

# Meeting with Capital Research Global Investors

Munich, October 9, 2018



e-tron



# Anton Poll

Head of Financial Communication/Financial Analysis, AUDI AG



e-tron



# Deliveries Audi brand 1-9/2018

World  
**1,407,700** cars  
(1,380,463)



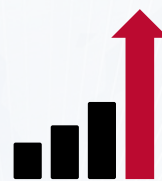
**+2.0%**



China

**483,001** cars  
(418,670)

**+15.4%**



Europe

**616,200** cars  
(661,258)

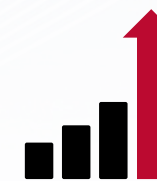
**-6.8%**



USA

**167,420** cars  
(160,914)

**+4.0%**





**now.next.beyond.**

**H1/18**

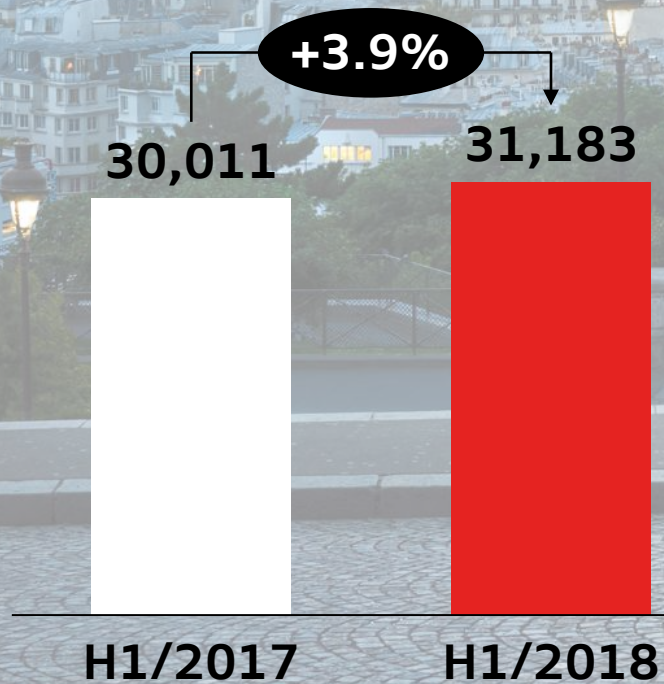
**FY 18e**

**funding  
the  
future**



# strong revenue development

Revenue  
(EUR m)

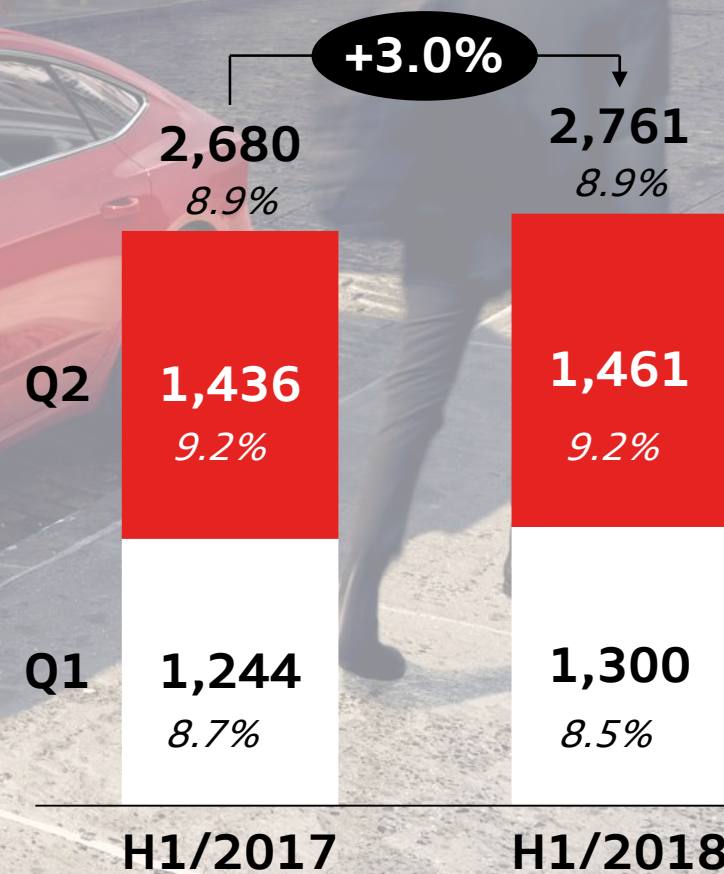




# 9.2% RoS – best-in-class-profitability

strong Q2

Operating profit/margin  
(EUR m)





# keeping Audi on track

An aerial photograph of a city street intersection. A blue Audi car is parked on the left side of the road. Several pedestrians are walking on the sidewalk. A yellow taxi is partially visible on the left. Three red circular callouts with white text are overlaid on the image, each surrounded by concentric white circles and dots. The background shows a crosswalk, a 'ONE WAY' sign, and a green trash can.

