

VOLKSWAGEN

AKTIENGESELLSCHAFT

Leading the Transformation.

Dr. Herbert Diess

Chairman of the Board of Management,
Volkswagen AG

CAPITAL MARKETS DAY 2019

DISCLAIMER

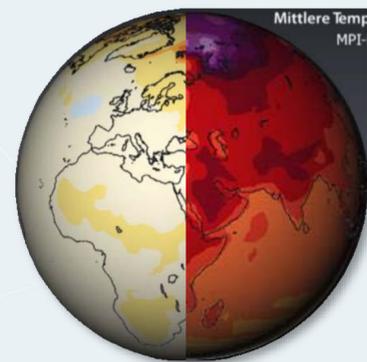
The following presentations contain forward-looking statements and information on the business development of the Volkswagen Group. These statements may be spoken or written and can be recognized by terms such as “expects”, “anticipates”, “intends”, “plans”, “believes”, “seeks”, “estimates”, “will” or words with similar meaning. These statements are based on assumptions, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. These assumptions relate in particular to the development of the economies of individual countries and markets, the regulatory framework and the development of the automotive industry. Therefore the estimates given involve a degree of risk, and the actual developments may differ from those forecast. The Volkswagen Group currently faces additional risks and uncertainty related to pending claims and investigations of Volkswagen Group members in a number of jurisdictions in connection with findings of irregularities relating to exhaust emissions from diesel engines in certain Volkswagen Group vehicles. The degree to which the Volkswagen Group may be negatively affected by these ongoing claims and investigations remains uncertain.

Consequently, a negative impact relating to ongoing claims or investigations, any unexpected fall in demand or economic stagnation in our key sales markets, such as in Western Europe (and especially Germany) or in the USA, Brazil or China, and trade disputes among major trading partners will have a corresponding impact on the development of our business. The same applies in the event of a significant shift in current exchange rates in particular relative to the US dollar, sterling, yen, Brazilian real, Chinese renminbi and Czech koruna.

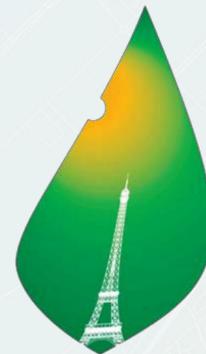
If any of these or other risks occur, or if the assumptions underlying any of these statements prove incorrect, the actual results may significantly differ from those expressed or implied by such statements.

We do not update forward-looking statements retrospectively. Such statements are valid on the date of publication and can be superseded. This information does not constitute an offer to exchange or sell or an offer to exchange or buy any securities.

