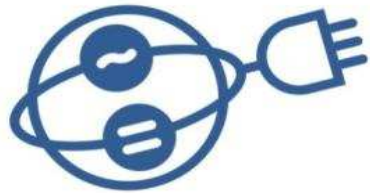




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Combined Charging the universal charging system

Combined Charging System is Reality

Cornel Pampu, Carmeq GmbH

Birger Fricke, Ford

Thorsten Künzig, BMW Group

Ralf Milke, Volkswagen AG

Matthias Kübel, Volkswagen AG





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Combined Charging System is:

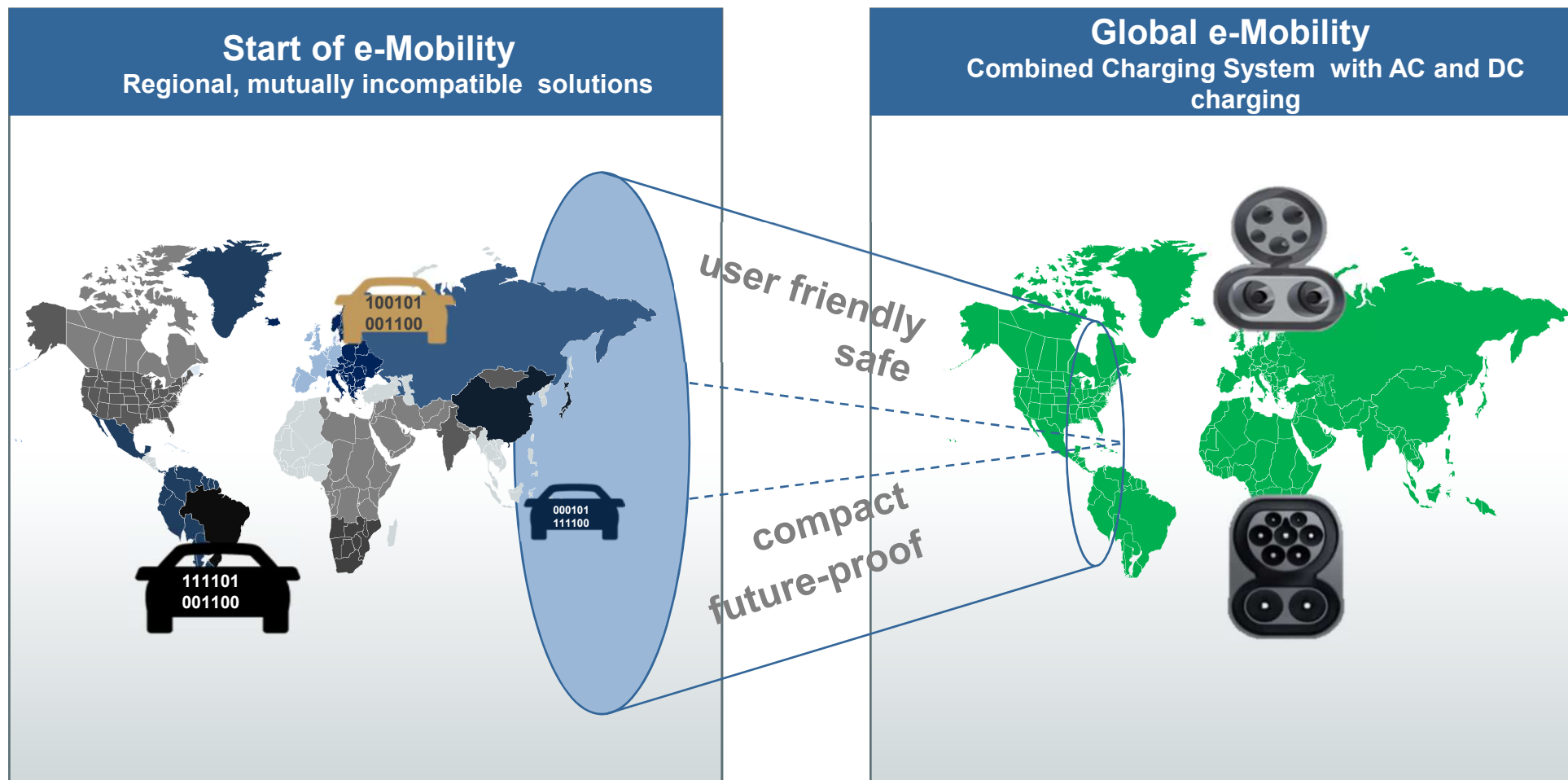
INNOVATIVE RE-THINKING

FOR

FUTURE-PROOF SYSTEM
APPROACH

Combined Charging System – Why?

Global e-Mobility: One system for all.



