Think Blue – Volkwagen’s sustainability strategy

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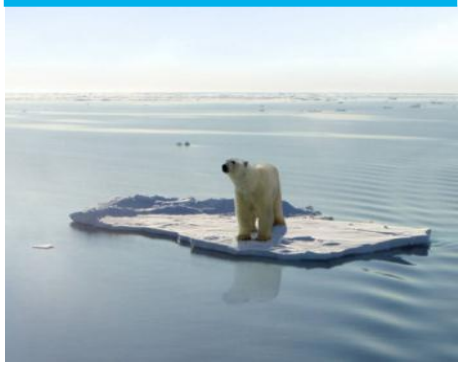
SIVA

inspired by Think Blue.

The world is changing.

Finite resources, dependence on oil

Emissions, global warming



Support for e-mobility in government policy

Increasing availability of clean energy

CO_2 – legislation tightened globally

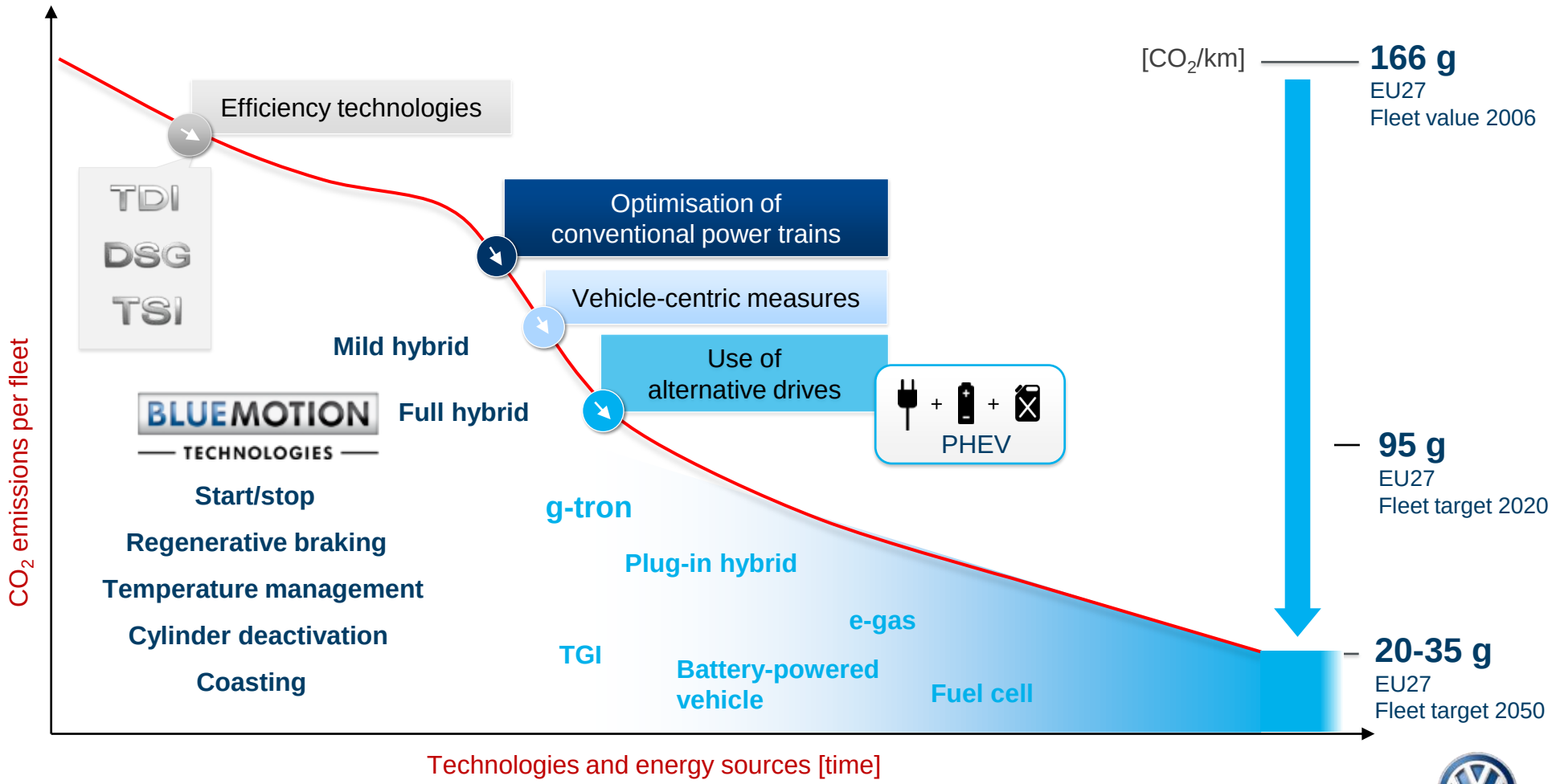
USA*	Europe	China
2025 101 g CO_2/km	2020 95 g CO_2/km	2020 5 l/100km