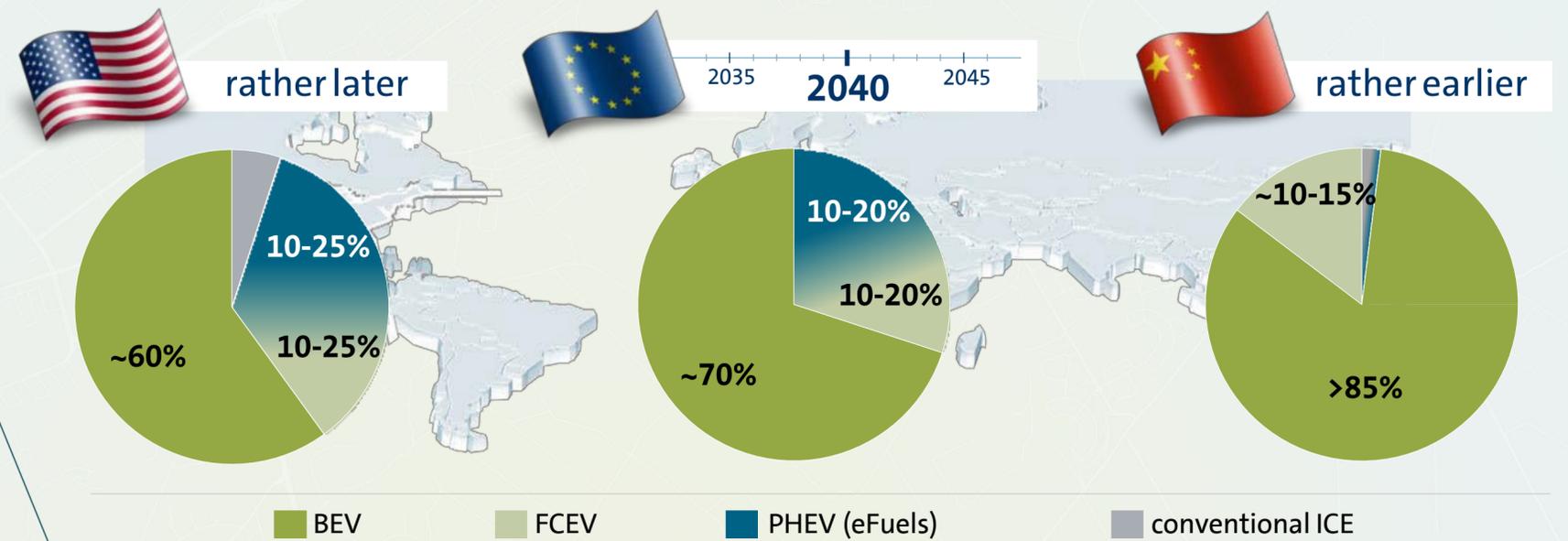
E-MOBILITY IS THE ONLY WAY FORWARD TO ACHIEVE CLIMATE TARGETS



COP21 • CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE



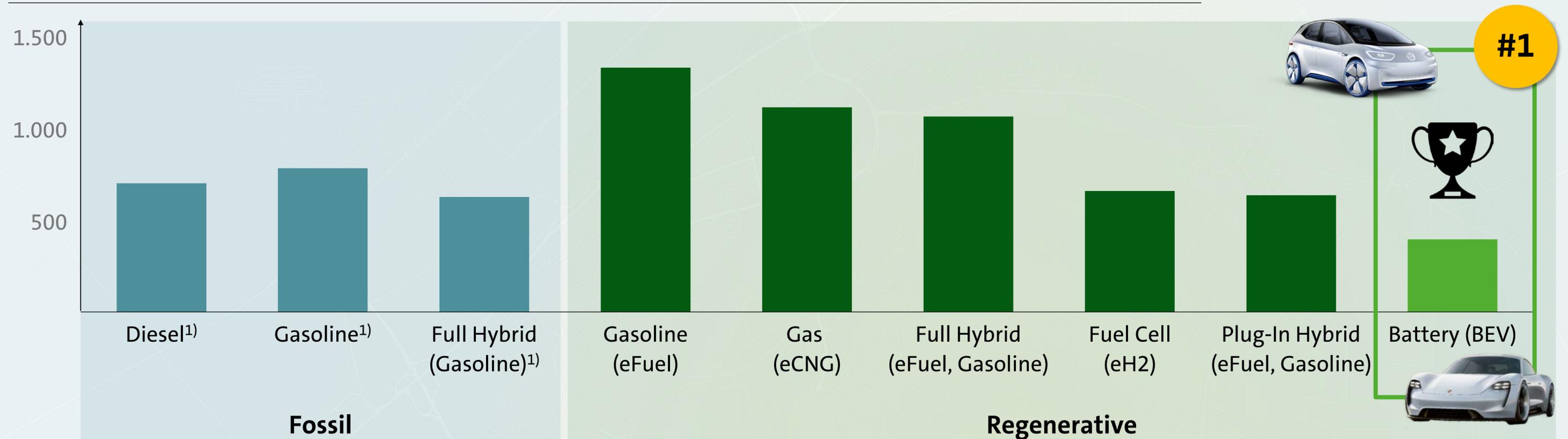
- Our Target:
CO₂ neutral fleet by 2050



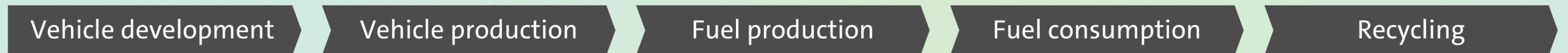
- Increase share of **future technologies** – **Focus E-Mobility**
- Implementation of further measures to become **CO₂ neutral**