Coordination Office Charging Interface
c/o Carmeq GmbH

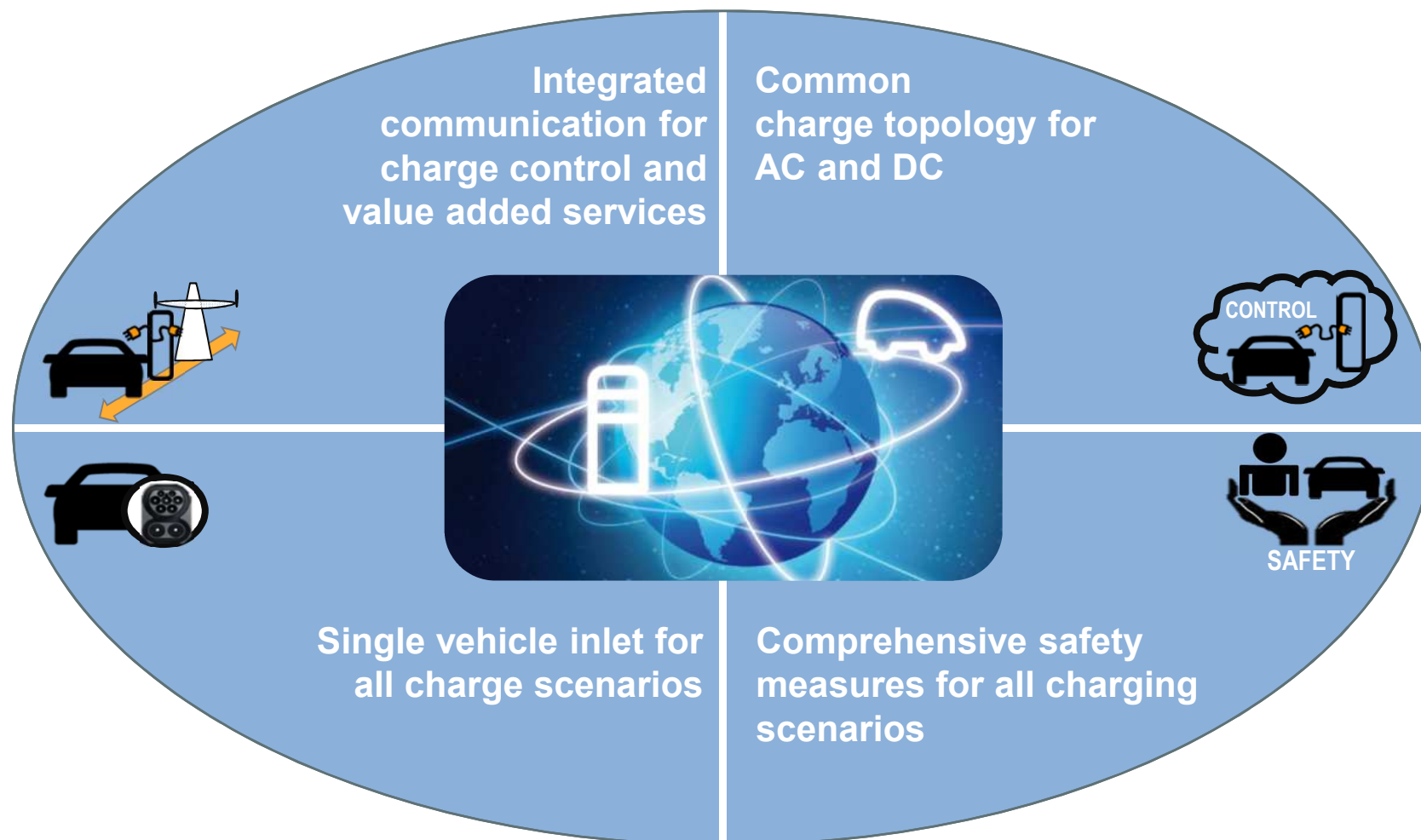


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The Combined Charging System - A New System Approach

An open, standardized and future-proof charging system



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c/o Carmeq GmbH



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International Support for the Combined Charging System.

Strong commitment of international OEMs and infrastructure providers



**

Chrysler Group LLC,
Ford Motor Company, and
General Motors

*

BMW, DAF, Daimler, Fiat, Ford of Europe, General Motors Europe, Hyundai Motor Europe, Jaguar Land Rover, MAN, Porsche, PSA, Renault, Scania, Toyota Motor Europe, Volkswagen, Volvo Cars, and AB Volvo