**growing  
challenges**

**focusing  
on  
efficiency**

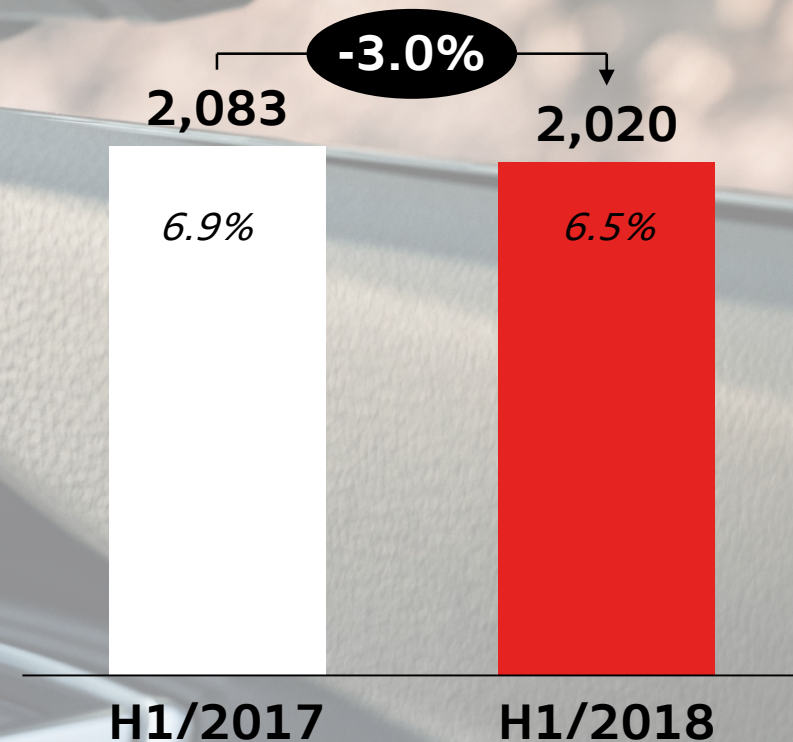
**China  
business**



# continuous cost improvements



## R&D activities & ratio (EUR m)

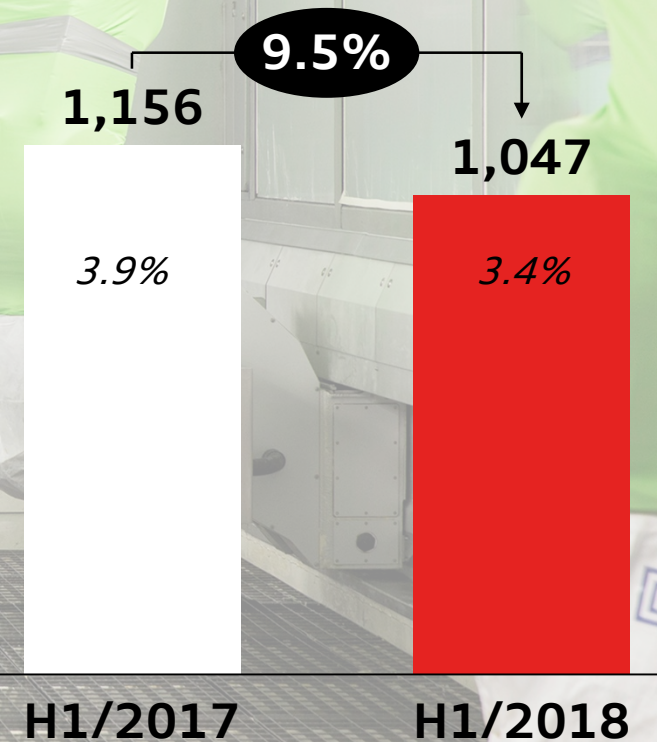




# Capex discipline

Capex ratio  
**3.4%**  
H1/2018

## Capex & ratio (EUR m)





# China business drives KPIs

**+20%  
deliveries**  
H1/2018

**customer  
focus**

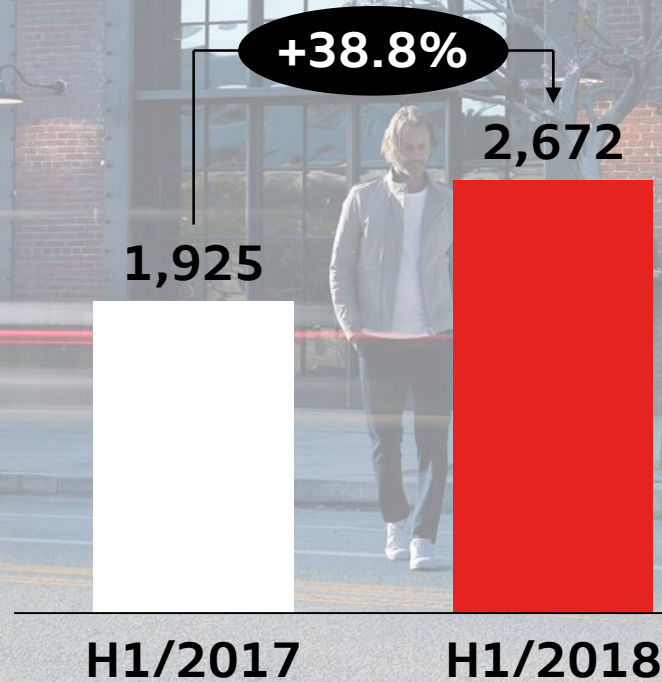
**JV  
performance**





# major contributor to VW Group NCF

**Net cash flow**  
(EUR m)





# Outlook: further WLTP-risks ahead

**Deliveries**

prior year's  
record level

**Revenue**

slightly above  
prior year level

**Operating  
Margin**

of 8-10%



**Net  
Cash Flow**

between  
€2.7 and 3.2 bn

**FY 2018**



# top-priority: funding the future

electric vehicles

digital business

upfront  
expenditure  
**€40** bn  
until 2025

autonomous driving





# Audi Transformation Plan (ATP)

transforms  
and  
prioritizes  
resources

frees up  
a total of  
€ **10** bn  
until 2022

secures  
Operating RoS  
**8-10%**

2025



renewed C/D line up adds profitability





# success story Audi China

**7 attractive models from  
local production**

---



**1988**



**today**



# success story Audi China

**7 attractive models from  
local production**



1987



today

**every third Audi delivered  
to Chinese customer**

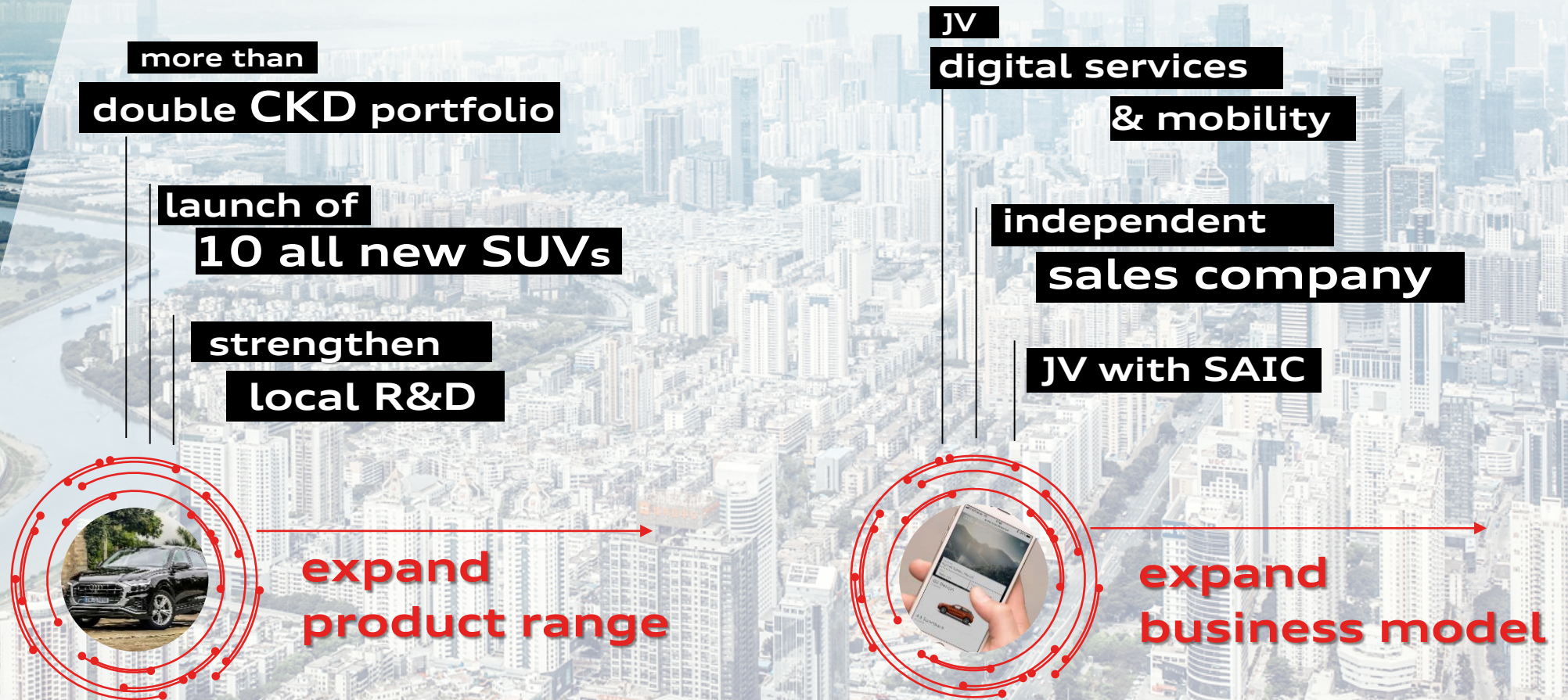
597,866

1987

2017



# China: double deliveries by 2022





# e-tron



early-to-market

designed on  
MLB modules



built for series  
production  
at Brussels plant

strong pricing  
paves the way for  
“New Premium”