PRIMARY ENERGY DEMAND IS LOWEST WITH BEVS

PRIMARY ENERGY REQUIREMENT IN WH/KM FOR LIFECYCLE



THE MODEL OF THE ENERGY BALANCE LIFECYCLE

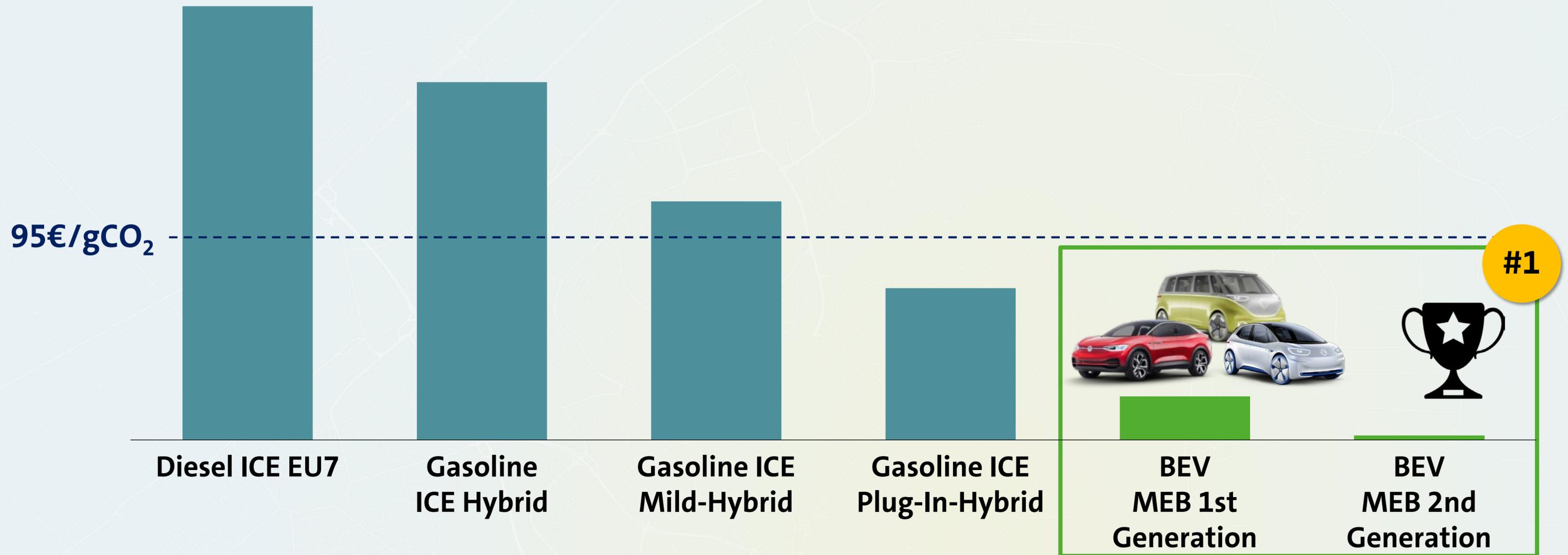


Example: A-Segment 200.000 km, CO₂ emissions & energy over lifecycle of vehicle and fuel

