



INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION

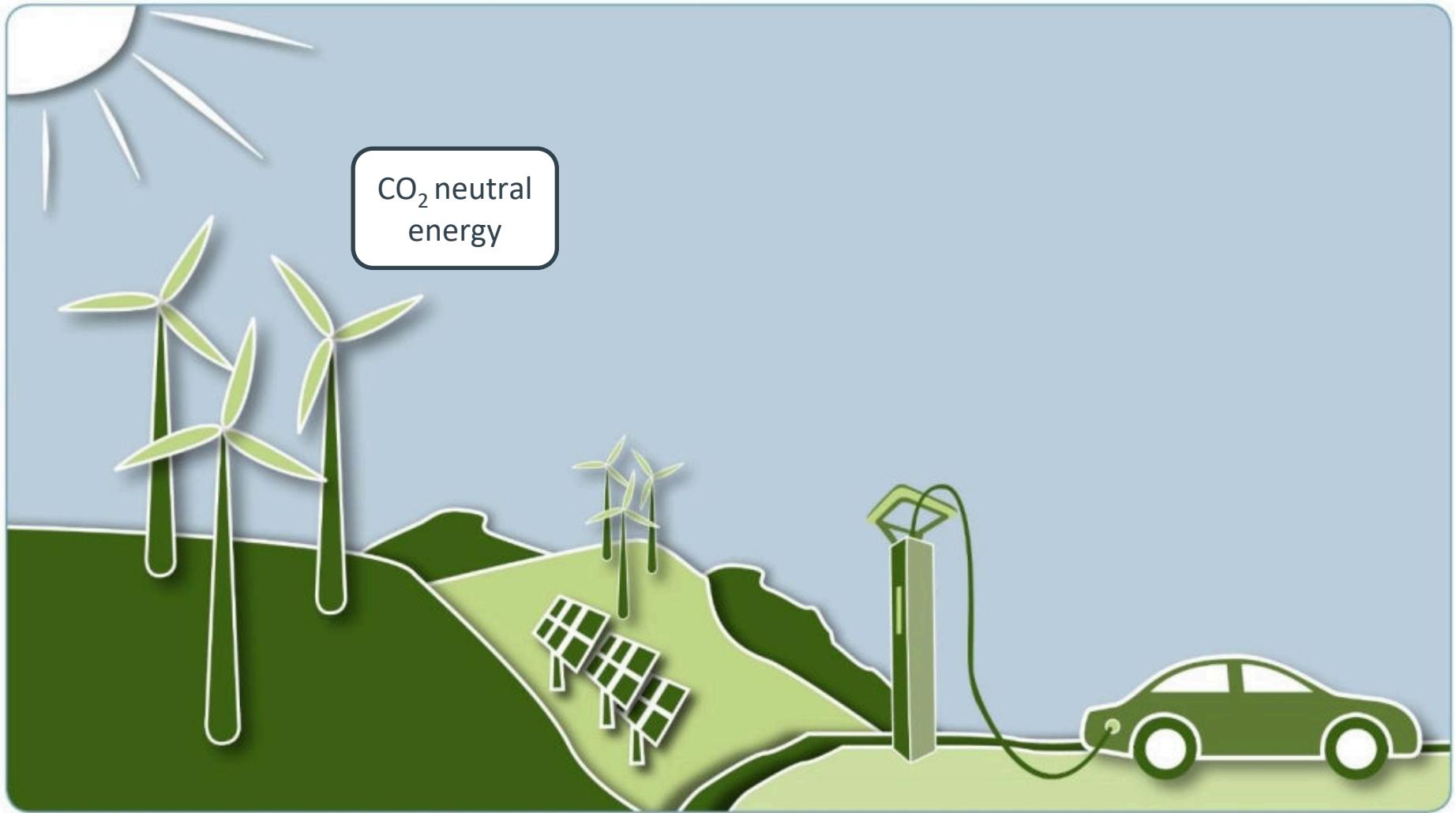


CharIN e.V.

