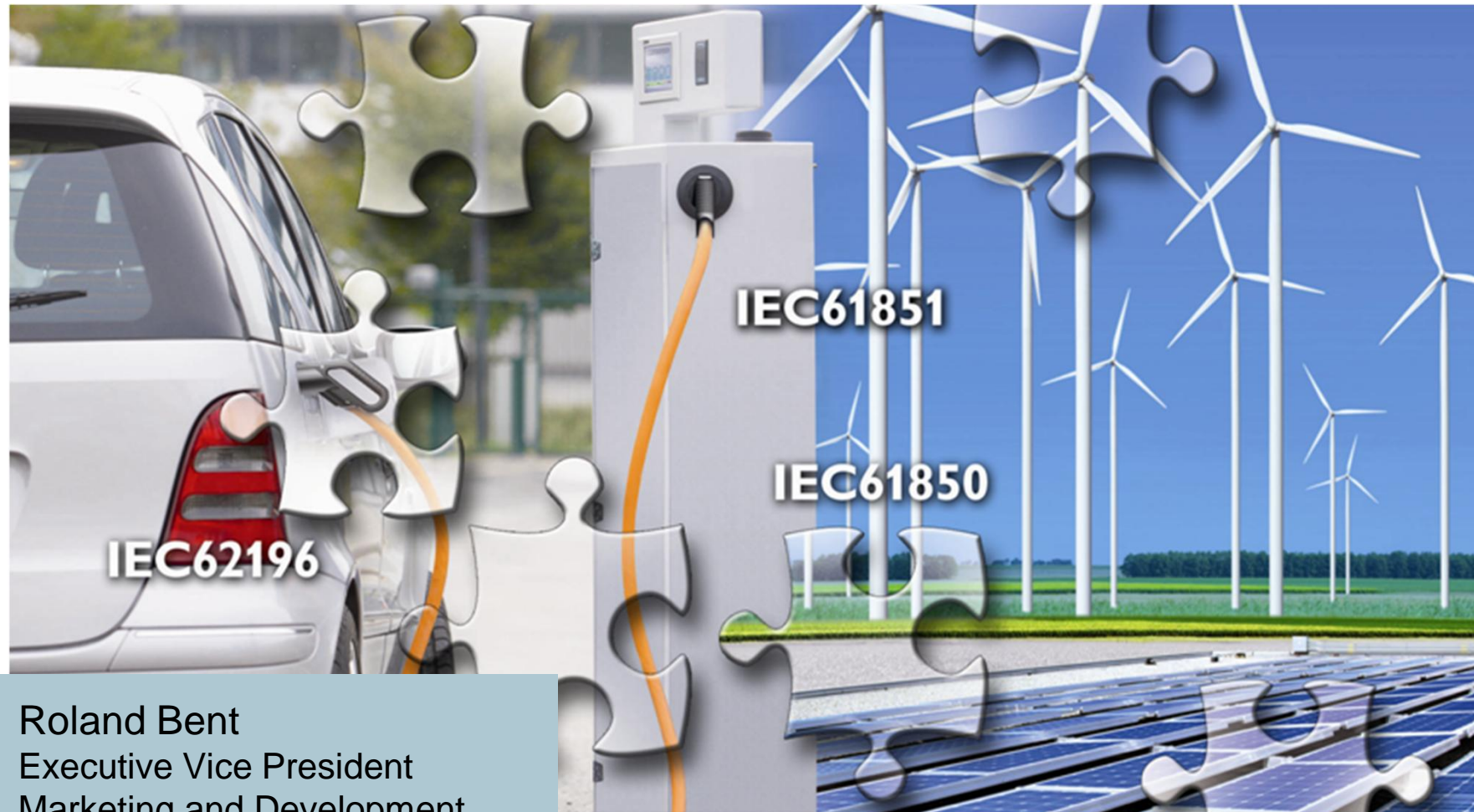