# next: group synergies enhance EV-profitability



**MEB**



**30%**  
efficiency  
gains

**PPE**

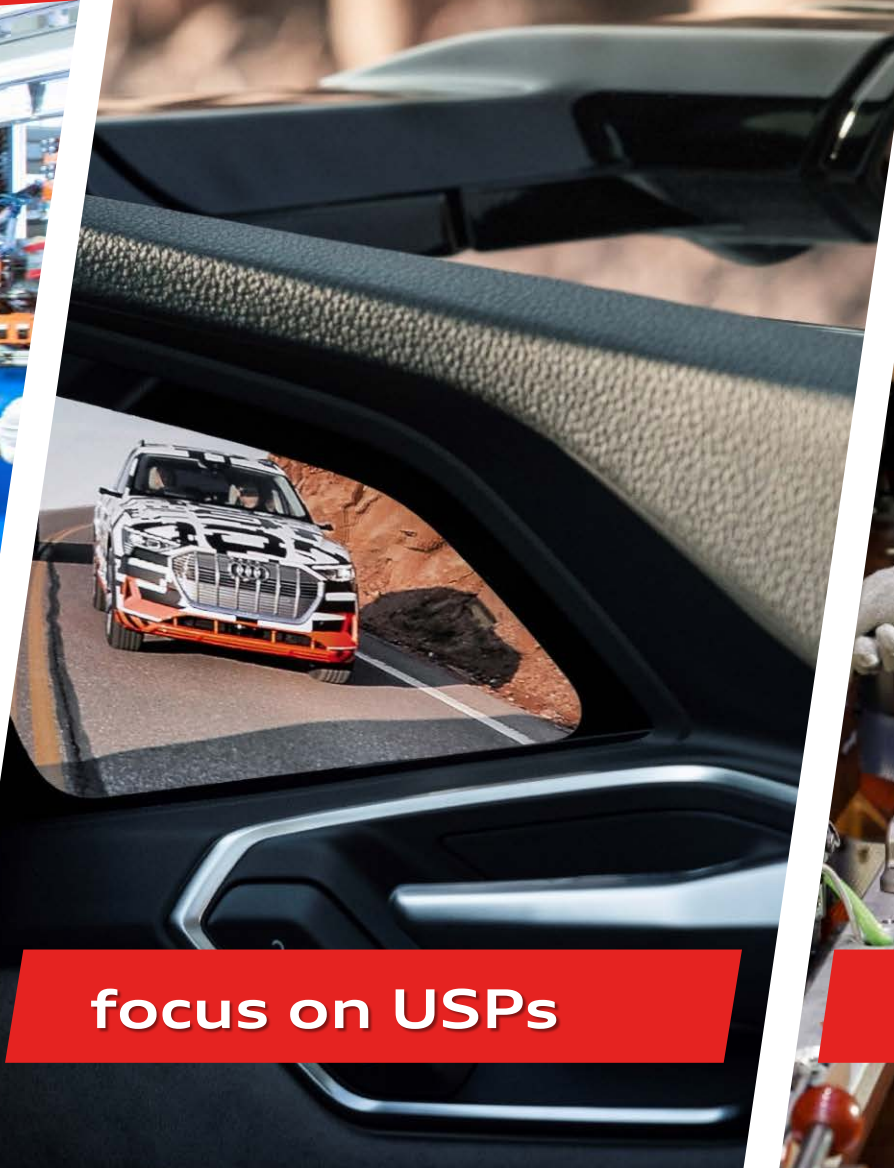
**electric architectures within VW Group**



# continuous cost improvements



material costs



focus on USPs



transformation of skills



# Dr. Stefan Niemand

Head of Electrification, AUDI AG



e-tron



**Why are we  
going electric?**





**LAW**

**CUSTOMER BEHAVIOR  
& DEMAND**

**SUSTAINABILITY**



**H**ow did we  
address the  
questions we had?



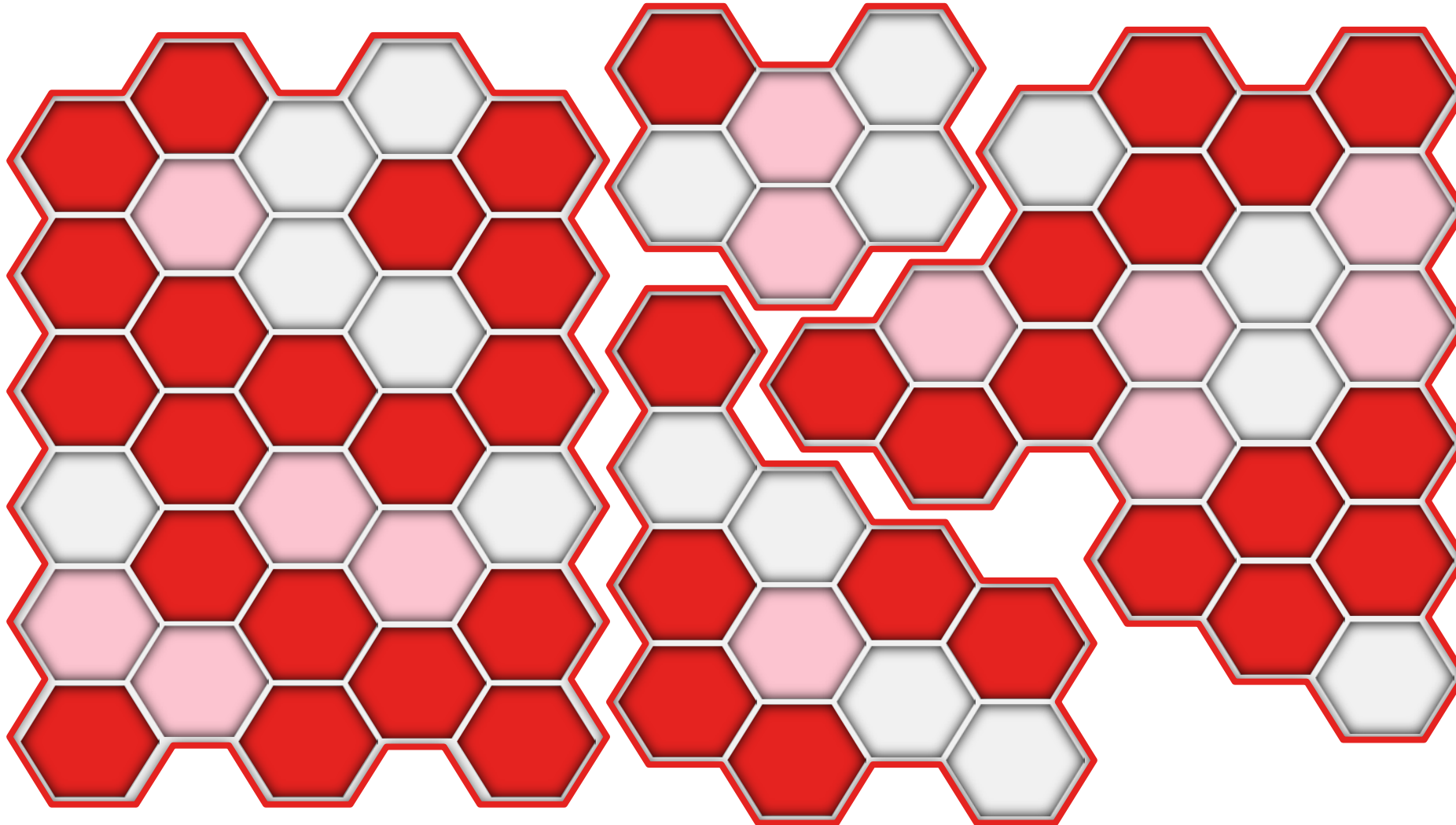
# e.readiness program

started early to  
address the fields  
of action for  
going electric

**OVERALL**

**ENGINE**

**CHARGING**



**BATTERY**



**Why with a  
fullsize SUV?**





**C**USTOMER  
DEMAND in  
C SEGMENT

**G**ROWING  
SEGMENT

**M**AKING  
ELECTRIC CARS  
SEXY



**Is it based on a  
combustion engine  
platform?**





Seats



Infotainment

Suspension &  
Brakes

...

+

**Intelligent  
modular approach**

**New platform design** for a  
**full electrical car** considering characteristics  
like **battery position & crash behavior**  
**No restriction from ICE platforms**





**Is** it a „one-off“?

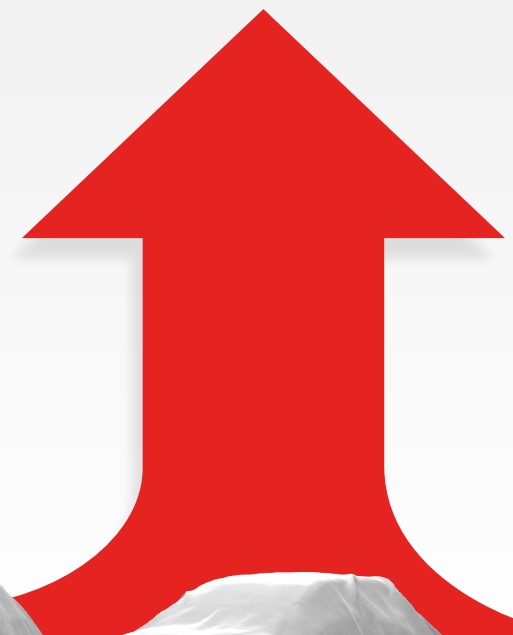


# THE AUDI E-TRON

is the beginning...