Coordination Office Charging Interface
c/o Carmeq GmbH

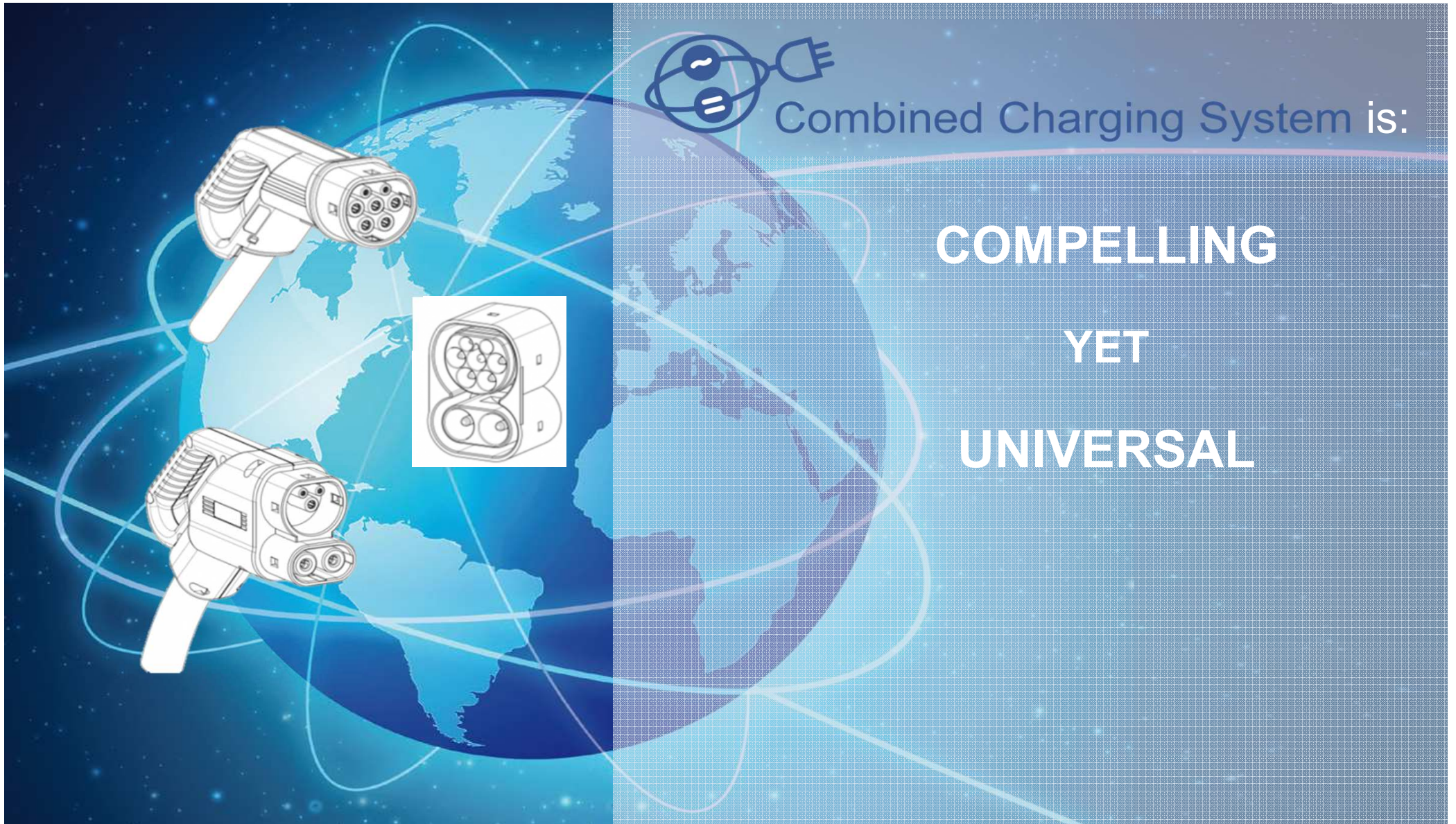


