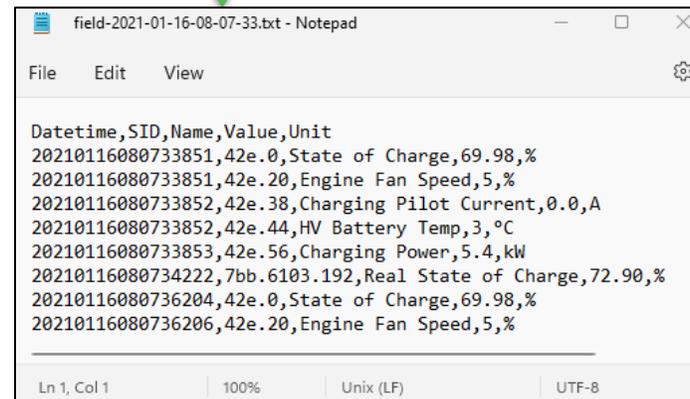


Equipment needed:

- OBD dongle
- Tablet or smartphone with the CanZE app



Data is recorded as .txt



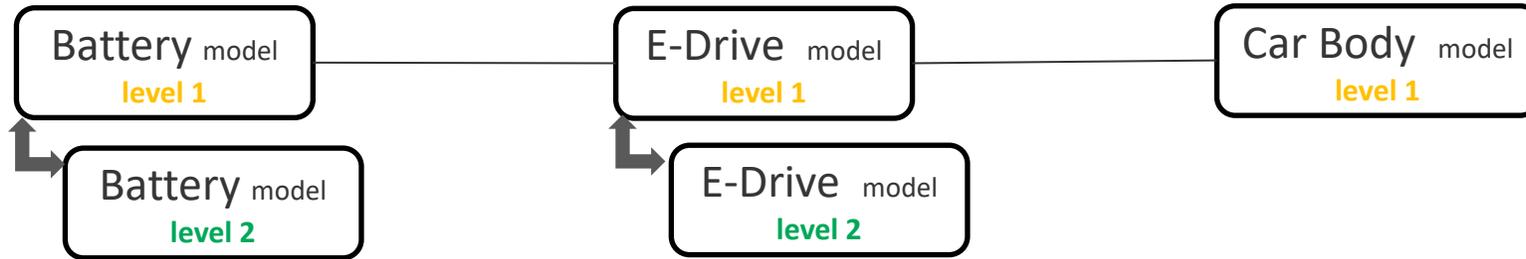
Available data:

- Time
- Vehicle speed
- Battery voltage
- Battery current
- Battery SoC
- Battery temperature
- Electric machine torque
- Electric machine RPM

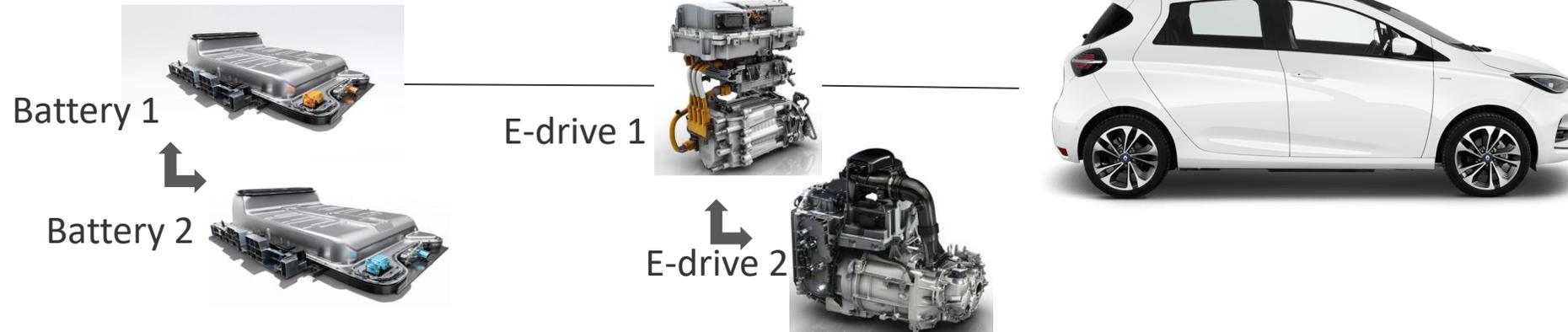
PANDA innovations and Renault ZOE evolution



PANDA flexible simulation organization



Renault ZOE changed battery and e-drive



Necessity of evolutions to keep the market \Rightarrow high interest of a flexible simulation organization



End of presentation

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SIEMENS



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BLUWAYS