Legislation on CO_2 consumption is designed to be market-specific

➡ CO_2 is a motivating factor for alternative drive technologies in all key markets

*ZEV I: model years 2015 to 2017
ZEV II: model years from 2018

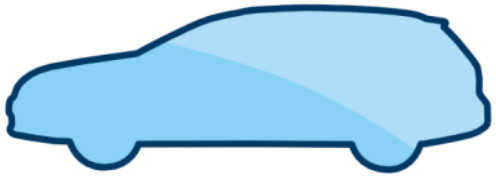
CO_2 – conventional drive technologies are no longer good enough

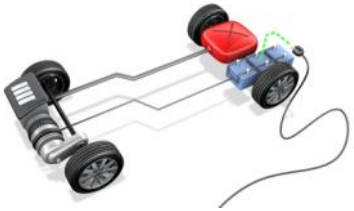


Concepts with an increasing degree of electrification

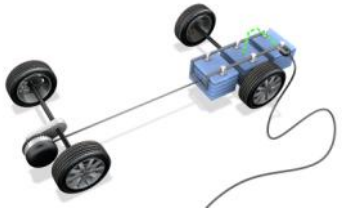
HEV
Hybrid **E**lectric **V**ehicle

PHEV
Plug-in **H**ybrid **E**lectric **V**ehicle

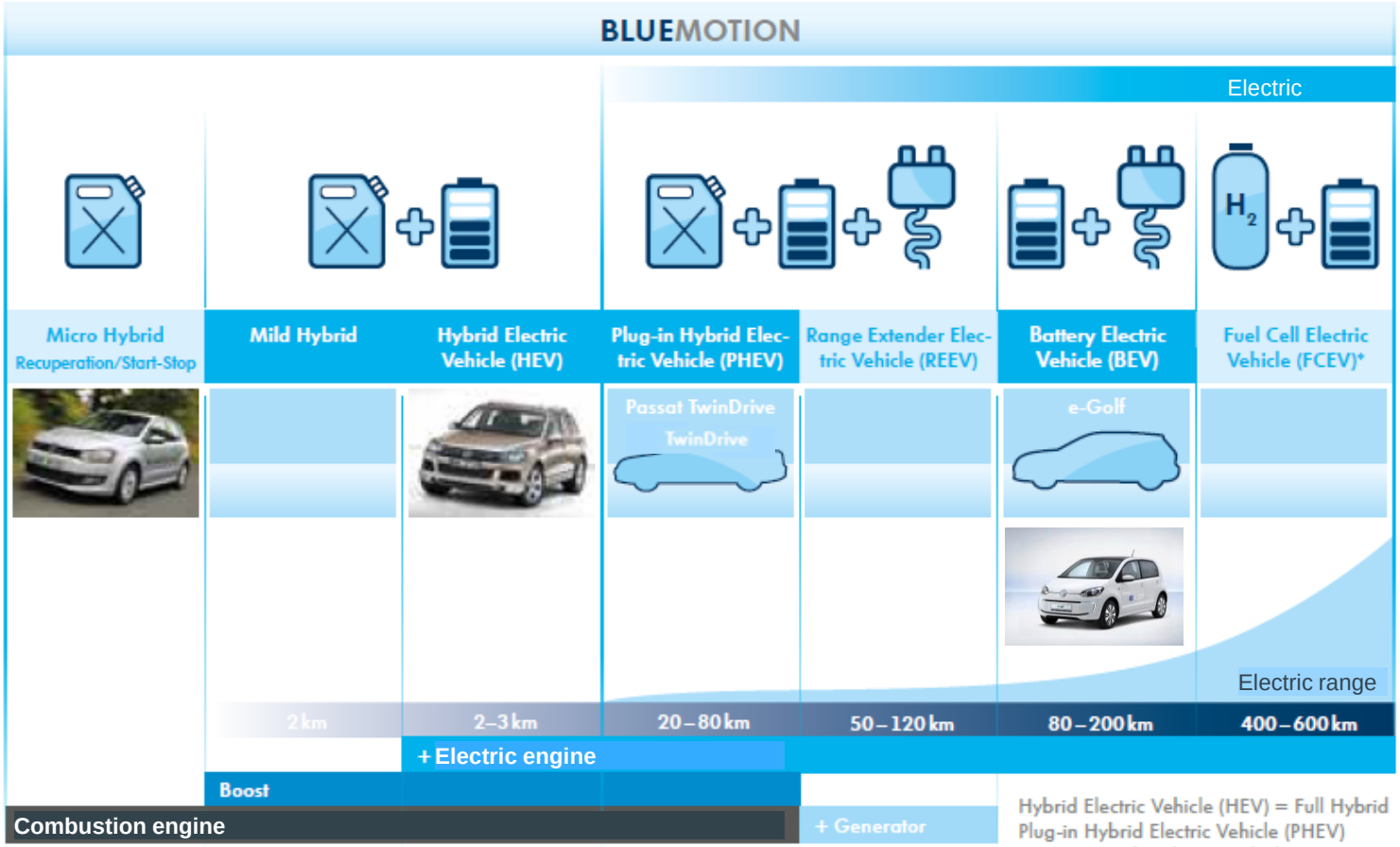




BEV
Battery **E**lectric **V**ehicle



Volkswagen customers can select their preferred level of electric power



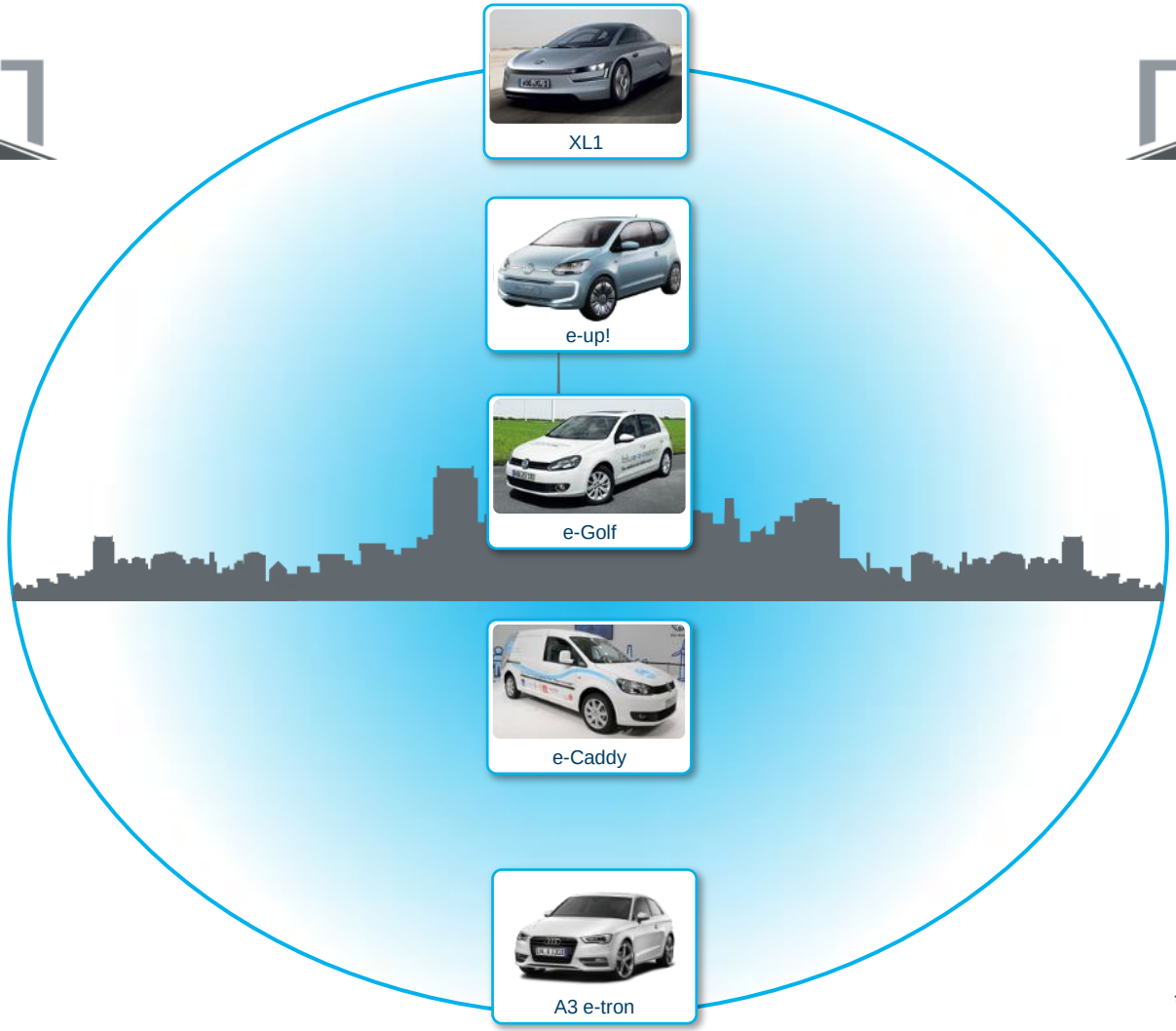
Hybrid Electric Vehicle (HEV) = Full Hybrid
Plug-in Hybrid Electric Vehicle (PHEV)
Range Extender Electric Vehicle (REEV)
Battery Electric Vehicle (BEV)
