

Final Event  
24-25<sup>th</sup> of May 2022

Physical Demos

Renault Zoé



Powerful Advanced N-Level Digital Architecture  
for models of electrified vehicles and their components

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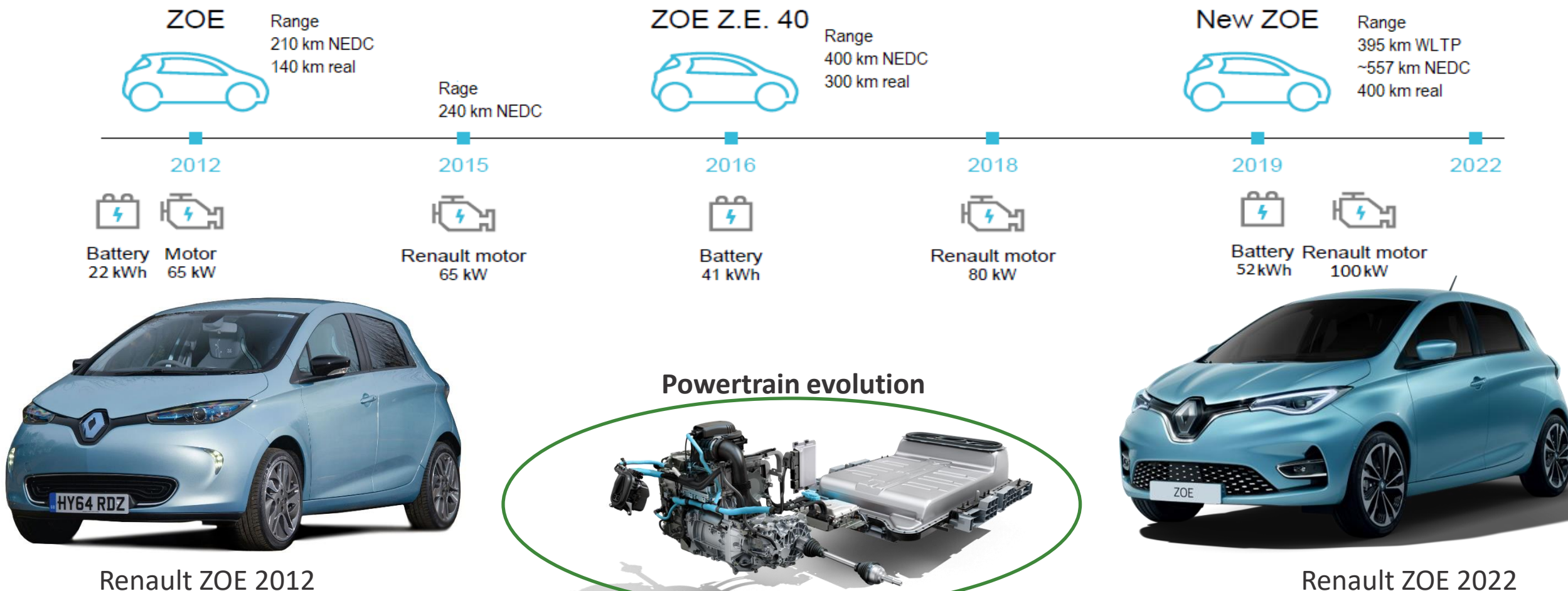