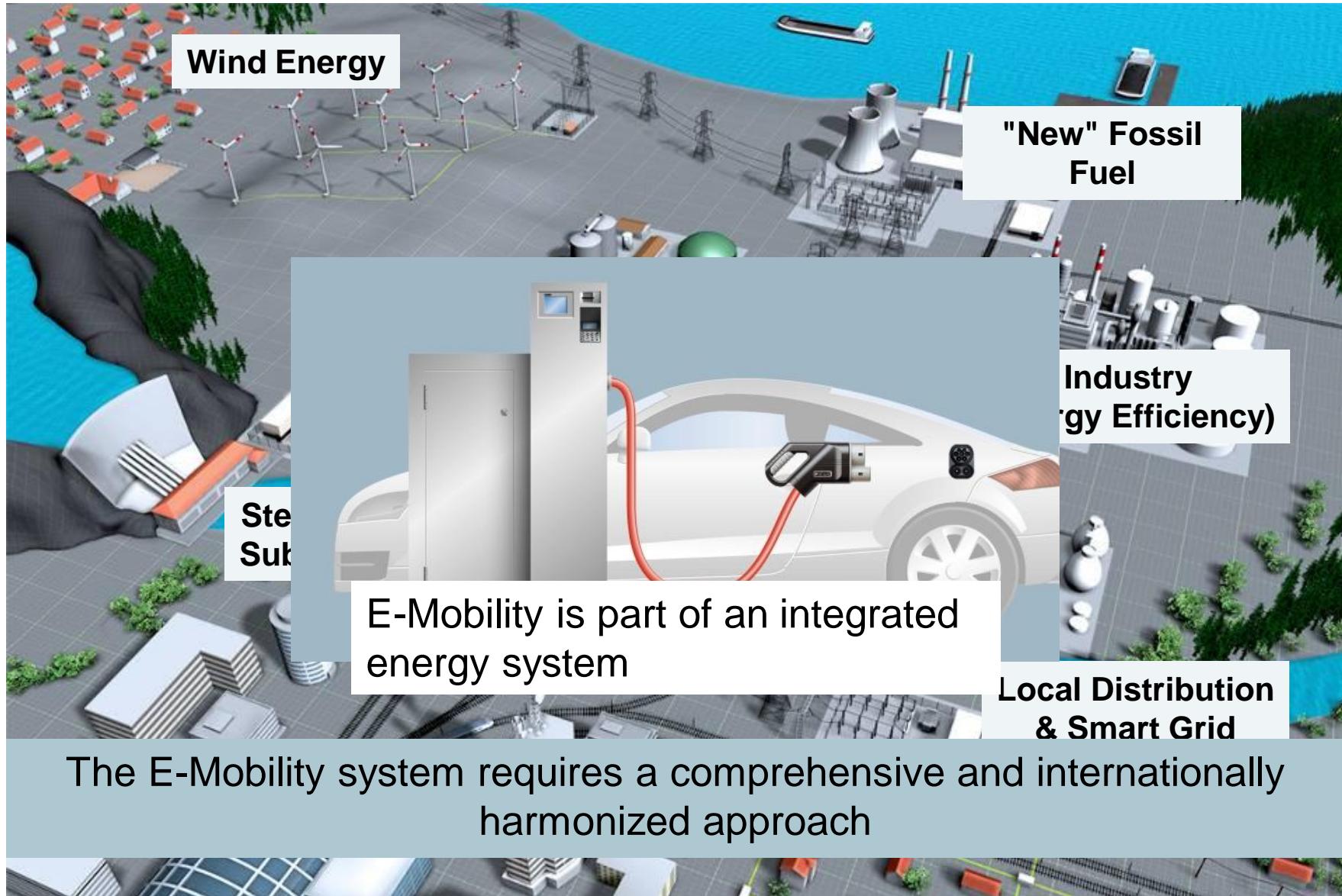