Fuel Cell Electric Vehicle (FCEV)

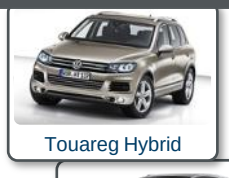
* > 2020

Volkswagen Group products for current and future mobility demands

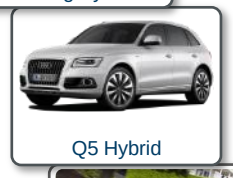
Golf TDI BlueMotion

eco up!

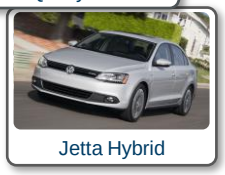




Touareg Hybrid



Q5 Hybrid



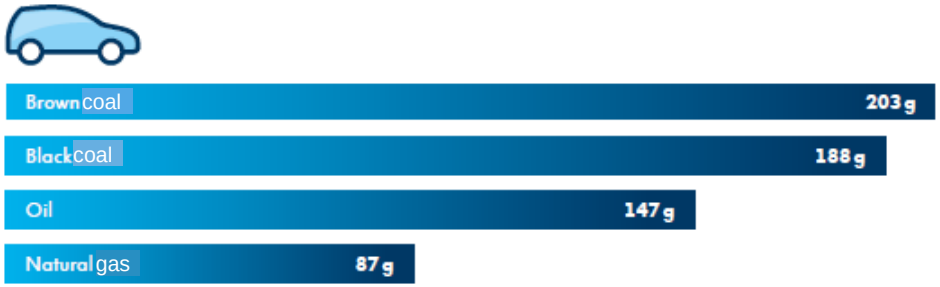
Jetta Hybrid

* concepts

CO_2 emissions are minimised when electric vehicles are charged using renewably generated electricity