...of an **ELECTRIC**  
**MODEL OFFENSIVE**

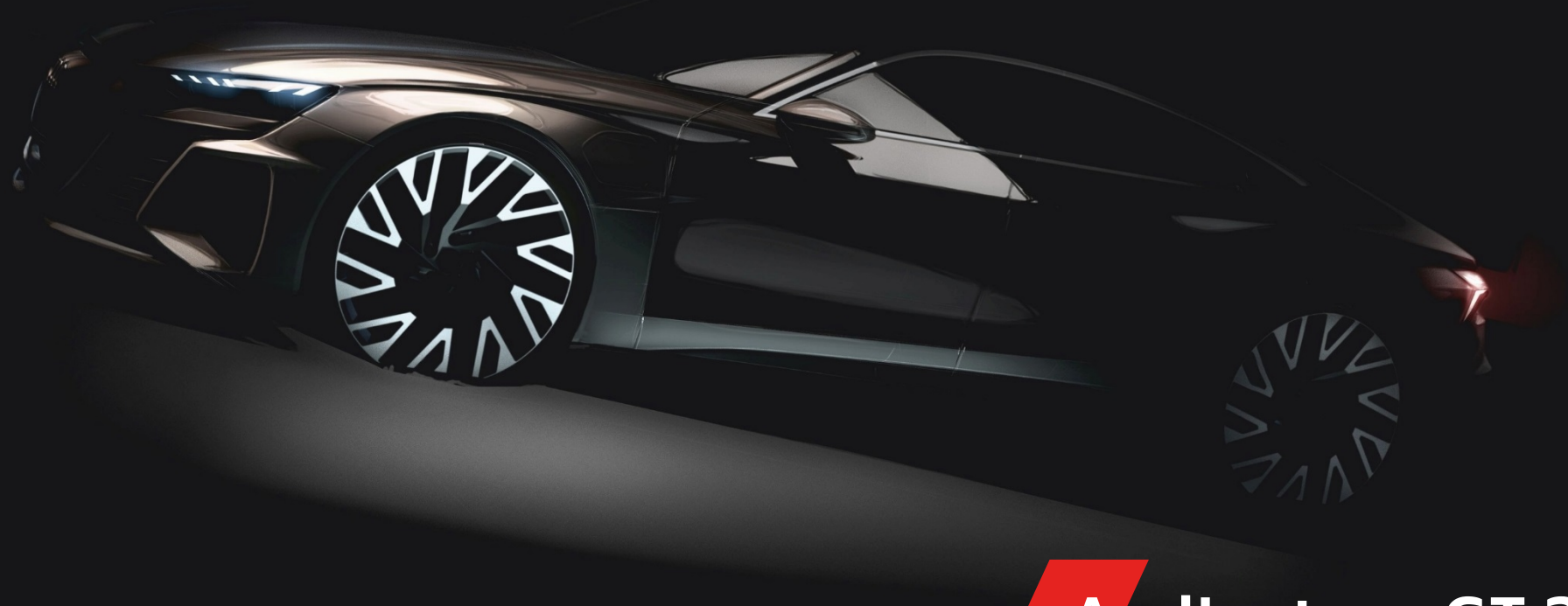






 Audi e-tron Sportback 2019





 Audi e-tron GT 2020



# E-Roadmap

BEV platform  
PPE



BEV platform  
MEB



BEV  
dedicated  
platform



PHEV



2016

2020

2025



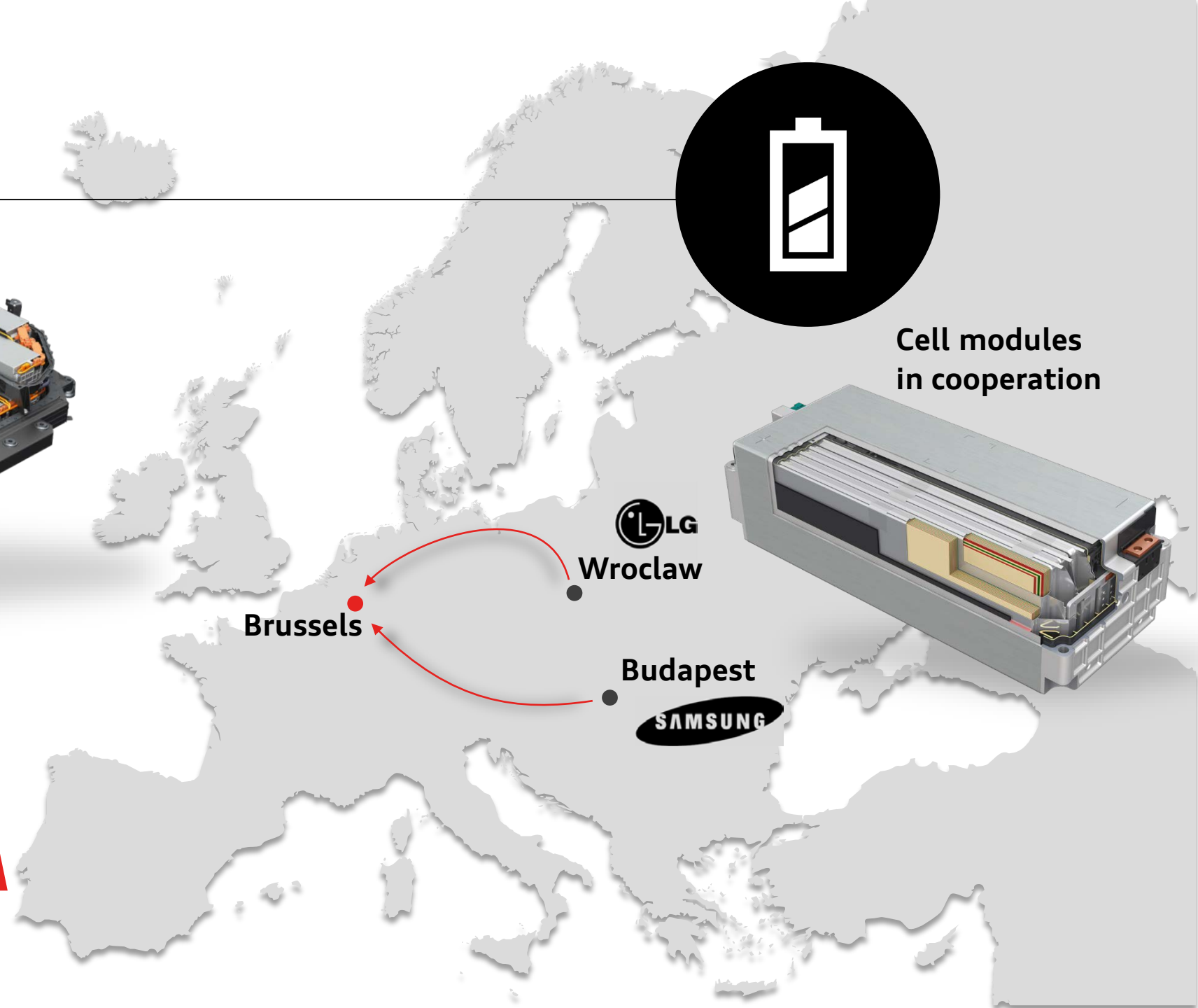
**W**hat about  
the battery?