¹⁾ not fully comparable with energetic base, not CO₂ neutral

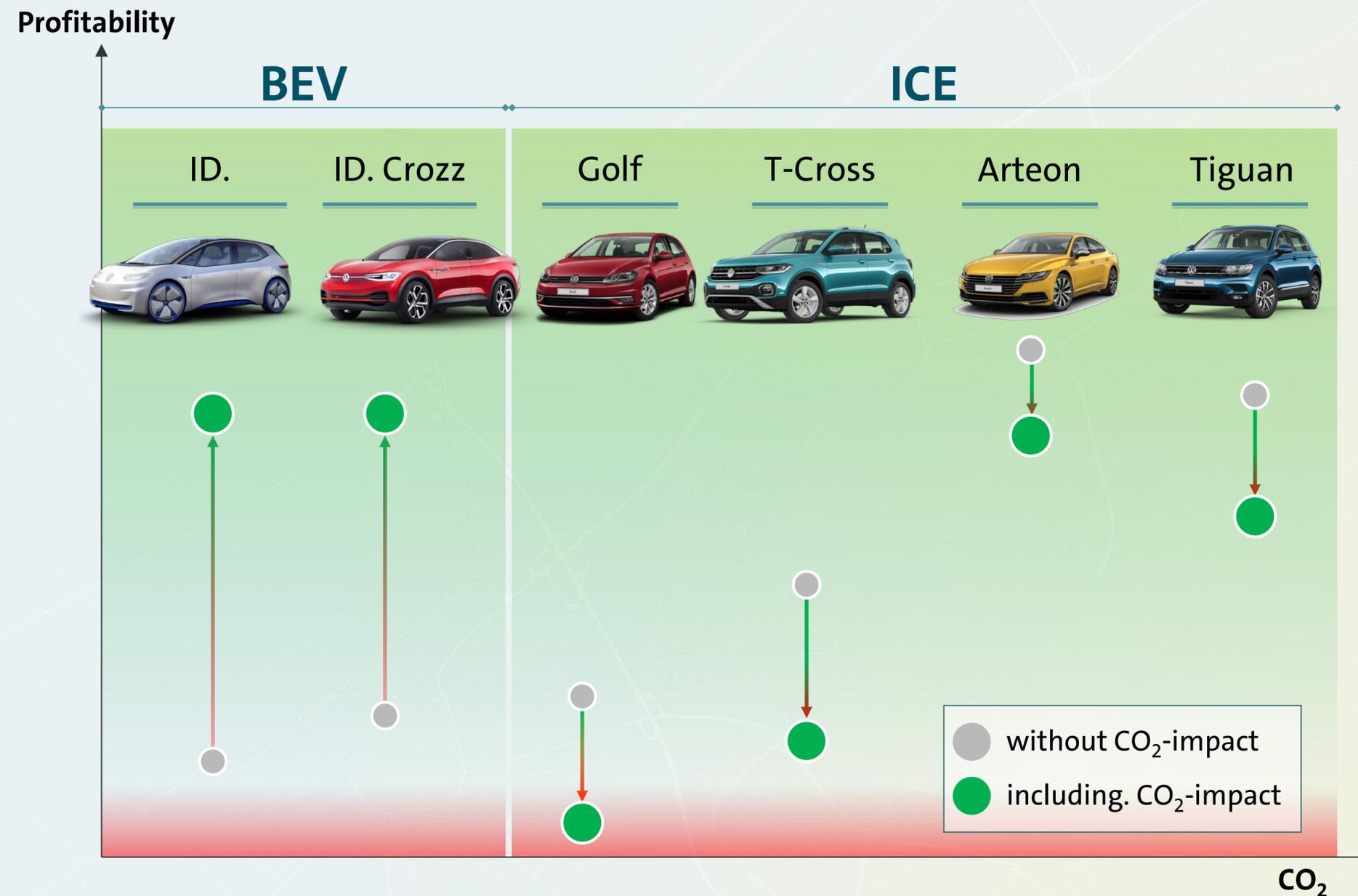
BEVS ARE FIRST CHOICE AS THE MOST COST EFFICIENT SOLUTION FOR CO₂ REDUCTION

MEASURES FOR CO₂ REDUCTION IN €/G CO₂



Example Volkswagen Brand: Ranking CO₂ efficiency indicators (average) for selected CO₂ measures