Well-to-wheel CO_2 emissions from each Golf VII TDI Blue Motion (85g CO_2/km):

Well-to-wheel CO_2 emissions from each Golf BEV with electricity generated from:



Consequences for Volkswagen: Introduce a range of renewable energies

Image and marketing

- To ensure CO_2-neutral driving
- To promote ecological sustainability
- To support the ecological positioning of Think Blue.
- To gain a competitive advantage

New business model

- "One-stop-shopping" offered to customers
- High-level customer service

At Volkswagen e-mobility goes beyond the automobile

Charge
Wallbox for a safe, fast and intelligent charging process at home

Volkswagen Car-Net
Remote control by smart phone:
- Charge level and range status
- Start charging process
- Vehicle position
- Vehicle air conditioning

Energy supply
100% CO_2-free energy from renewable resources makes e-mobility at Volkswagen a sustainable choice for the future

Core element: a vehicle with a plug

BEV: 160 km electrical range

PHEV: combustion engine + electric motor/battery for 50 km electrical range and full total range

Both with full interior and boot space availability

Extended mobility
Option of hiring a conventional vehicle at a discounted rate for journeys requiring a range of more than 150 kilometres.

Collection service
Any BEV customer stranded due to an empty battery will be towed to the nearest charging station.

Extended guarantee
The right choice is reflected in the extended guarantee on batteries and high-voltage components.

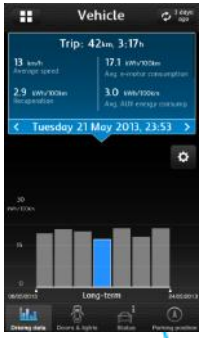
Feedback from infrastructure testing in Portugal

“Portugal offers the best AC infrastructure we have seen in our European trials so far. We found an easy and customer-friendly way of using the infrastructure.”

Summary of VW tests - number of charging stations visited: 111 (100%)

- Number of charging stations tested with positive results: 49%
- **Number of charging stations that were occupied by other vehicles: 33%**
- Number of charging stations that are defective: 14%
- Number of charging stations that could not be located: 4%

Volkswagen Car-Net “e-Remote”

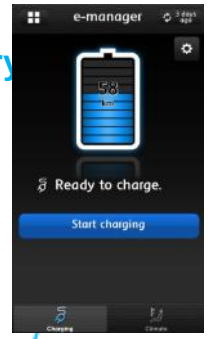


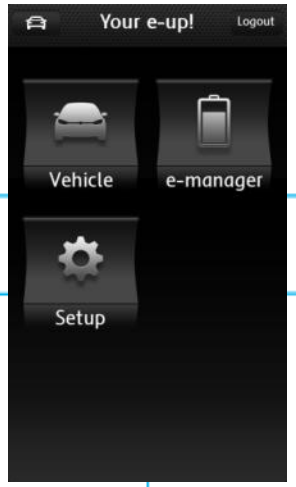
Trip statistics

Useful data:
- Start time and travel time
- Distance travelled
- Average speed
- Electricity consumed