# BATTERY



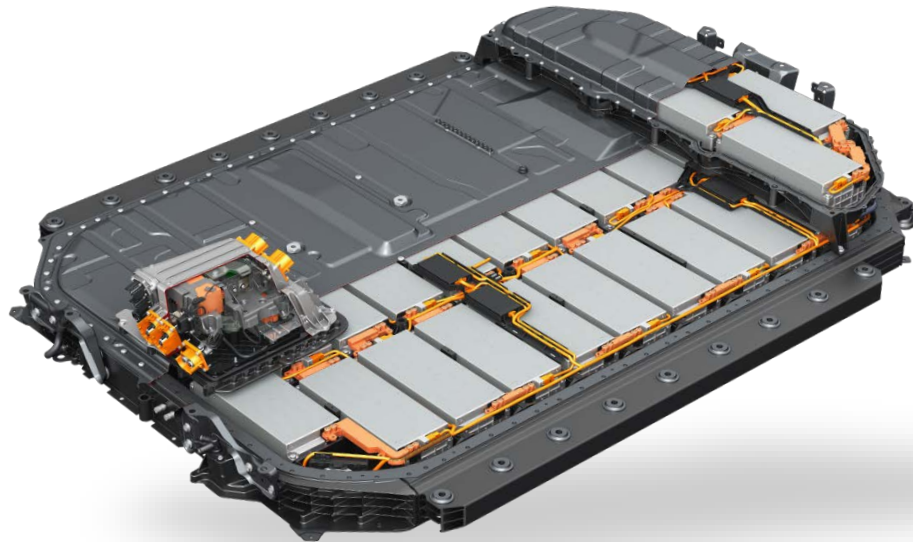
Battery assembly at carbon-neutral factory in Brussels