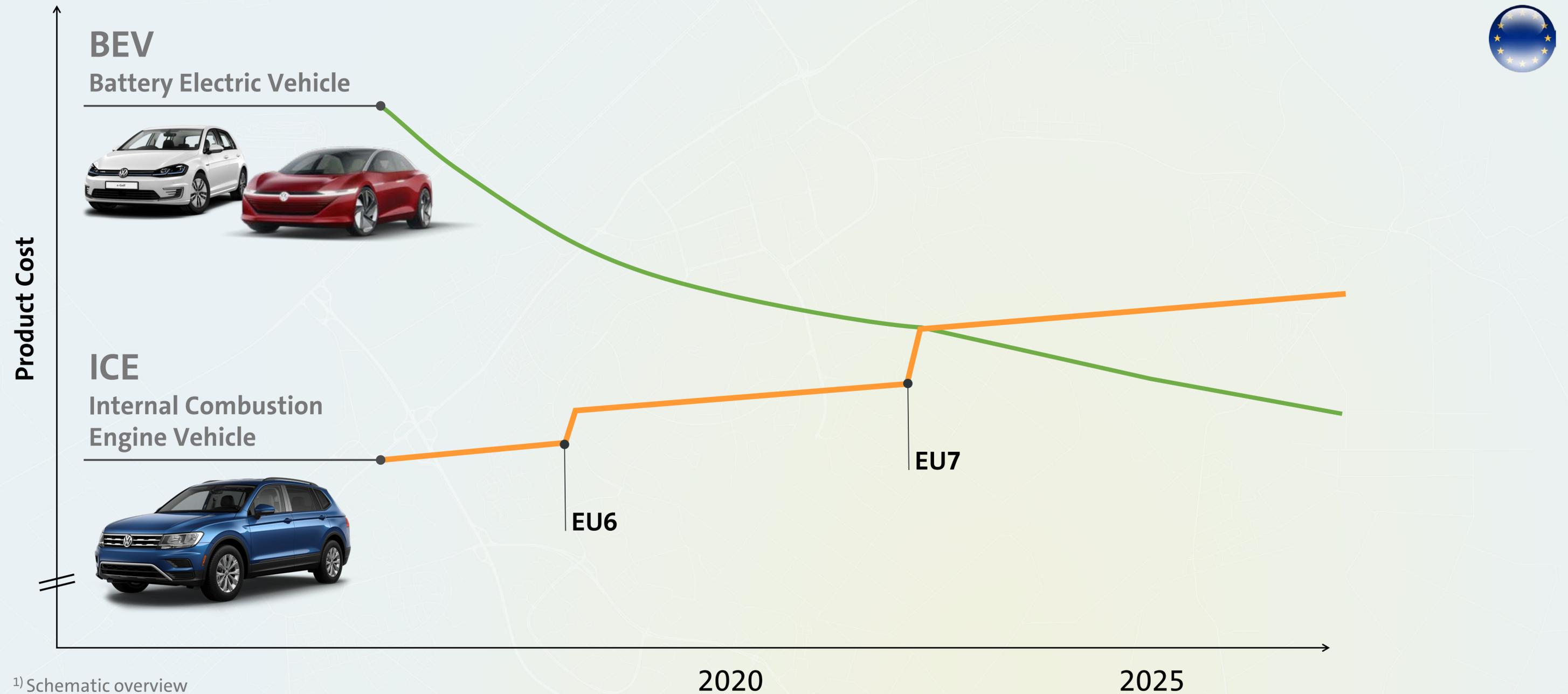
CO₂ FLEET TARGETS HAVE CHANGED PRODUCT PROFITABILITY



IMPACT ON PRODUCT DECISIONS:

- TRANSITION PERIOD: ICES STILL MORE PROFITABLE
- RISING COSTS OF CO₂ COMPLIANCE NEGATIVELY IMPACT ICE PROFITABILITY
- BEVS NECESSARY FOR CO₂ COMPLIANCE
- INCREASING VOLUME OF BEVS DRIVES PROFITABILITY

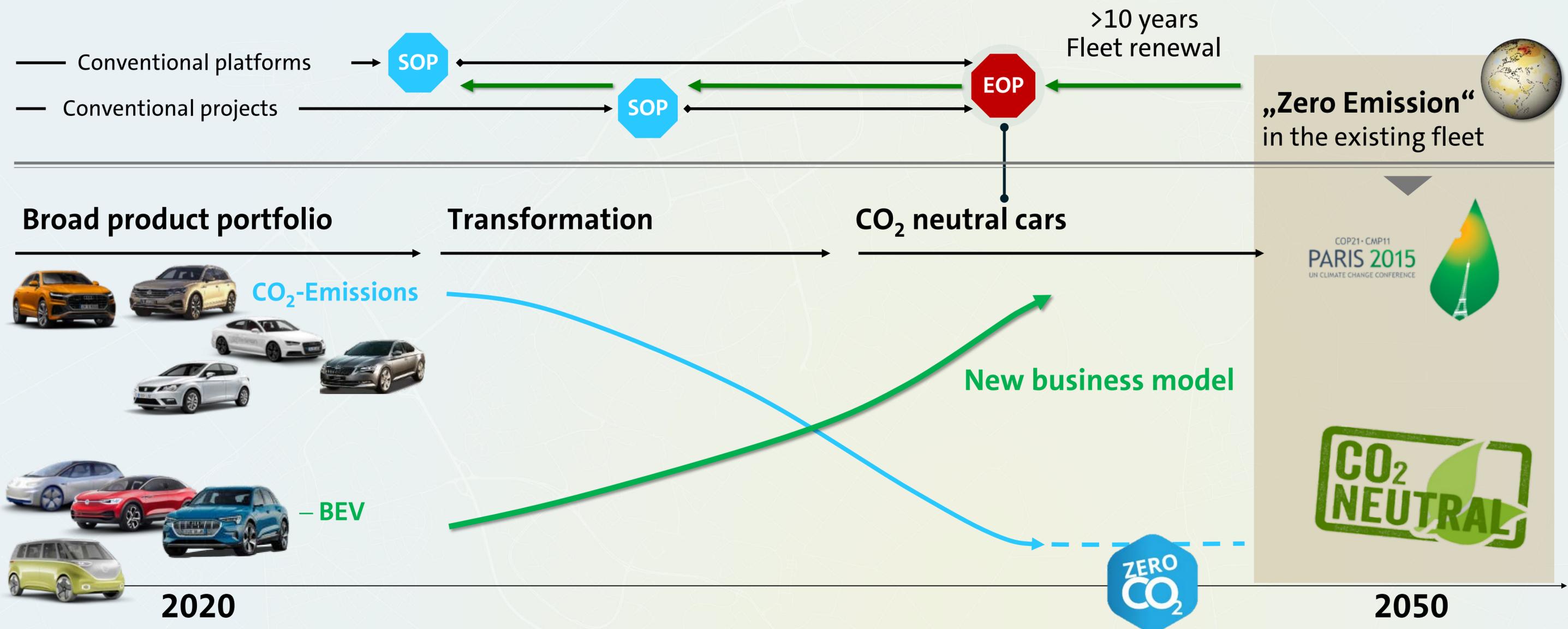
BEV AND ICE COSTS AND MARGINS ARE CONVERGING SOON¹⁾



¹⁾ Schematic overview

E-MOBILITY TRANSFORMATION IS REFLECTED IN OUR CORPORATE PLANNING

PARIS IMPLICATIONS AND TRANSFORMATION PATH



DEDICATED PLATFORMS (MEB/PPE) GUARANTEE SUPERIOR CUSTOMER EXPERIENCE, SCALE AND VERSATILITY

SCALABLE TECHNOLOGY



Long wheelbase
short overhangs



Spacious interior for
driver & passengers



No center tunnel



Various
body styles



Big wheels



Rear-wheel
& four-wheel drive



Central
computing unit



Trunk volume
~ ICE



New Design



OUR E-MOBILITY STRATEGY COMES TOP DOWN...