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# Renault ZOE 2012-2022

same car with different technologies



# Renault ZOE 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**

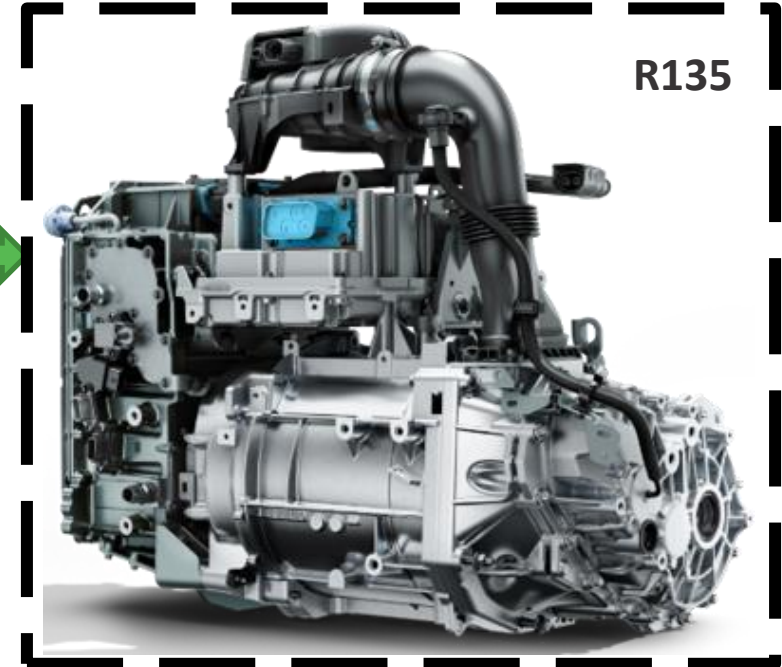
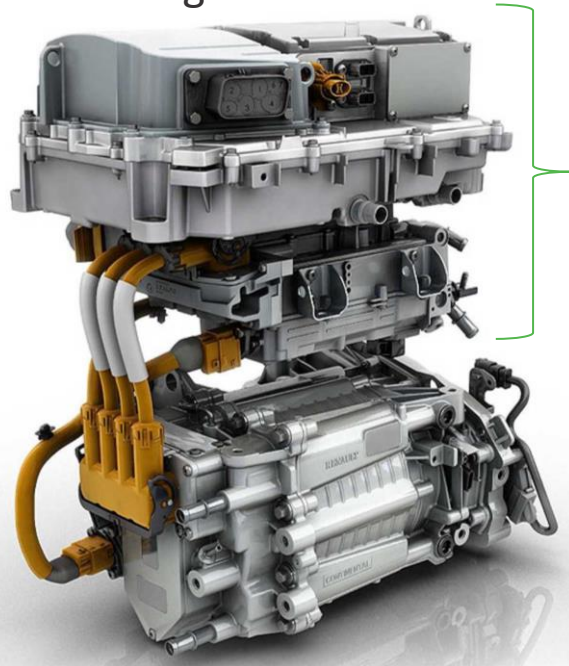
$P_{\max} = 66 \text{ kW}$   
 $T_{\max} = 225 \text{ Nm}$   
 $n_{\max} = 12000 \text{ rpm}$   
Air/Water cooling  
140kg