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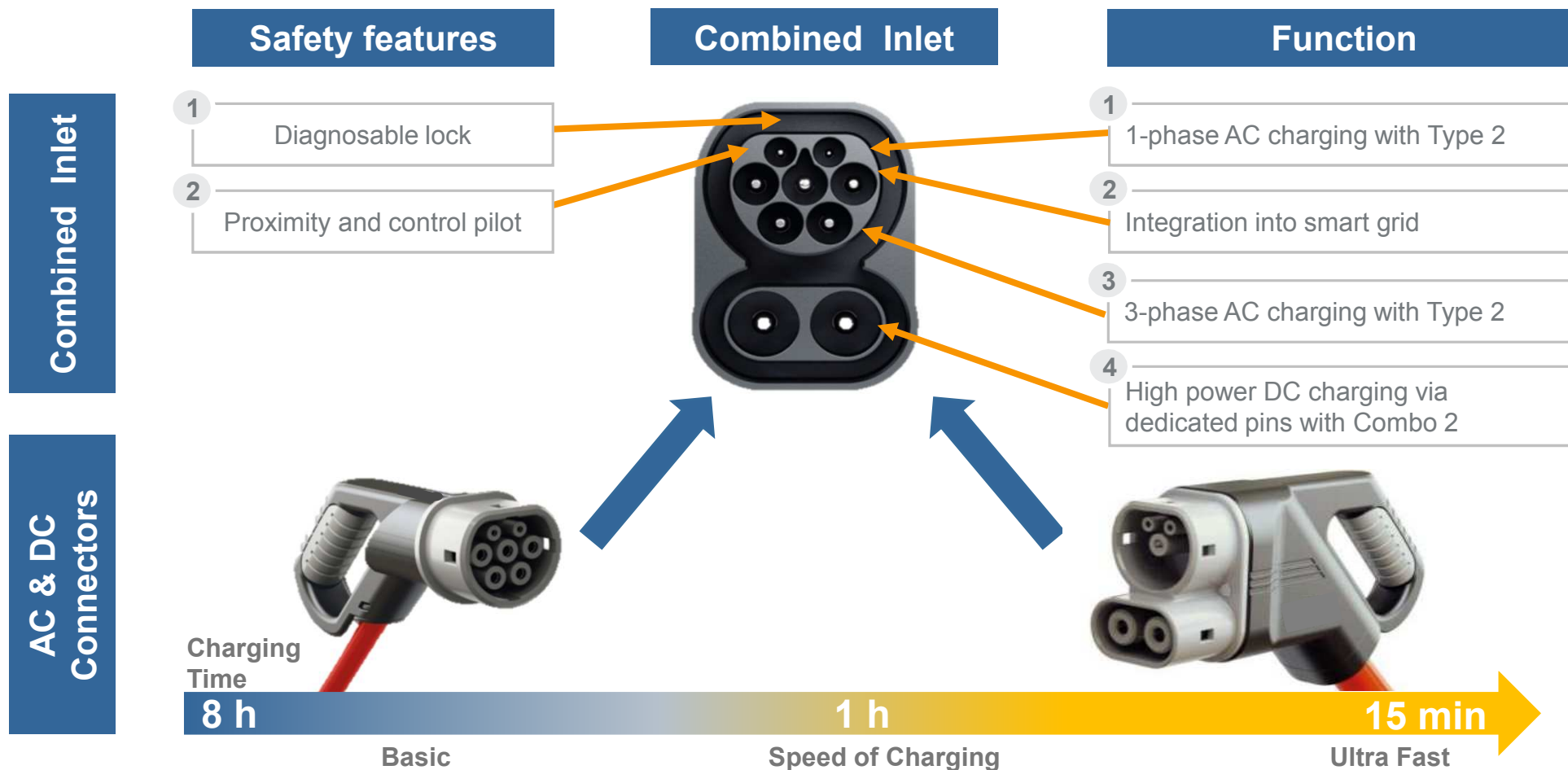