PREMIUM



VOLUME



Eli
IONITY

HOLISTIC APPROACH with GREEN ENERGY

SUMMARY E-MOBILITY STRATEGY

- Only way to meet Paris climate target
- Most cost efficient way to meet fleet targets
- Dedicated platforms put Volkswagen in pole position
- Volume in China and Group guarantees scale effects
- Multi-brand plants provide efficiencies
- Top down strategy (premium → volume)
- Holistic customer focus:
dealers well prepared, infrastructure in progress, affordable
- Battery supply secured



**Fully reflected
in corporate planning**



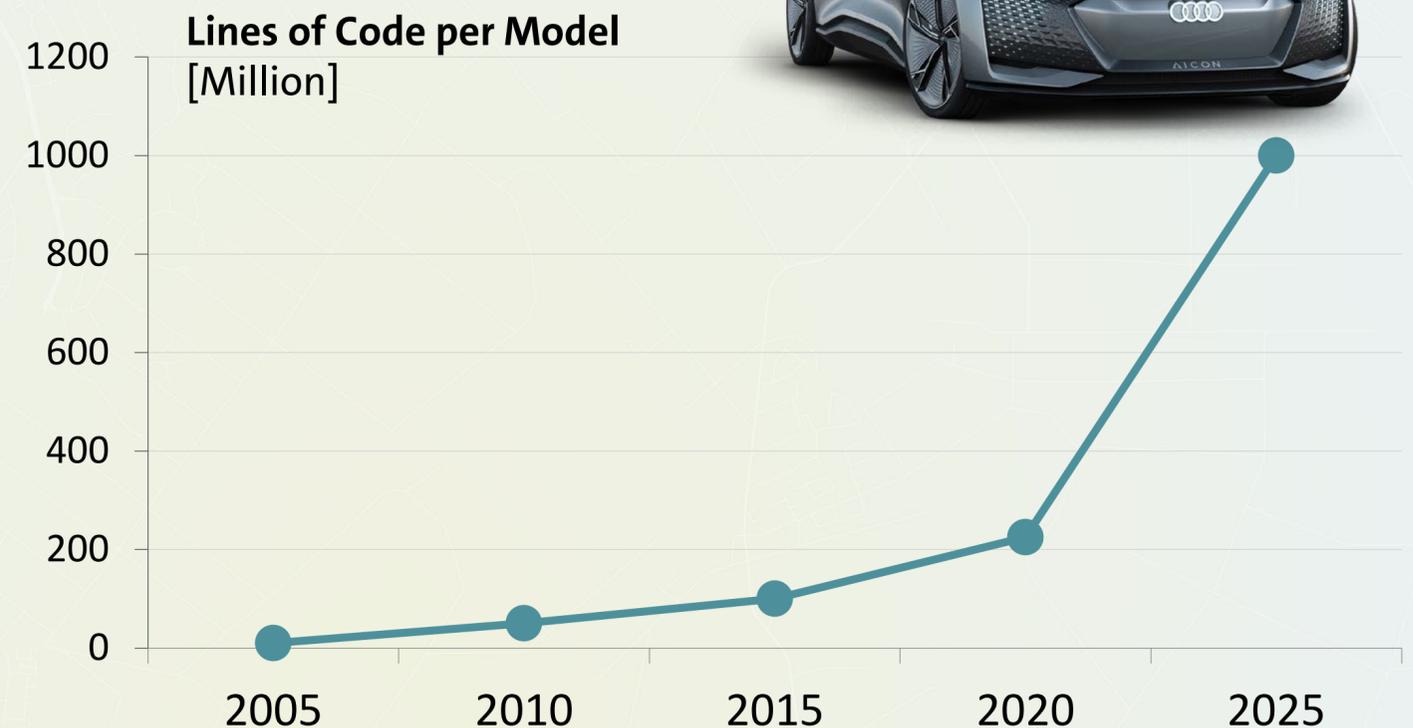
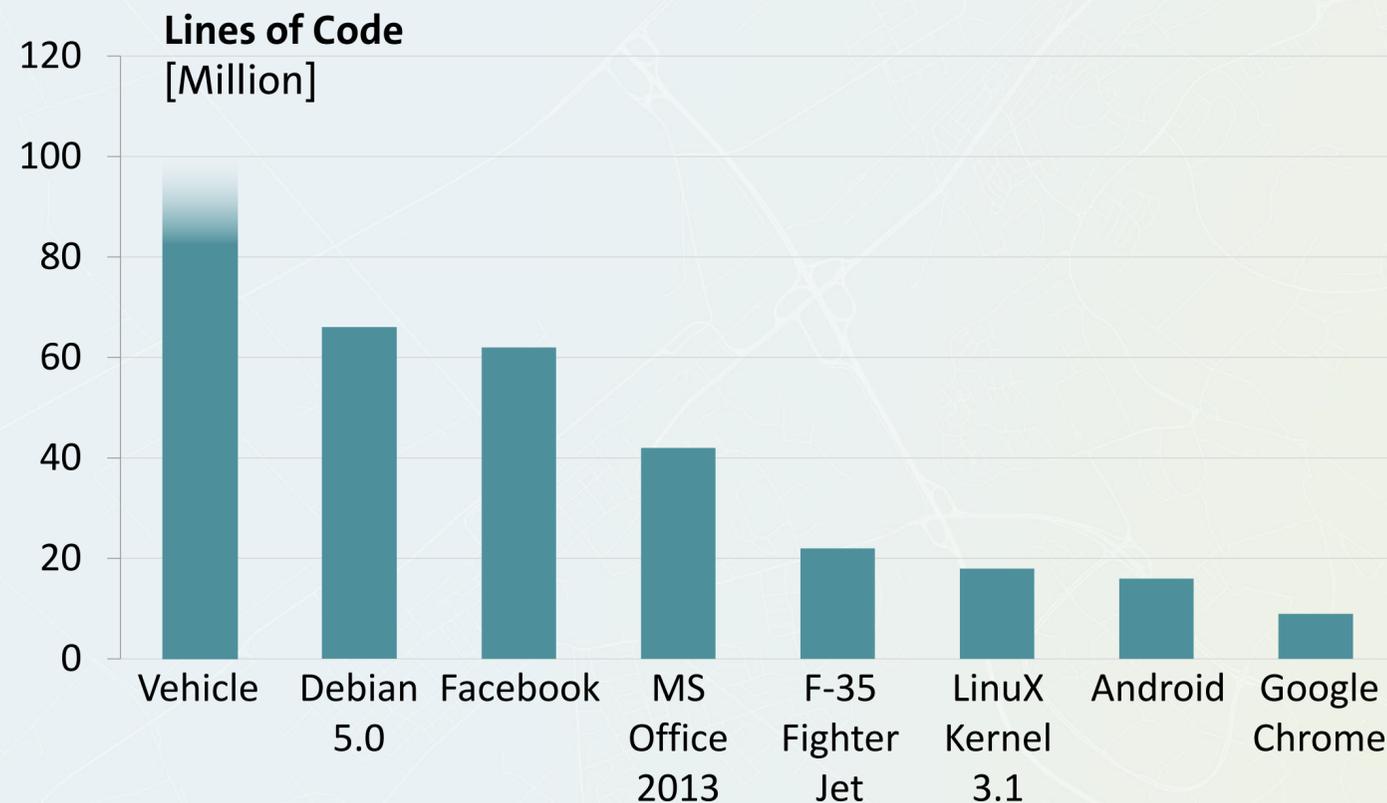
THE SOFTWARE CHANGE