+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

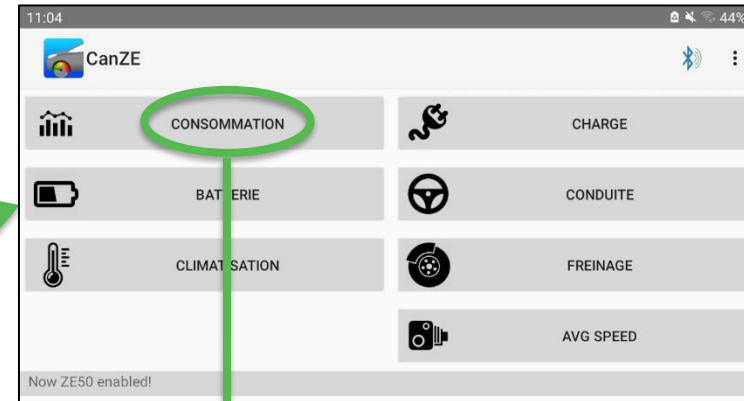


# Getting data from Renault Zoe with the CanZE app

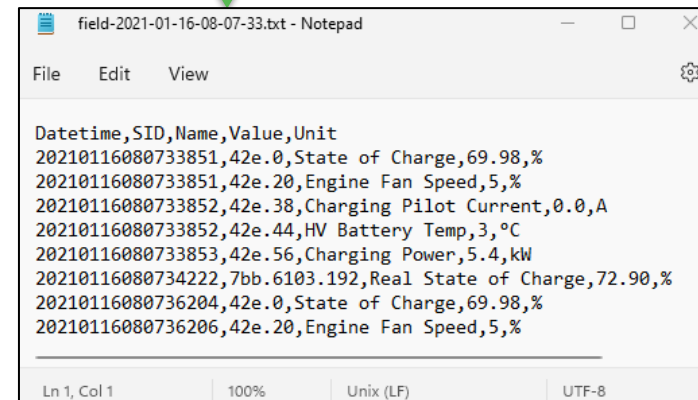


## Equipment needed:

- OBD dangle
- Tablet or smartphone with the CanZE app



Data is recorded as .txt



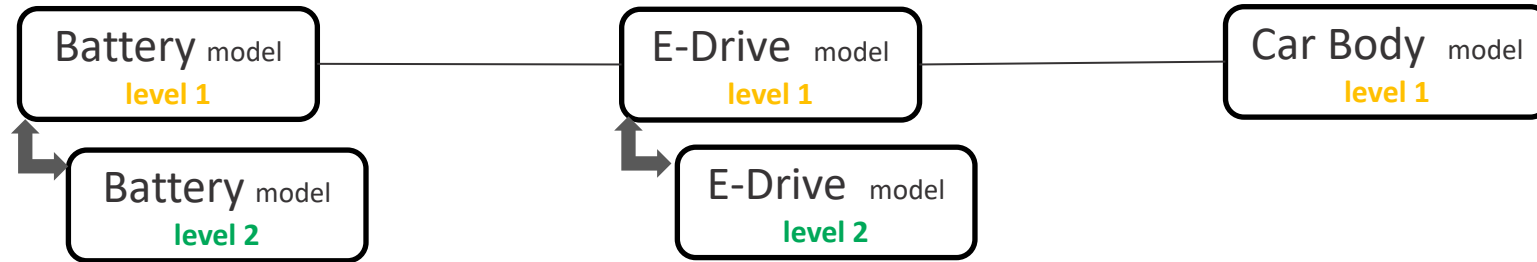
## Available data:

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

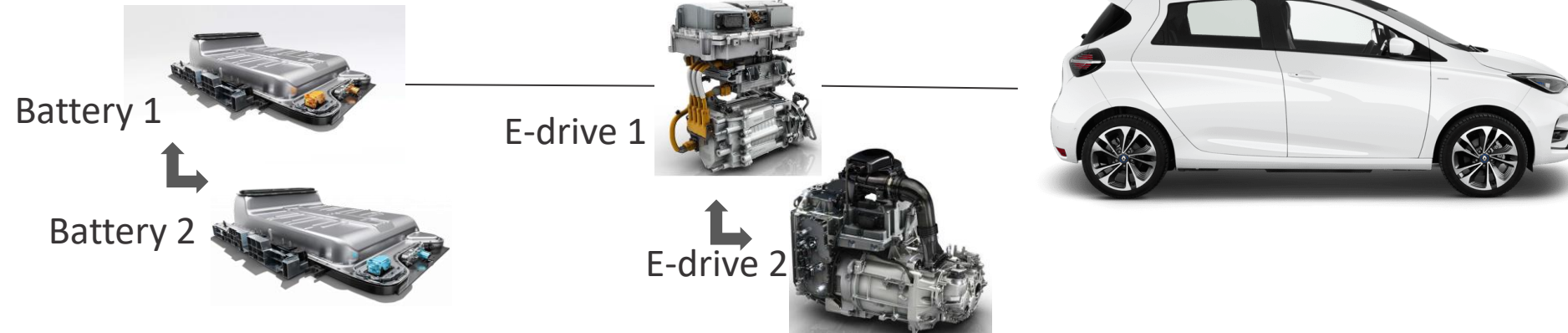
# PANDA innovations and Renault ZOE evolution



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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