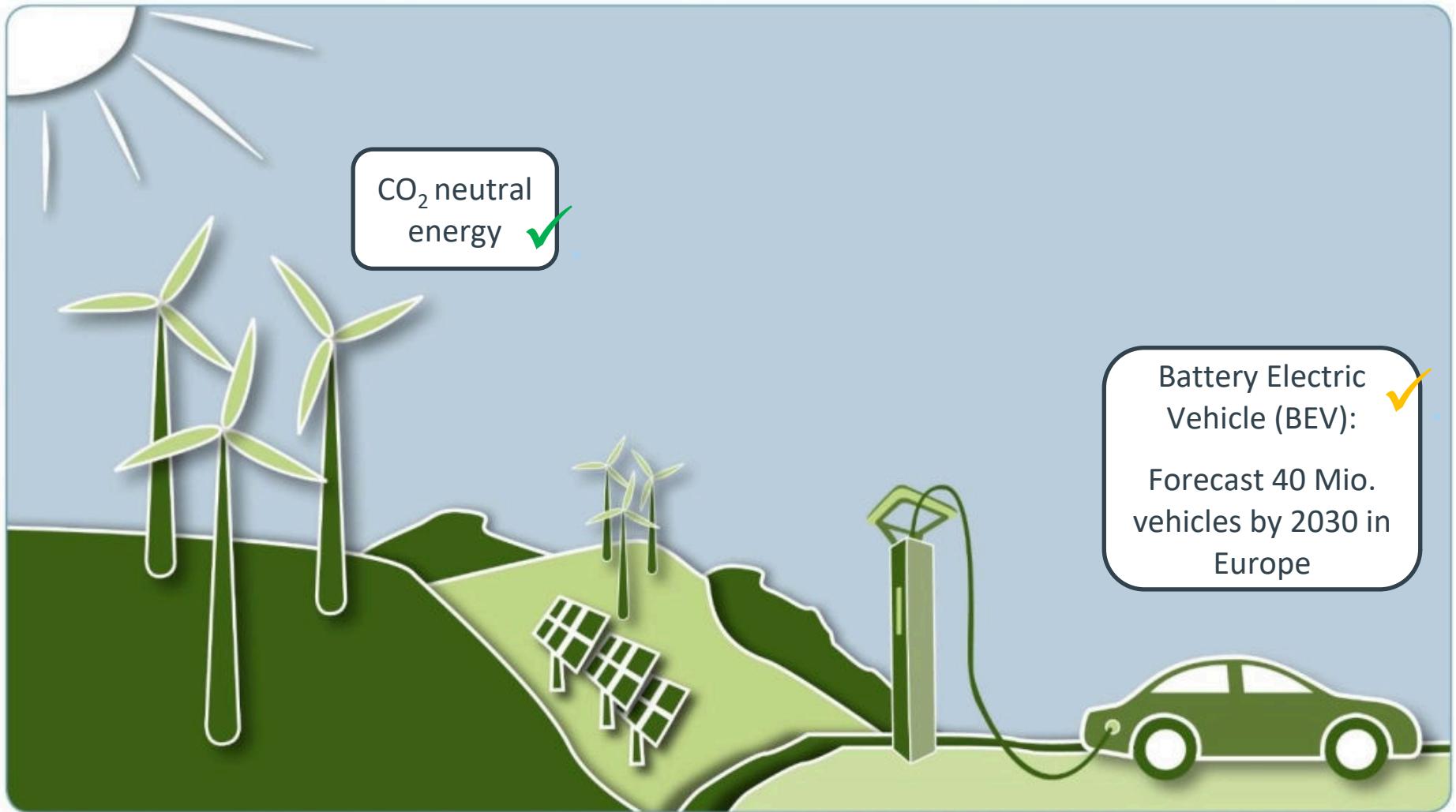
The path to a global EV Charging System



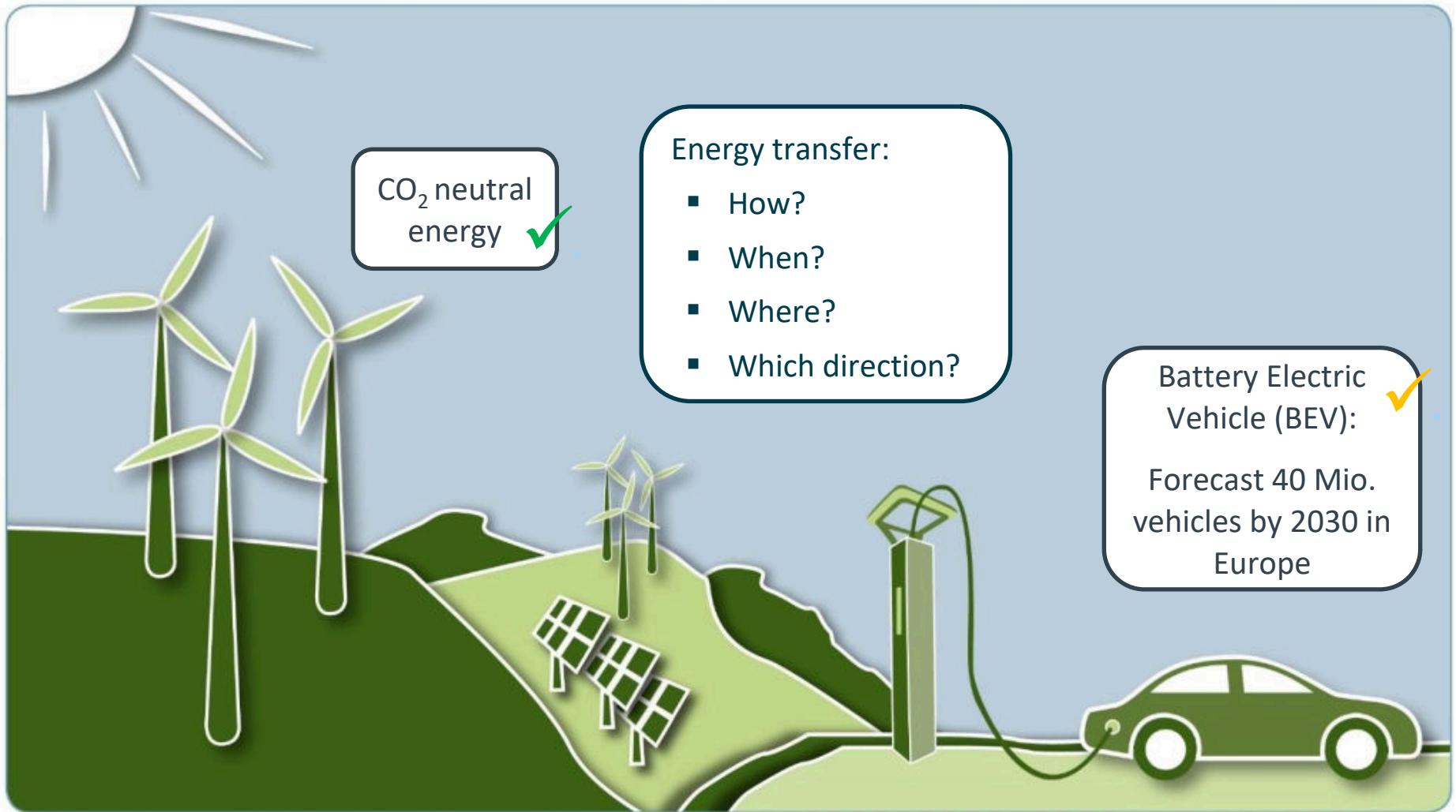
General Goal: CO₂ neutral Mobility



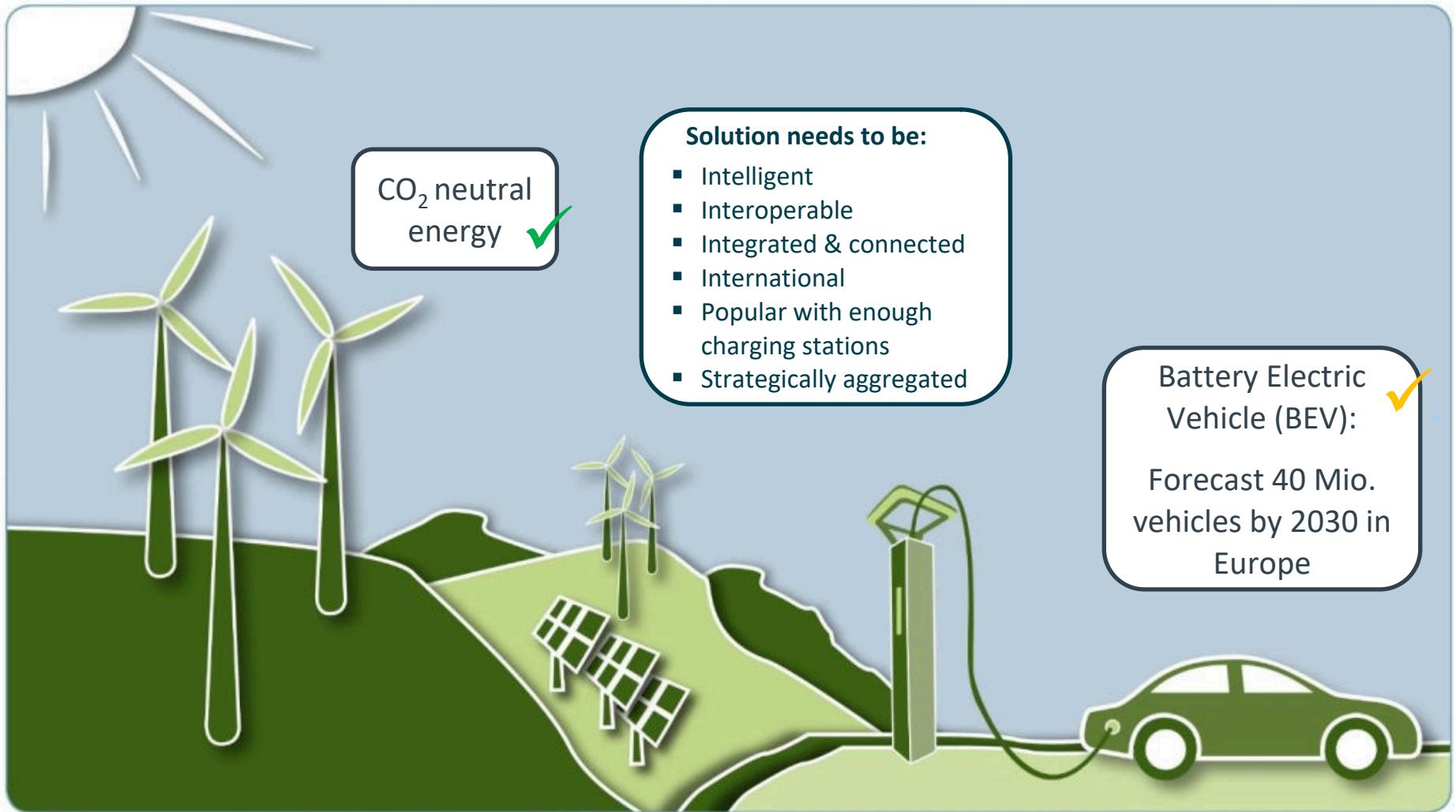
General Goal: CO₂ neutral Mobility