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Combined Charging System – Core Features

Enhancing existing, market proof technology



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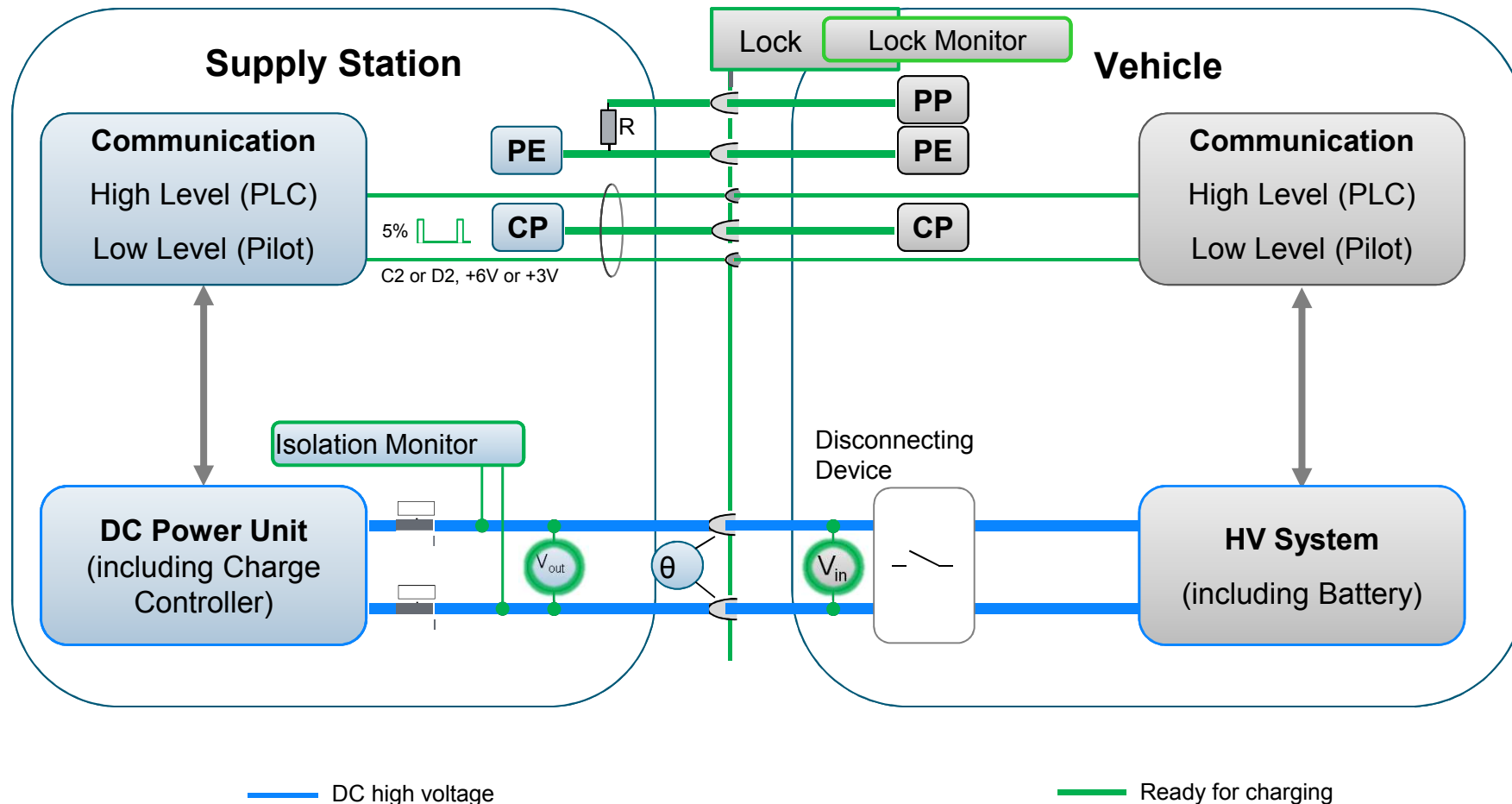