Today

- 100 million lines of code per vehicle
- Approximately \$ 10 per line of code
- Example: Navi system 20 million lines of code

Tomorrow

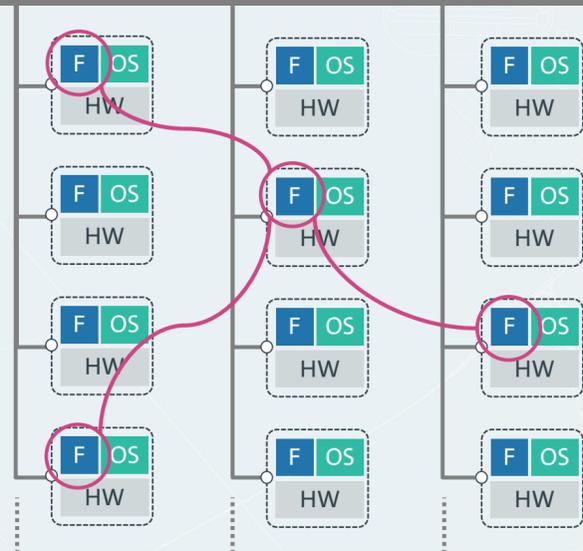
- > 200 - 300 million lines of code are expected
- Level 5 autonomous driving will take up to 1 billion lines of code