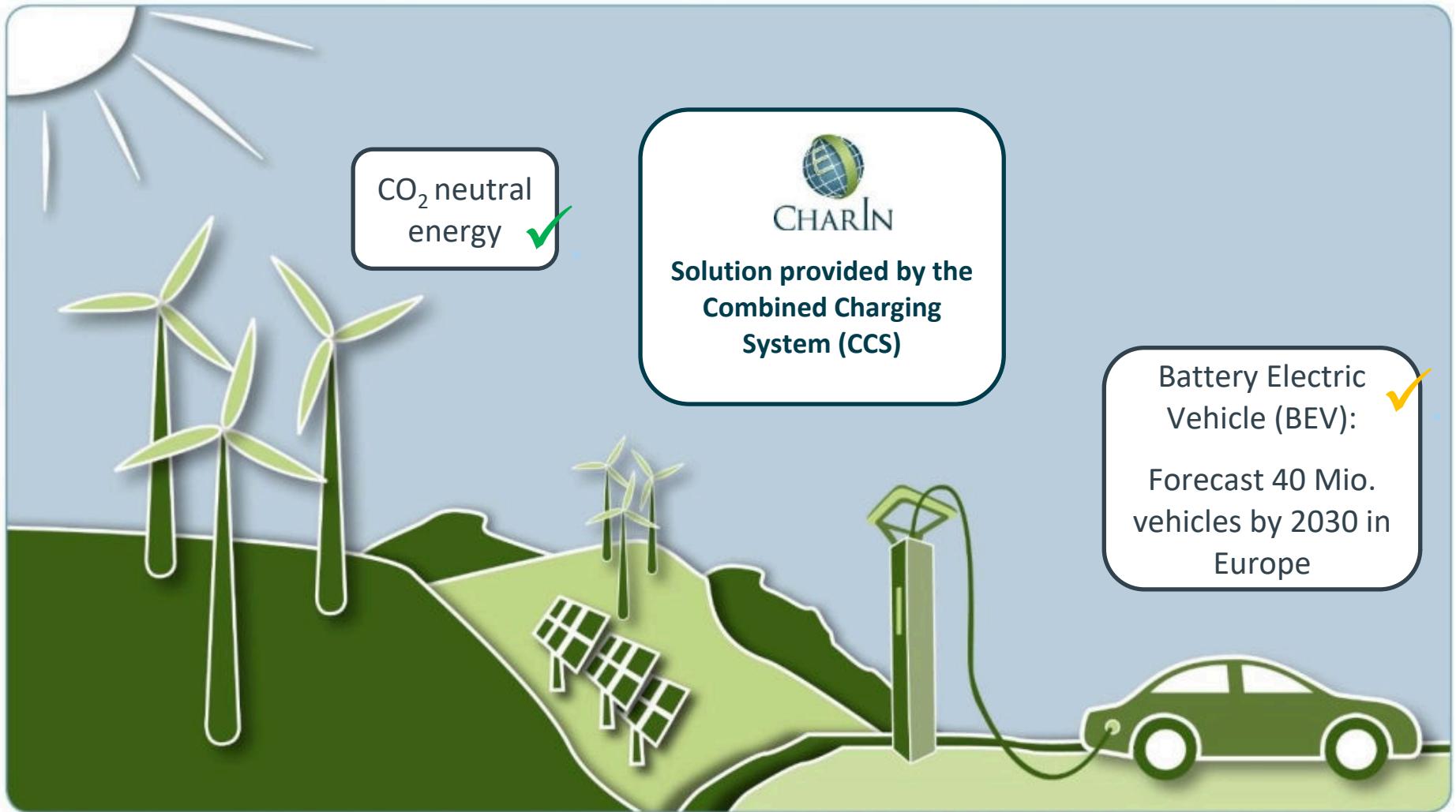
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Charging System Standard

Combined Charging System (CCS)



- **Single System in one connector**
- **One communication module**
- **High Charging Power up to 450 kW**



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- **State of the art communication technology (PLC)**
- **Enabling of grid integration services (V2H, V2G)**
- **Enabling of automated charging and billing (PnC)**