Cell modules  
in cooperation



# BATTERY



**Car life** construction

**432** Li-Ion cells  
**36** modules

**699kg** weight

**2,28 m \***  
**1,63 m \*** dimensions  
**0,34 m**

## Biggest challenges

**too heavy**

**too big**

**too expensive**

**~ 33%** material costs

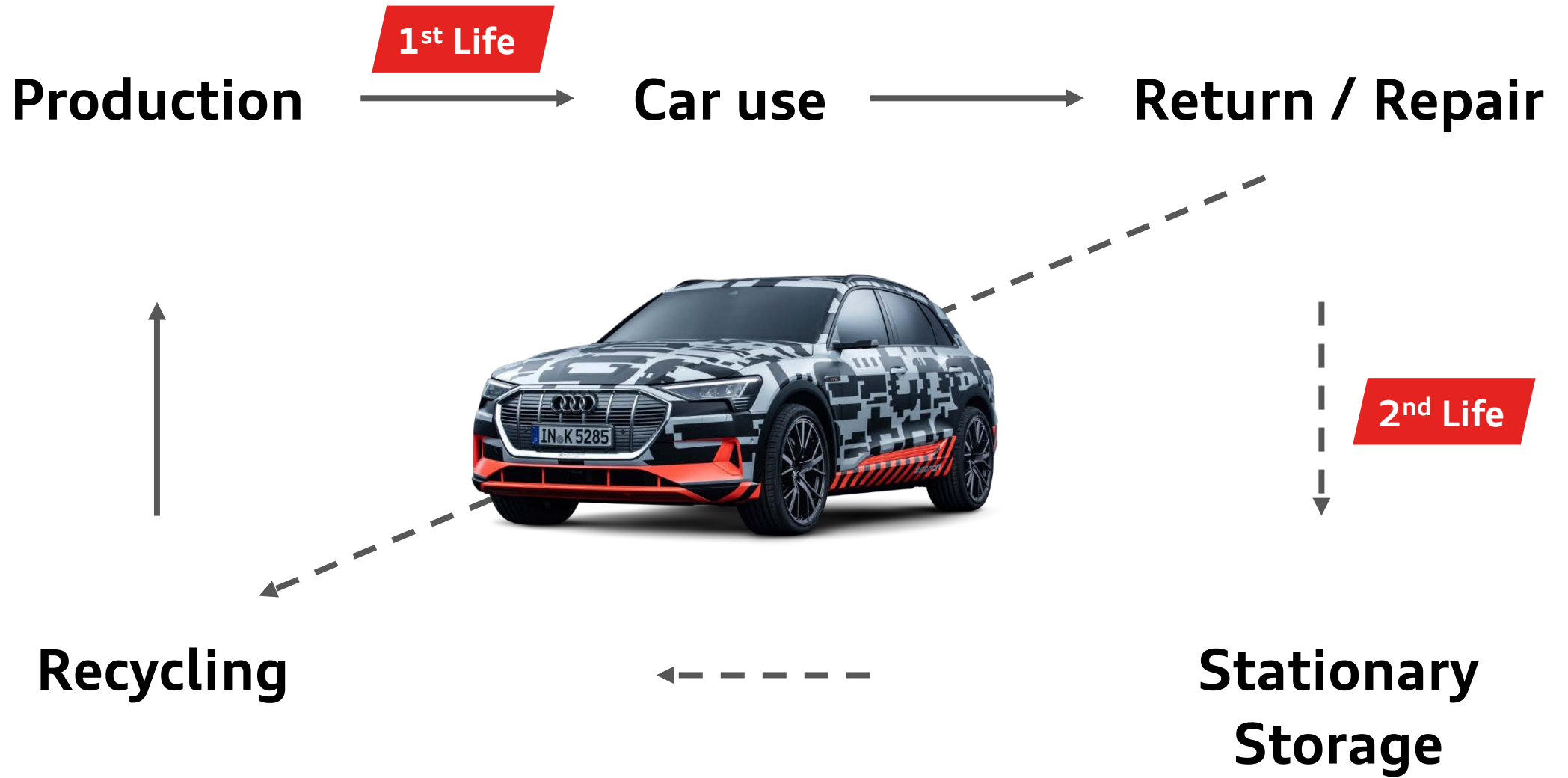




**What happens with the  
battery after car life?**



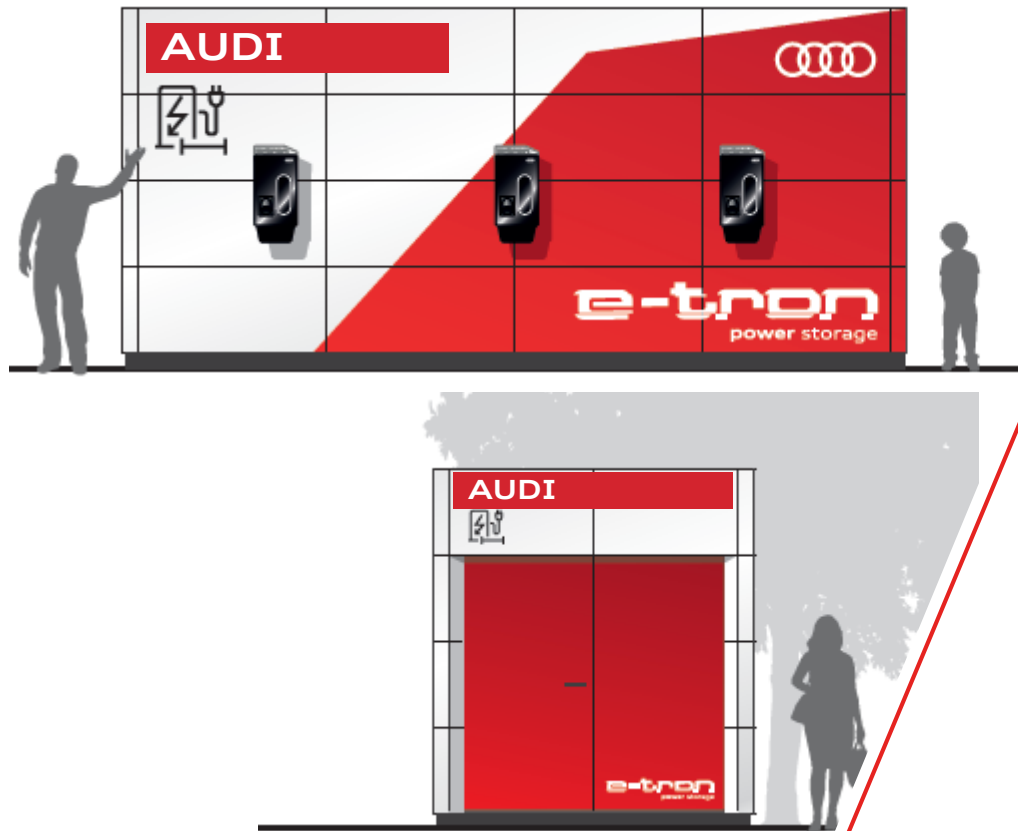
# 1<sup>st</sup> & 2<sup>nd</sup> Life





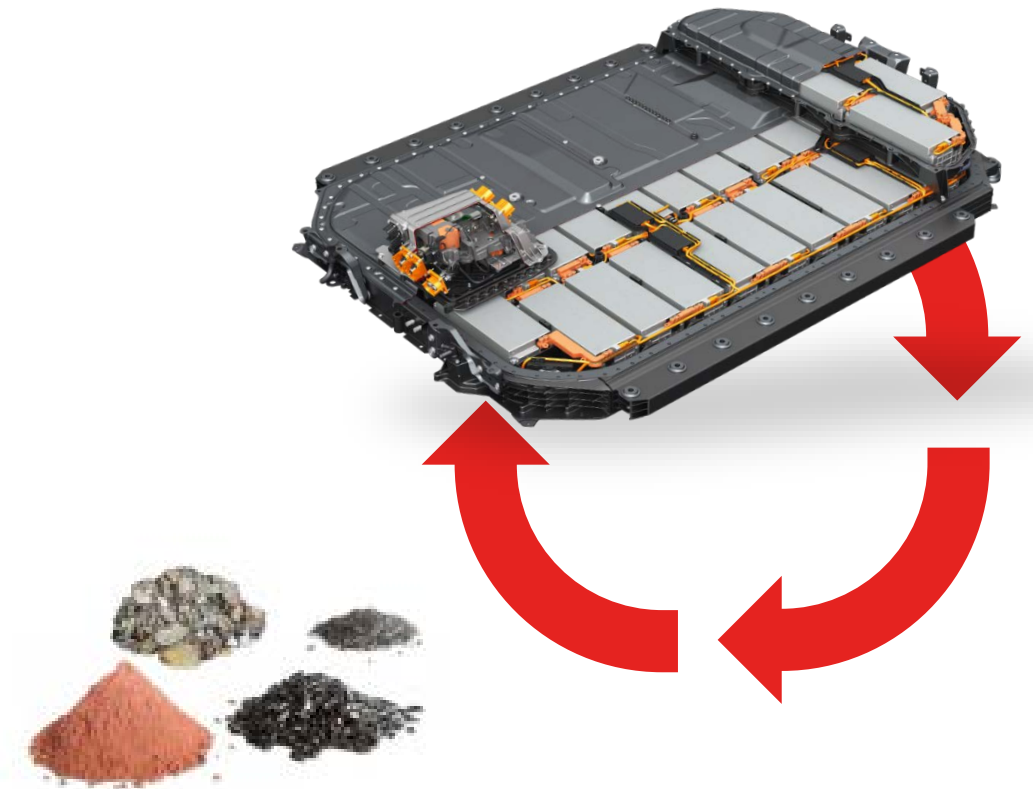
## SECOND LIFE

Stationary energy storage from a sustainable and economic point of view



## RECYCLING

Running pilot projects on the retrieval, disassembly of batteries and separation of the several raw materials





**Why are we going  
to Brussels?**





- Chances and synergy effects by shifting the Audi A1 to Martorell (Spain)
- Learning in a dedicated “e-plant”
- Bundling of know how & expertise

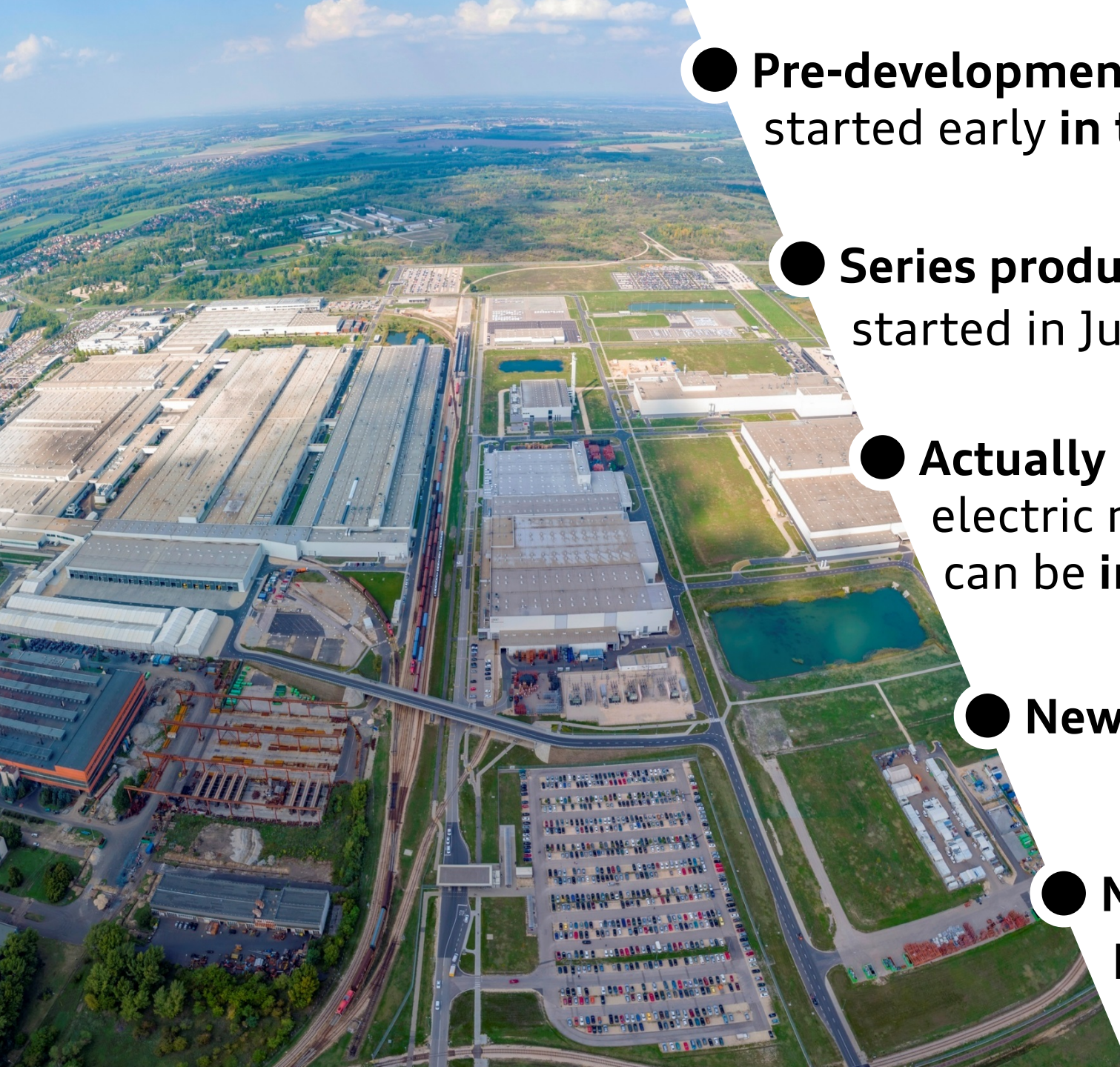
**In the future...**

- Electric cars in all of our plants worldwide
- Overall flexibility -  
ICE & electric cars on one  
production line



**W**hat is the role of  
our factory in Győr?





- **Pre-development & knowledge building**  
started early in the technical center
- **Series production of electric motors**  
started in July 2018
- **Actually installed capacity of 400**  
electric motors per day  
can be **increased gradually**
- **New winding and inserting center**
- **Modular method in**  
production cell



A red parallelogram graphic is positioned on the left side of the slide, partially overlapping the first letter of the main text.