THE CAR BECOMES THE MOST COMPLEX INTERNET DEVICE



Car



distributed customer functions

Control units: approx. **70**

No own Software stacks

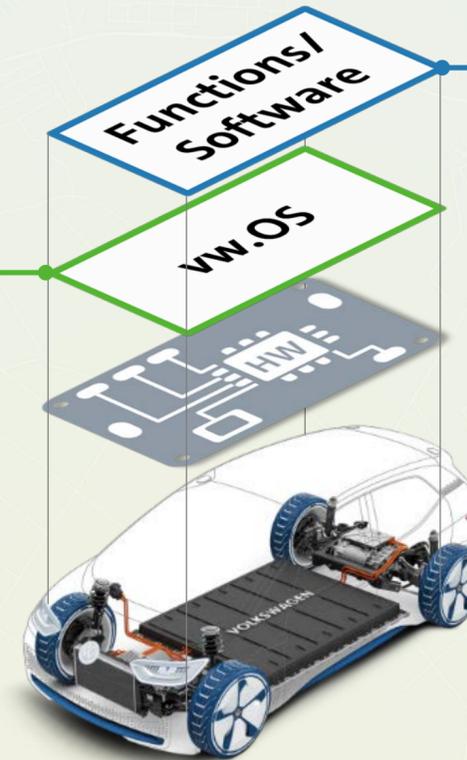
Today

Tomorrow

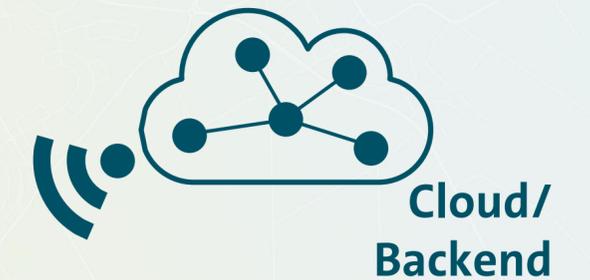
Fully connected car



vw.OS Basic Software: Operating System



Software Stacks: Infotainment, Navigation, Emergency Assist ...



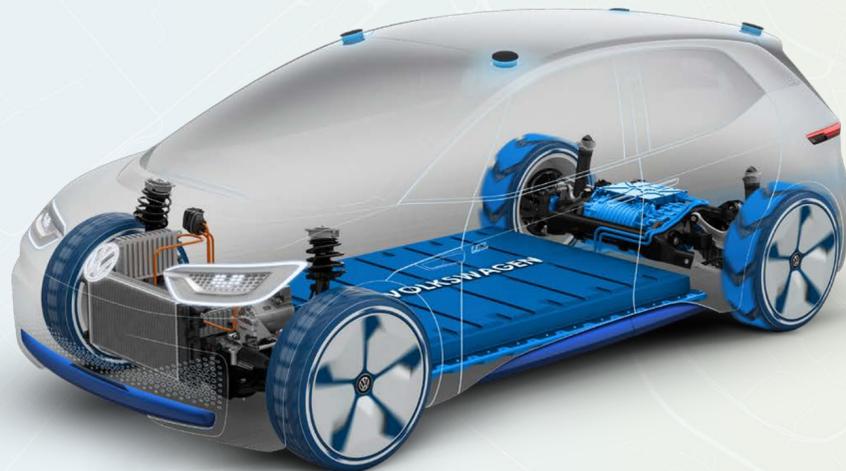
High Performance Computers **3-5**

+ Further control units for safety relevant functions

Development of Volkswagen's own Software stacks

FIRST STEPS TAKEN IN SOFTWARE TRANSFORMATION

- **E³ architecture** for premium (PPE) and volume (MEB) under way
- **Separating hardware and software development**
- Ramp up **software competencies** started (Carmeq)
- **Partnerships** and acquisitions (Microsoft/WirelessCar/Diconium)
- **Board position for Software** development
- **Strategy:**
 - Volkswagen Group owns software stack
 - Deploys software continuously into the fleets / all car brands



INCREASED FOCUS ON VALUE CREATION

- First steps to **release shareholder value**: TRATON in preparation and further steps in portfolio optimization in consideration
- **Performance share plan introduced** introduced to Top Level Management (~380) and similar plan to be introduced to total Management (~6.800)
- **Efficiency and Performance programs, complexity reduction and synergies** in all brands
- Roll out of **Integrity-Program** well on the way
- **Leadership program** expanded

VALUE



KEY MESSAGES

1.

Leading the industry in e-mobility

2.

Cost effective transformation path

3.

First in transforming into software OEM

4.

Increased focus on value creation

5.

Update on Strategy Together 2025+ in summer