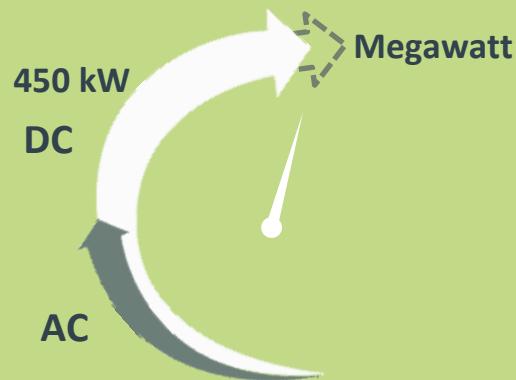
Charging System Standard

CCS Scope



Performance
up to

450 kW



Added Value

Extended
Functionality
Vehicle to grid &
Vehicle to home

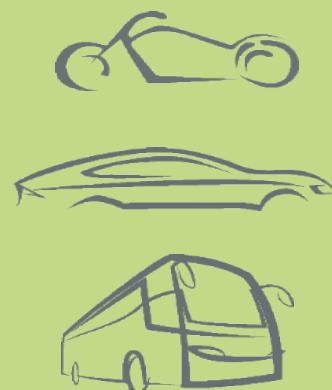


Worldwide

Asia

Europe

North America



Scope of application

Motorbike

Car

Bus | Truck



High Power Charging





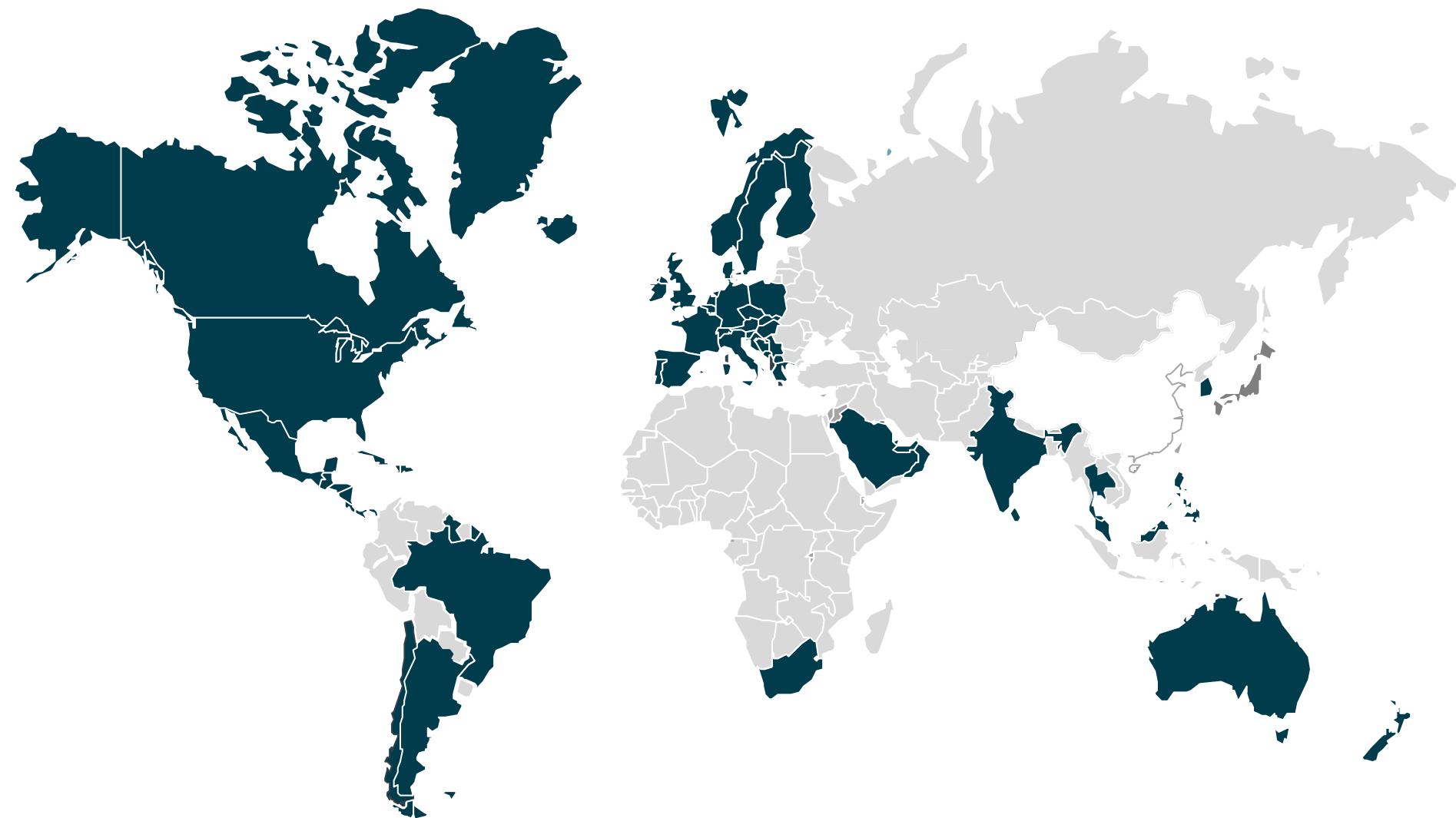
Automated Wireless Charging

Automated Conductive Charging



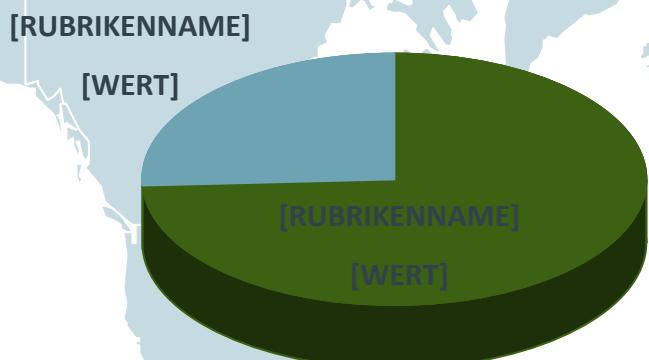
Plug & Charge

World Map of the Combined Charging System CCS



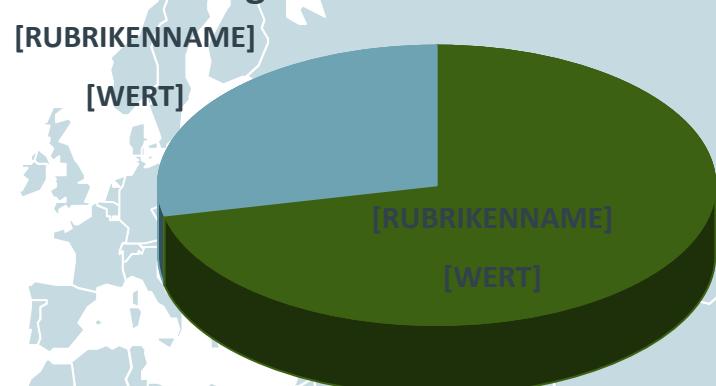
Battery Electric Vehicle market share of charging standards

BEV sales 2018 in the US



Source:
<https://insideevs.com/news/341824/december-2018-us-plug-in-ev-sales-report-card/>