**How can the customer use  
an electric car with ease?**





**HOME**



**ON THE ROAD**



**DESTINATION**



## PRIVATE



**CHARGING  
AT HOME**

**~85%**  
of charging events

**Private parking  
space**

**At the workplace**

## PUBLIC



**CHARGING  
ON THE ROAD**

**5-10%**  
of charging events

**Motorway  
services**



**CHARGING AT  
DESTINATION**

**5-10%**  
of charging events

**Customer  
parking**

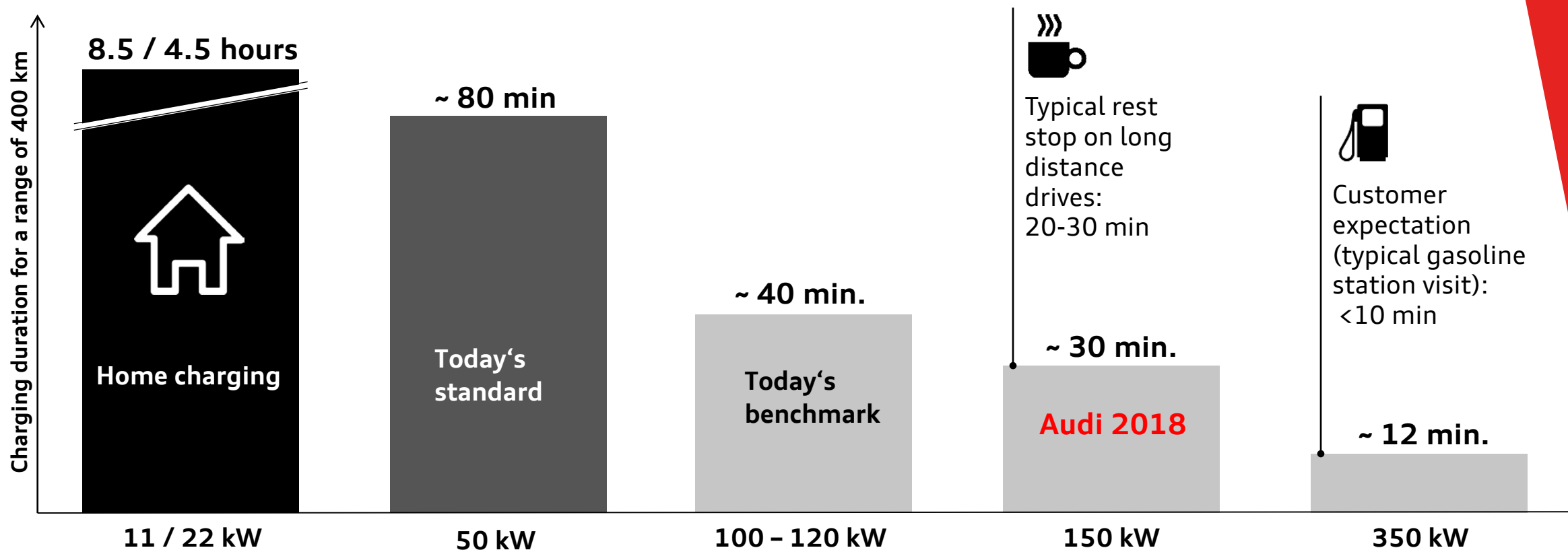
**Public car parks**



**H**ow long does  
charging take?



# At home, charging over night is sufficient, on the road every minute counts



AC CHARGING

DC CHARGING

HIGH POWER  
CHARGING (HPC)

**H**ow do we ease  
private charging?



## CHARGING SYSTEM **COMPACT**



Everyday  
charging solution  
with up to 11 kW  
as standard  
equipment

## CHARGING SYSTEM **CONNECT**



Double  
charging power  
& smart charging  
functions with  
photovoltaic  
integration



**Everyday  
backbone  
for  
charging  
the  
Audi e-tron**

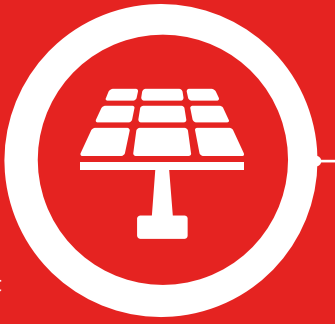
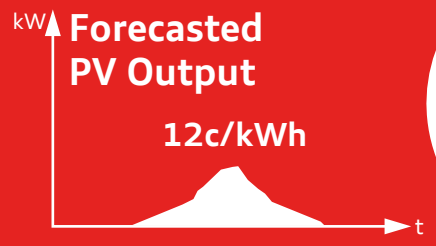
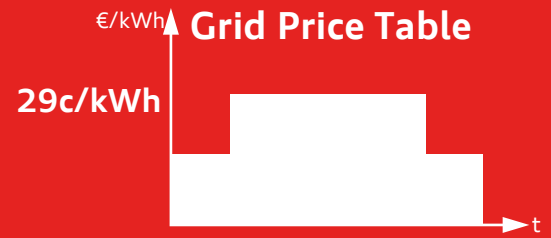