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Charging sequence with a simplified architecture

Proven technical design based on Type2.





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Combined Charging System is:

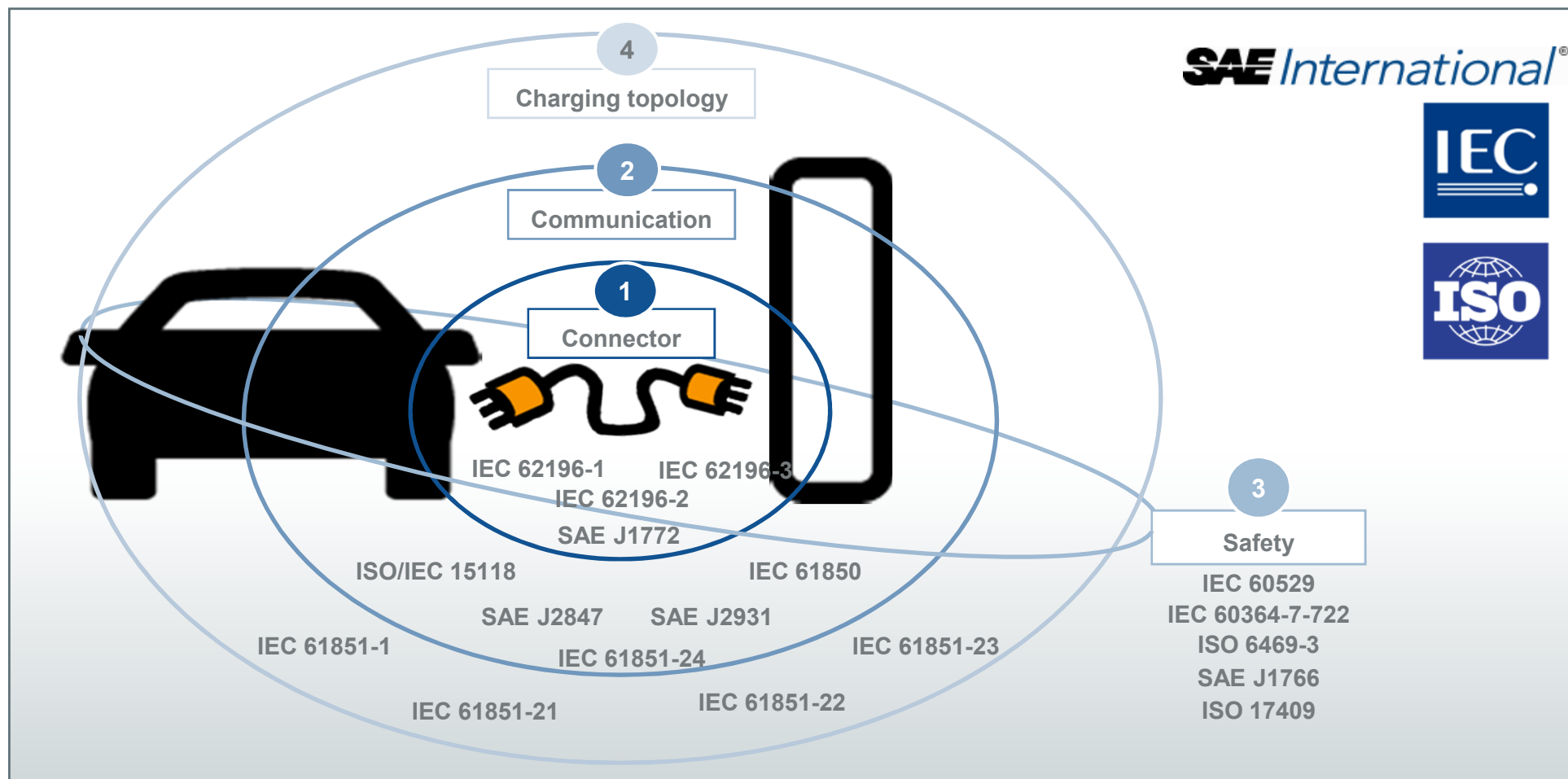
SAFE & ROBUST

WITH

**MATURE STANDARDS
UNDERLYING**

International Standards for the Charging Interface

Standards are validated – national and international.



Coordination Office Charging Interface
c/o Carmeq GmbH

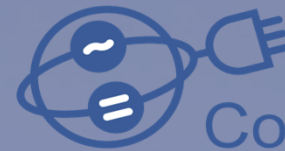


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Combined Charging System is:

**VALIDATED
AND
ON THE MARKET**

Ideas Turned into Reality



VW ERL - Belmont, CA
VW operating an Eaton DC 50 kW unit



BMW of NA – Woodcliff Lake, NJ
BMW i3 operating an ABB DC 50 kW unit



GM ATC – Torrance, CA
GM operating an AkerWade DC 50kW unit



EVS26 - Los Angeles, USA
07.05. – 09.05.2012



eCarTec - Munich, Germany
22. – 24.10.2012



Angela Merkel charging an VW e-up!
International Conference E-mobility Berlin

Coordination Office Charging Interface
c/o Carmeq GmbH



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E-Mobility for Europe

Electric Vehicles and Infrastructure



Announced EVs



Chevy Spark EV



i3



e-up!

Infrastructure



Launch of EU „clean fuel strategy“ earlier this year:

- "Type 2" and „Combo 2“ as common standard for the whole of Europe
- Strategic course of Parliament and Council



EVSEs Supporting the Combined Charging System

The CCS standard is implemented by major EVSE manufacturers



50 kW DC charger



50 kW DC charger



Compact and transportable Combo charger

Coordination Office Charging Interface
c/o Carmeq GmbH



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Infrastructure Rollout Started



Launch of EU „clean fuel strategy“ earlier this year:

- "Type 2" and „Combo 2“ as common standard for the whole of Europe
- Strategic course of Parliament and Council