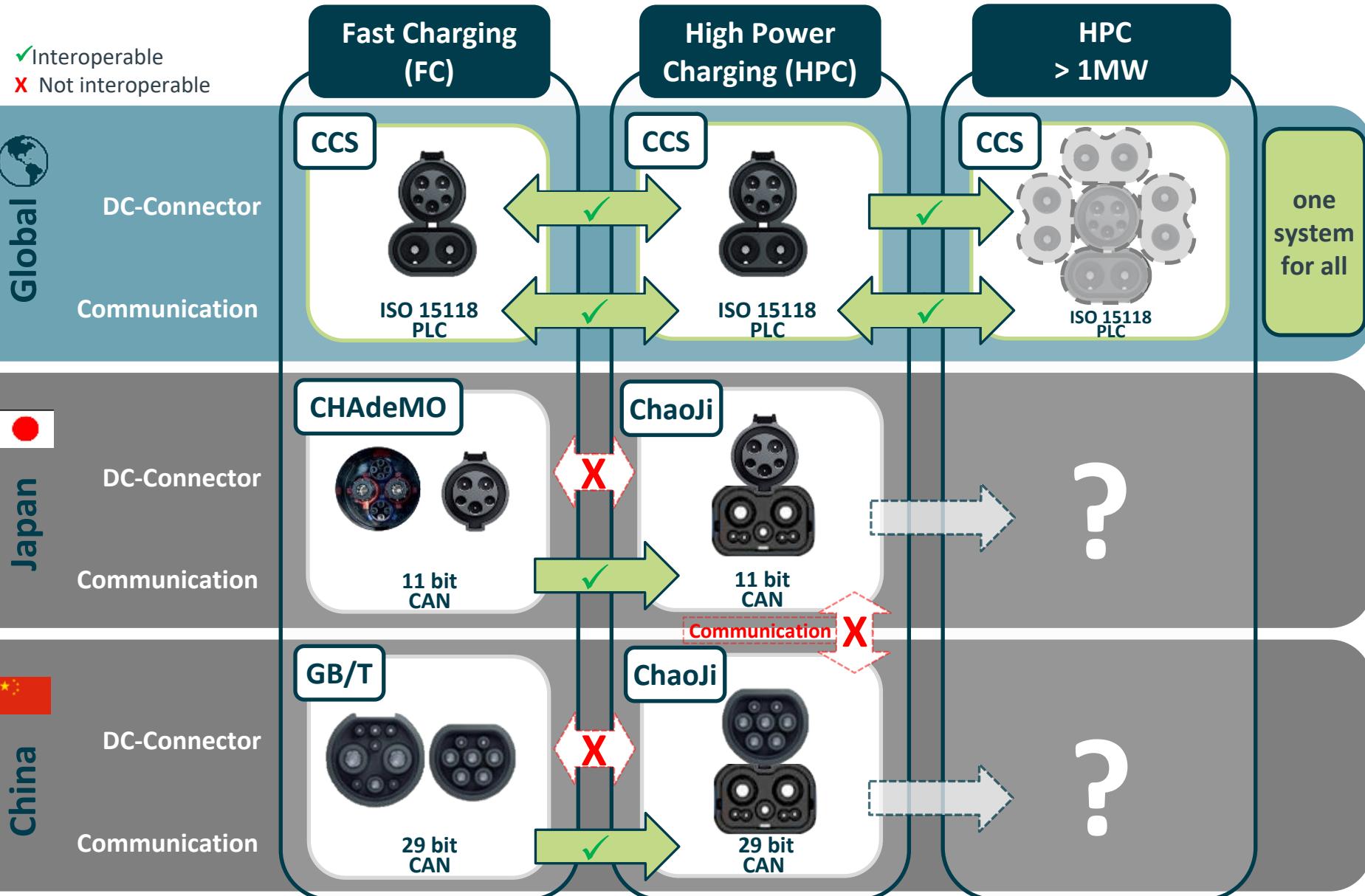
BEV registrations 2018 in Germany



Source: VDIK, VDA, KBA

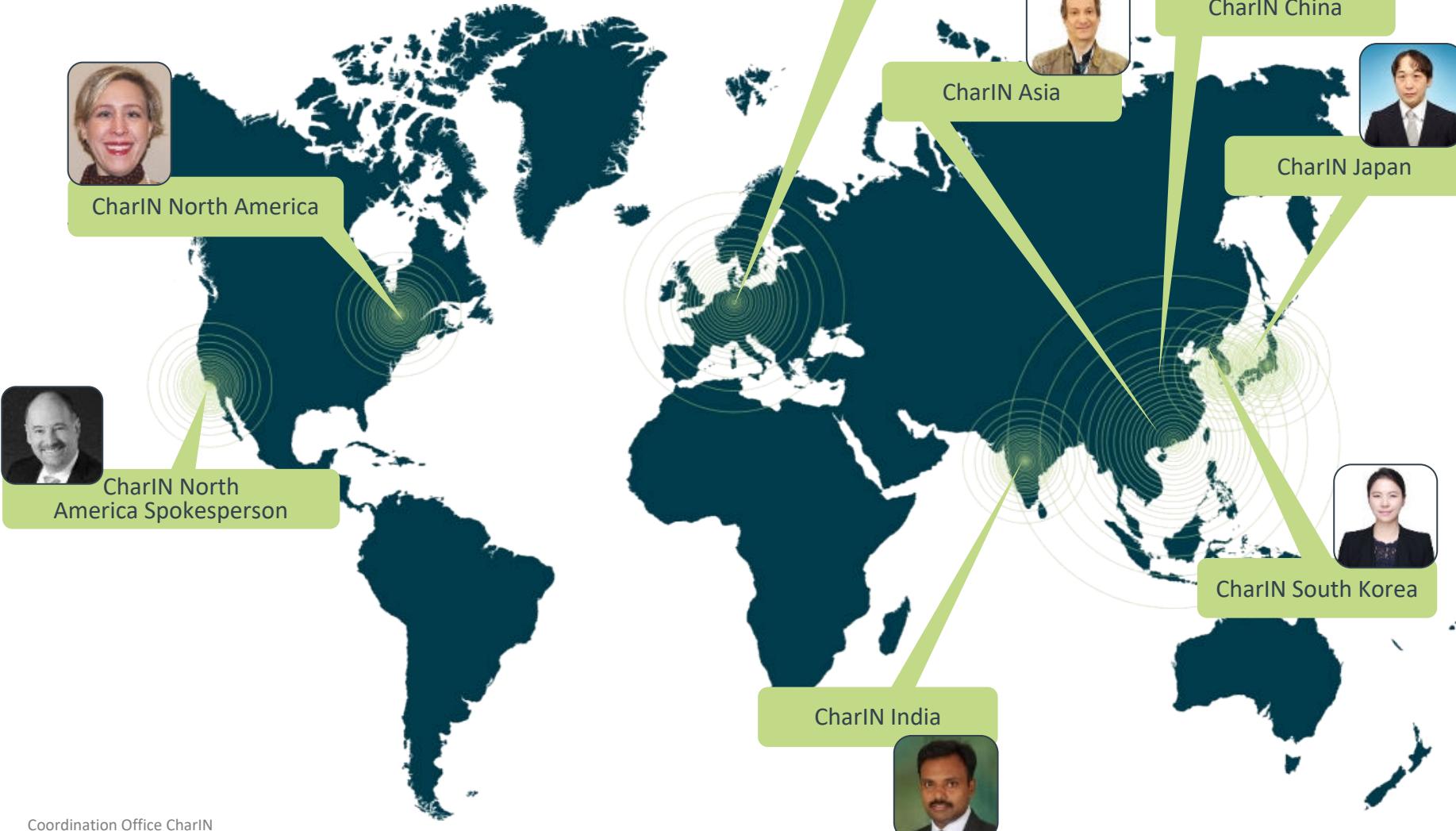
Charging System Standards worldwide

CCS and ChaoJi



CharIN association

Accessible to you at any time right round the world