**Premium Turnkey Solutions through  
installation service**

Offers & Solutions differ regionally

**Is intelligent  
charging necessary?**

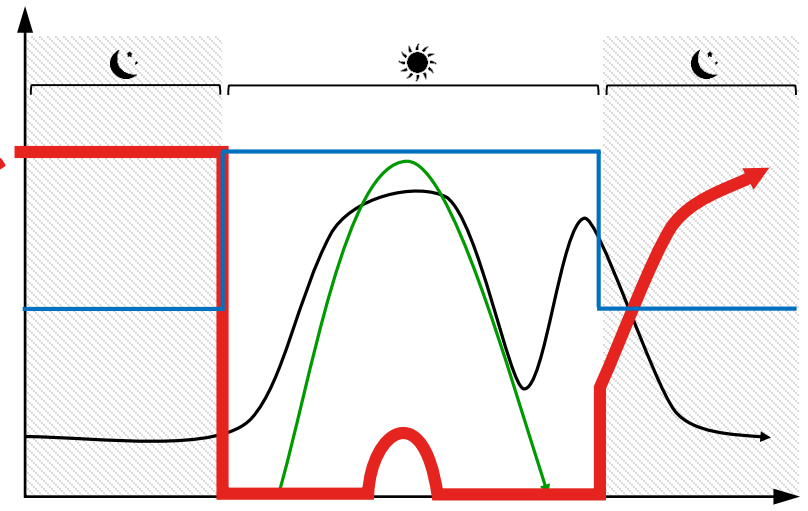




Home-Energy  
Management-  
system  
**HEMS**



- EV charging profile
- House consumption
- PV production
- Grid price table



**Is** a long distance  
trip a challenge?





USA

484

stations

by the end of 2019

EUROPE

400

stations

by 2020

IONITY

**What about other  
public charging facilities?**

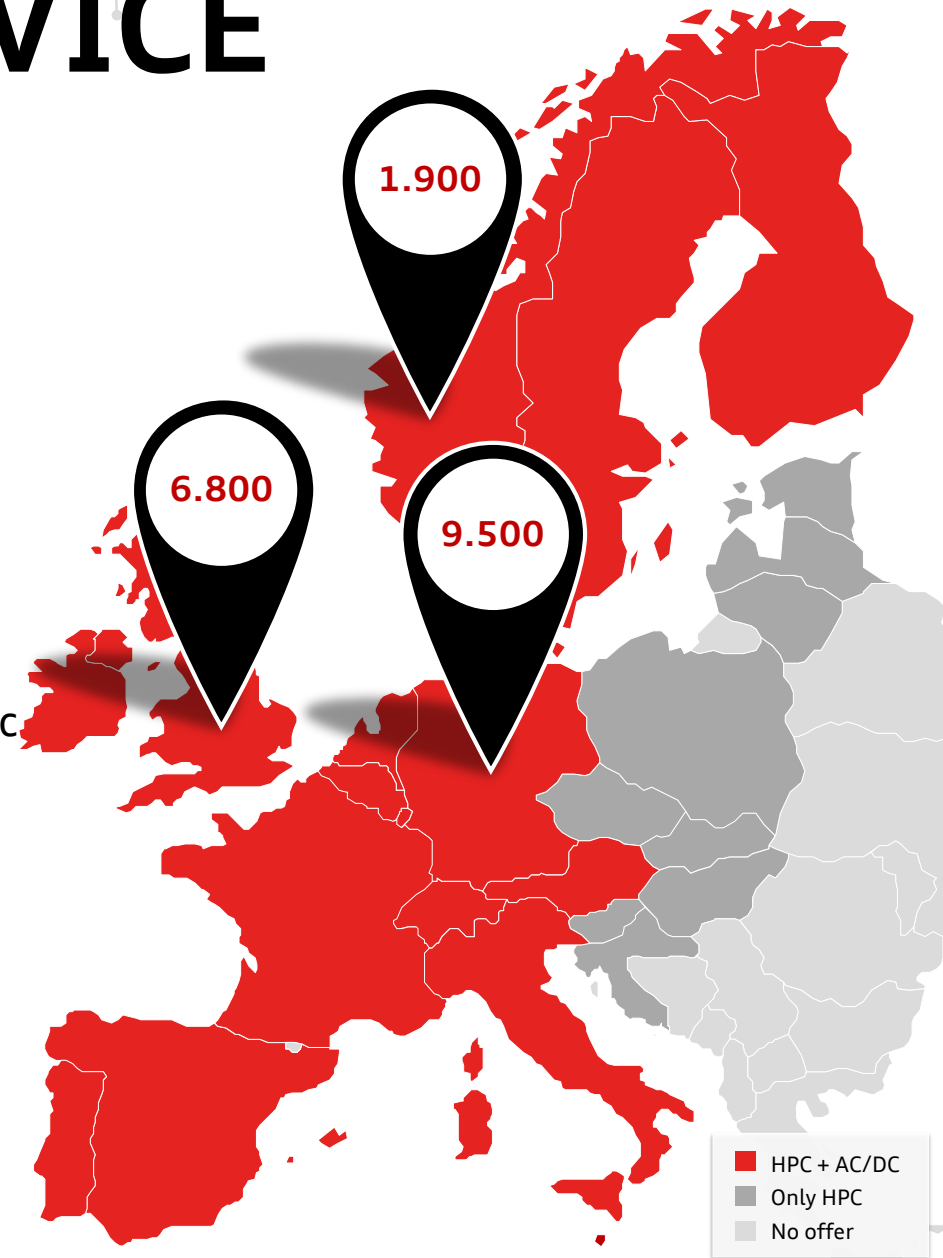




# E-TRON CHARGING SERVICE

**ONE** Premium Access Europe-wide

- › **70.000+** AC/DC charging points with up to 50 kW
- › **2000+** High Power Charging points with up to 350 kW
- › **International** roaming via Hubeject, e-Clearing, etc
- › **220+** Charge point operators in 16 countries



**Do I have to use  
several apps & maps?**



# RELAXED TRAVELLING

with the e-tron route planner

Convenient route planning in the car  
or via myAudi App



Calculation of the **required charging stations**  
taking account of the current traffic situation

**Display of the arrival time** including the  
necessary charging time

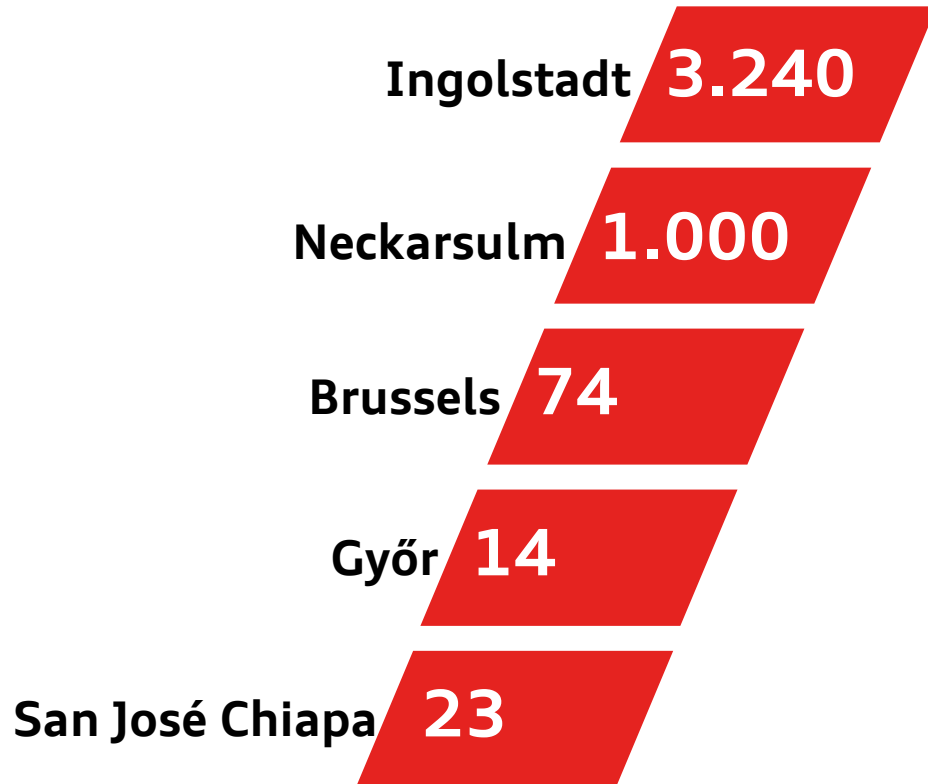
Navigation continues outside of the vehicle  
**(First/Last Mile)**

A red parallelogram graphic, tilted to the right, containing a white capital letter 'C' on its left side.

**Can I charge my EV  
at my workplace?**



# Audi invests 115 Mio. EUR in charging infrastructure

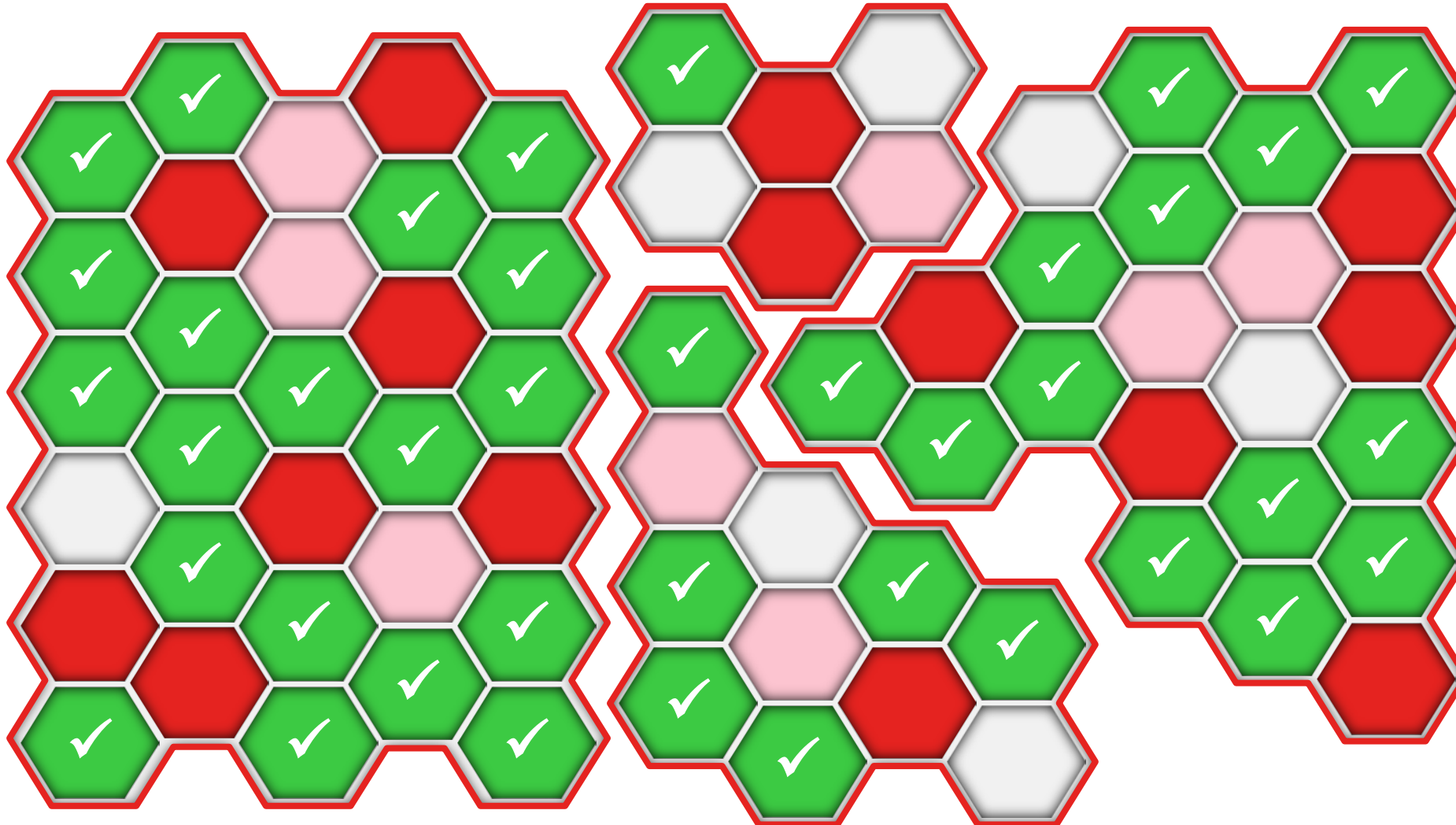


# e.readiness program

OVERALL

ENGINE

CHARGING



BATTERY

started early to  
address the fields  
of action for  
going electric





THANK YOU!





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Munich, October 9, 2018



e-tron



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