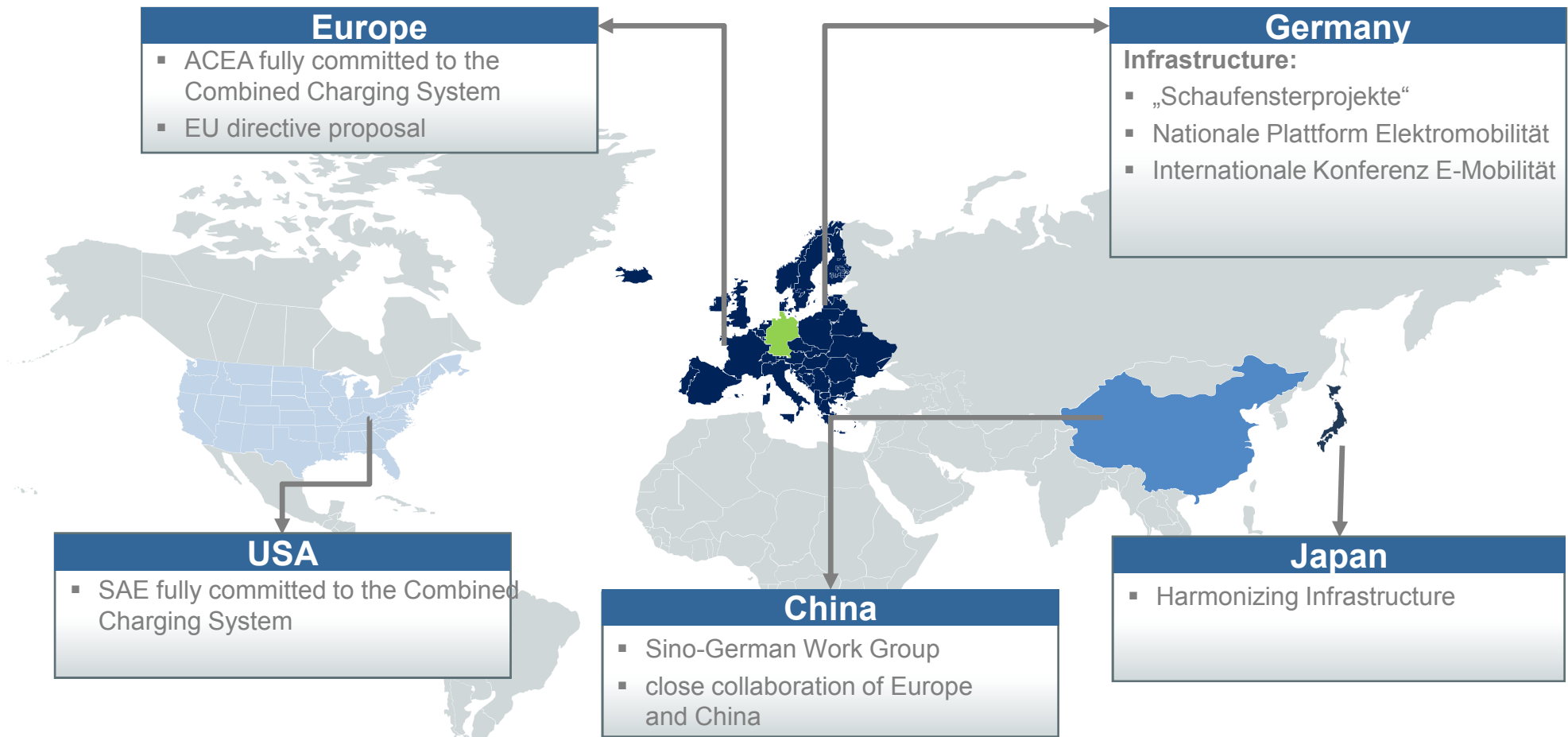
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Evolution towards a global universal system





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Combined Charging System is:

**OPEN STANDARD
FOR
GLOBAL E-MOBILITY**



The Combined Charging System - The SUNRISE of e-Mobility

It is on the market - worldwide



Combined Charging System

SAFE, UNIVERSAL, OPEN, ROBUST, INNOVATIVE SYSTEM for ELECTRIC VEHICLES



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Ideas Turned into Reality



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Q & A