Core Members



Core members: 91

CharIN association

Our members – currently **161** (total) **2/2**



Regular Members



Regular members: 68

Associated Members



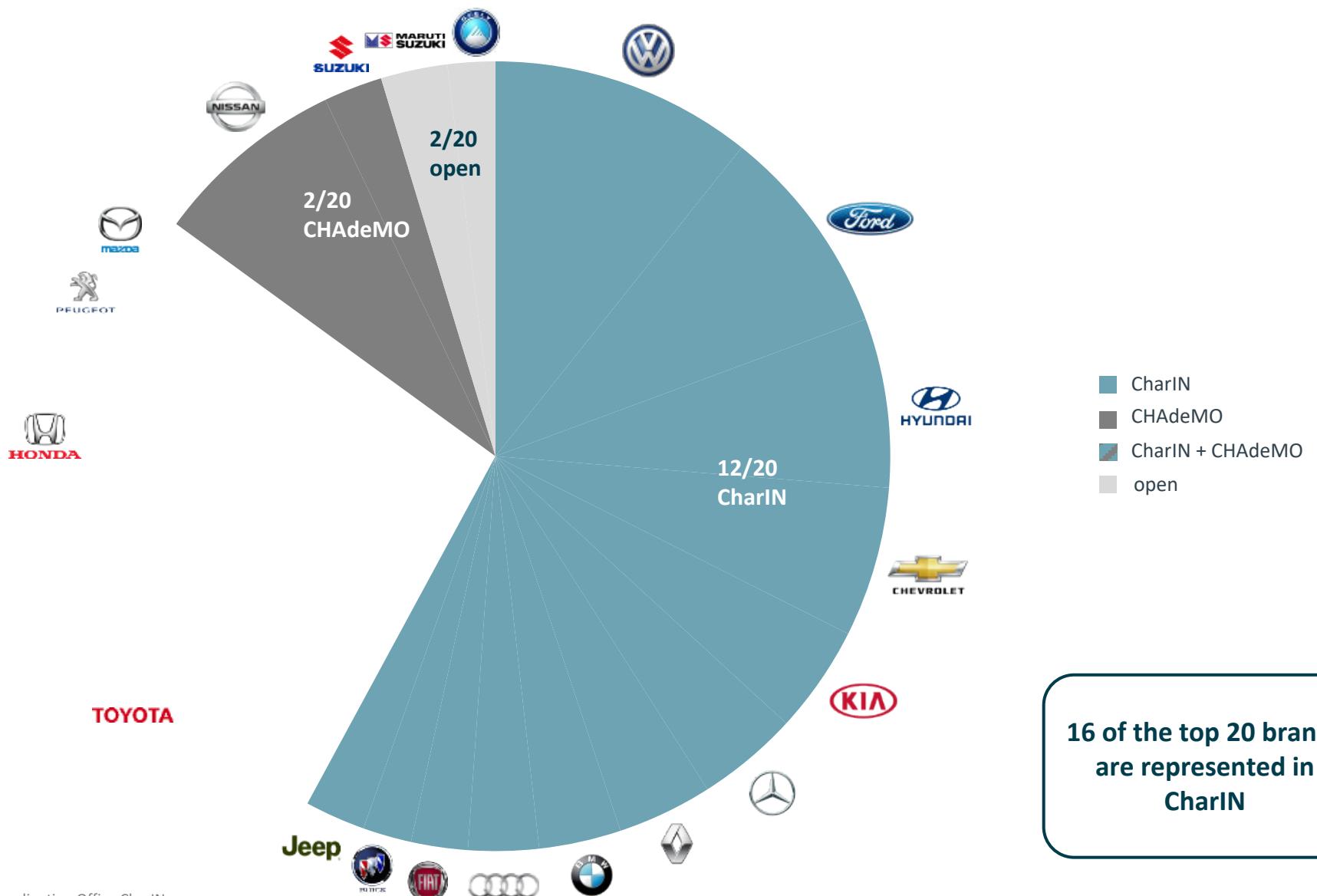
Supporters of CharIN



Supporters of CharIN: 12

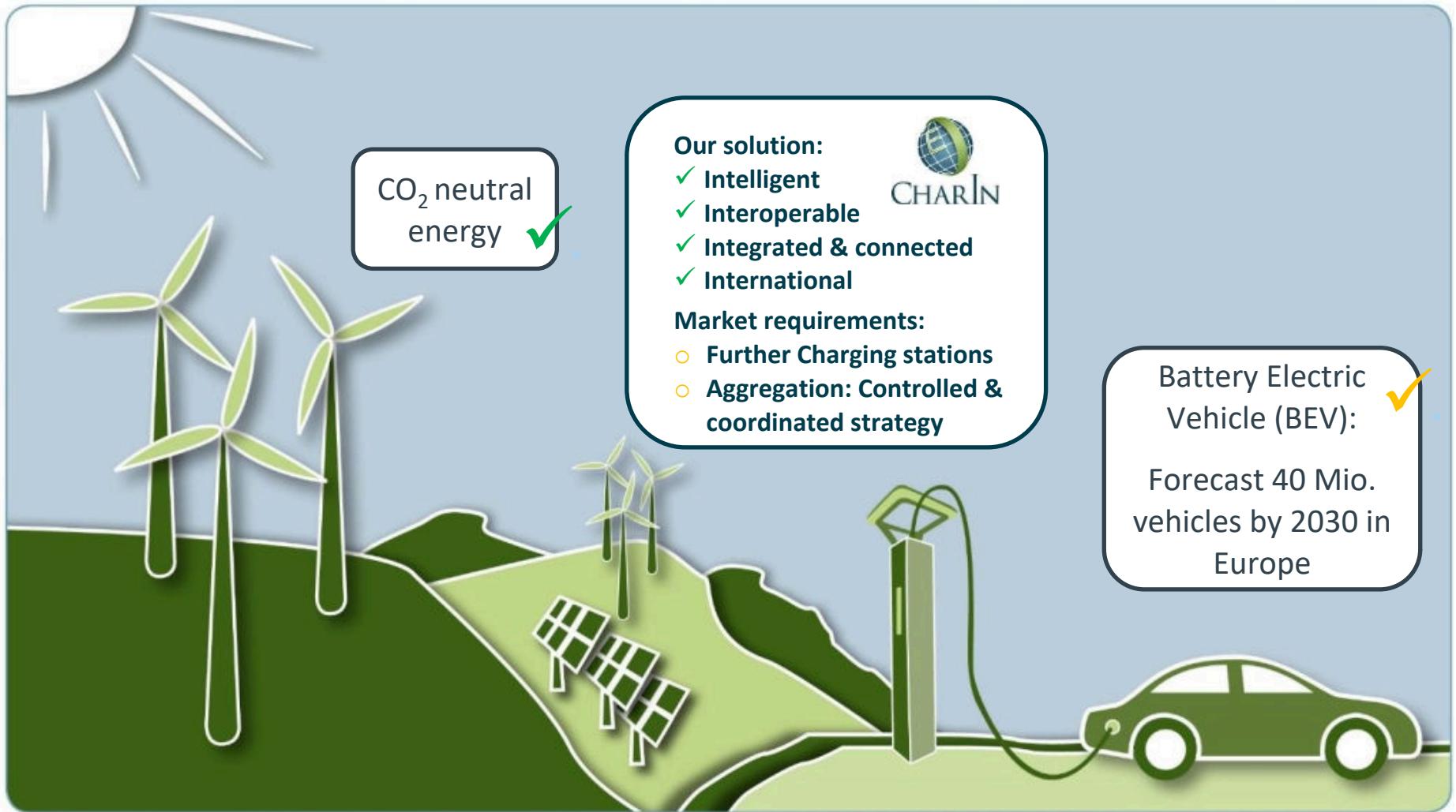
Membership Share

Top 20 brands 2018 by volume



16 of the top 20 brands
are represented in
CharIN

General Goal: CO₂ neutral Mobility



Thank you for your kind attention!

Visit us in Hall 6 | Booth E21!



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