Remote controlled battery charging management

Options for:
- Checking
- Configuring
- Controlling the charging process





Vehicle status

Various vehicle data:
- Doors open
- Mileage
- Vehicle location

2014: Remote-controlled departure manager

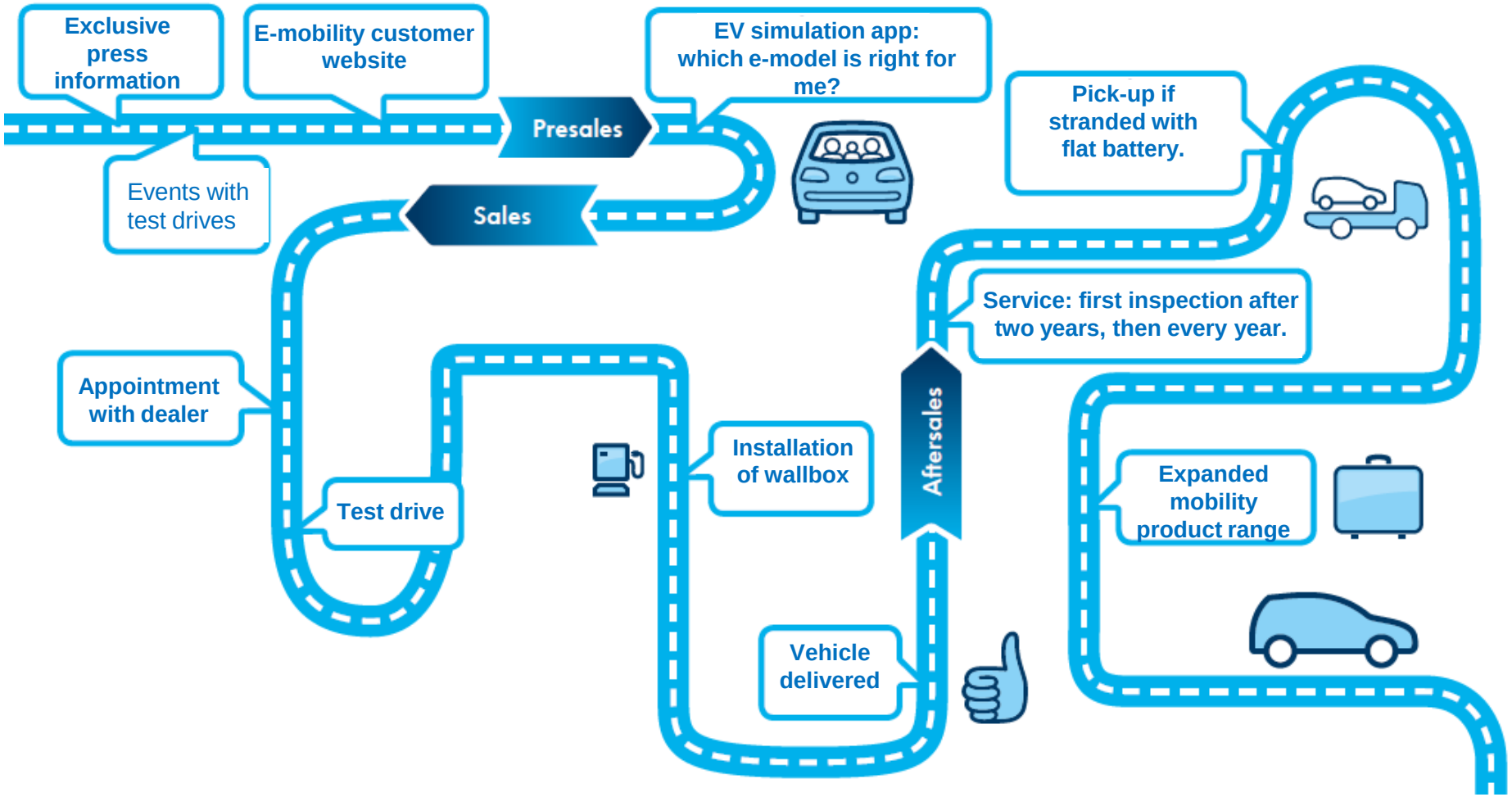
Three departure timers determine
- Charging at a convenient economic time
- When the charging process starts
- The vehicle is charged before the time of departure

Remote-controlled air conditioning

- Pre-heats or pre-cools the car’s interior
- Using mains power not battery power
- Maintains full vehicle range before the start of the journey

e-(asy) mobility

How customers find out about their ideal electric Volkswagen



The new e-up!

A portrait of the e-up! in facts and figures

210 Nm

Maximum torque
Powering forward: transferring energy to the road and bringing the driver to their destination at no less than 210 Nm torque.

82 PS

Maximum performance
A whole 82 hp, with no adverse effect on tractive force and no engine noise whatsoever.

in 5.0 s

0 - 60 km/h
A racing start – acceleration to leave many other models in the dust.

6-7 h

Charge time
Power is renewed quietly, at home or on the road. And when a quick boost is needed: CCS quick charging stations restore 80% of battery charge in just 30 minutes.

130 km/h

Top speed
Optimal dynamism in the city, and confident overtaking capacity.

160 km

Maximum range
More than enough to get you to work, to meetings, to the shops, and home safely.

Thank You. Think Blue.

inspired by Think Blue.

Back-up

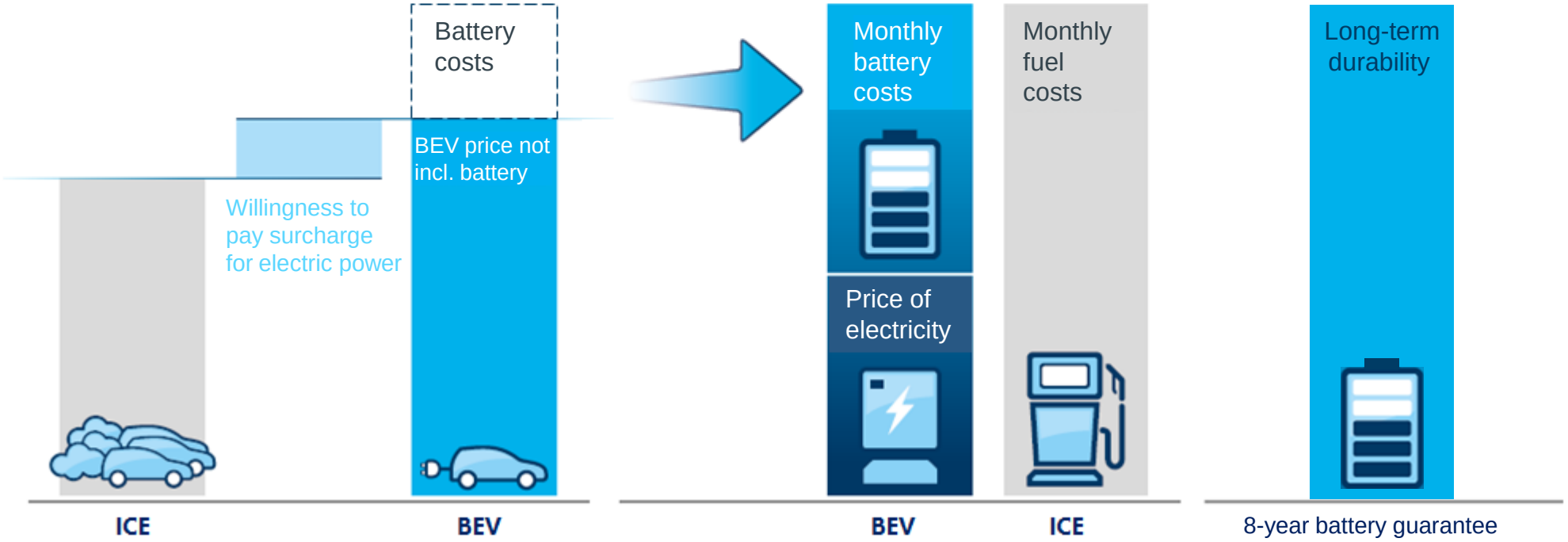
Comparing costs: combustion engine vs BEV

Compared with an internal combustion engine (ICE), an electric vehicle has higher purchase costs but similar running costs throughout its life as electricity costs less than fuel

Higher purchase costs…

…but similar running costs…

…with greater reliability.



Sustainable drive technologies from Volkswagen – a package of products

Think Blue.