Success Story Standardization Roadmap E-Mobility



Roland Bent
Executive Vice President
Marketing and Development
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E-Mobility is more than just the replacement of the combustion engine



Wind Energy

"New" Fossil Fuel

Industry
(Energy Efficiency)

Ste
Sub

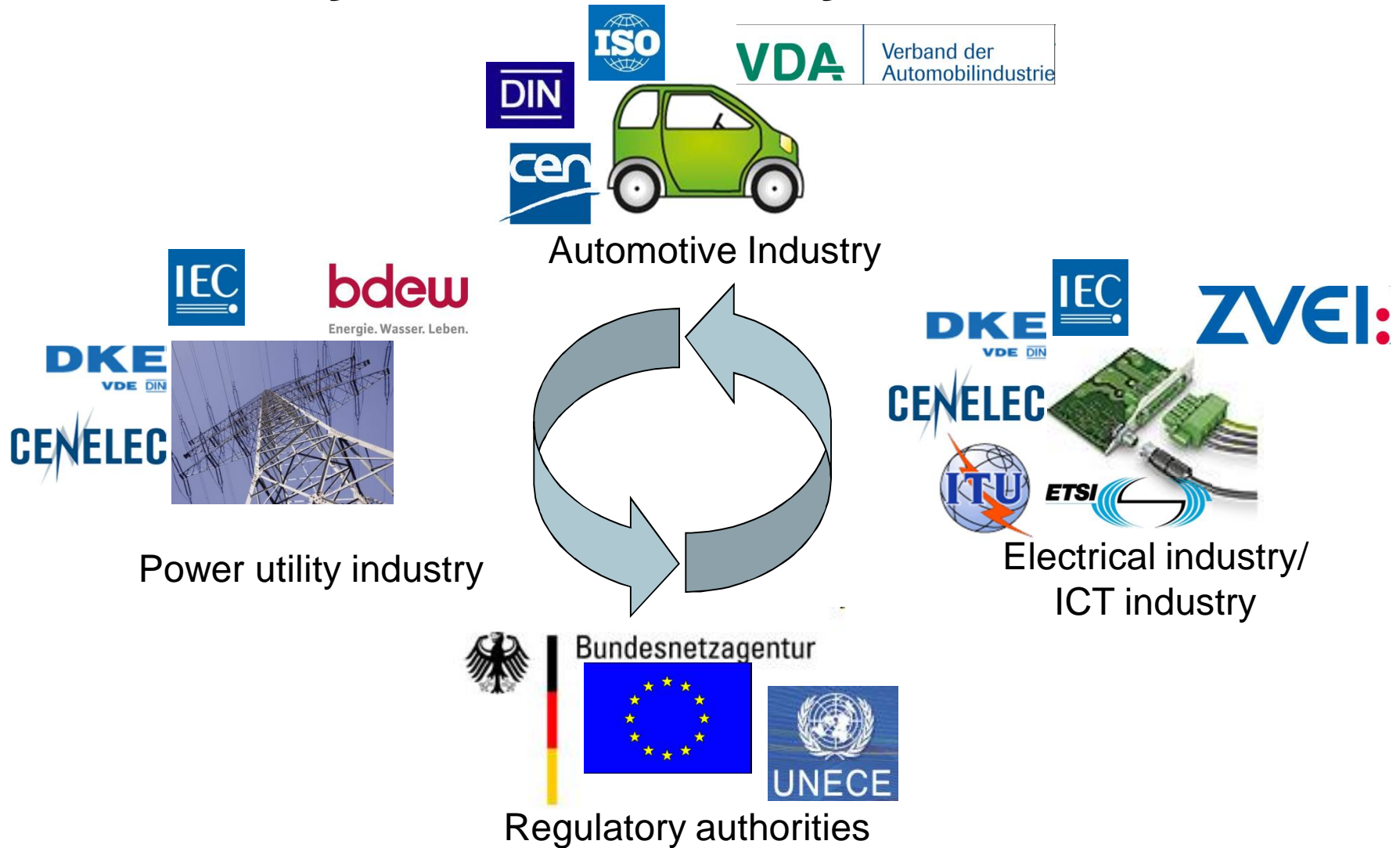


E-Mobility is part of an integrated energy system

Local Distribution
& Smart Grid

The E-Mobility system requires a comprehensive and internationally harmonized approach

Stakeholders for the "System E-Mobility"



Standardization roadmap E-Mobility

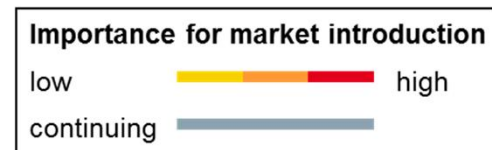
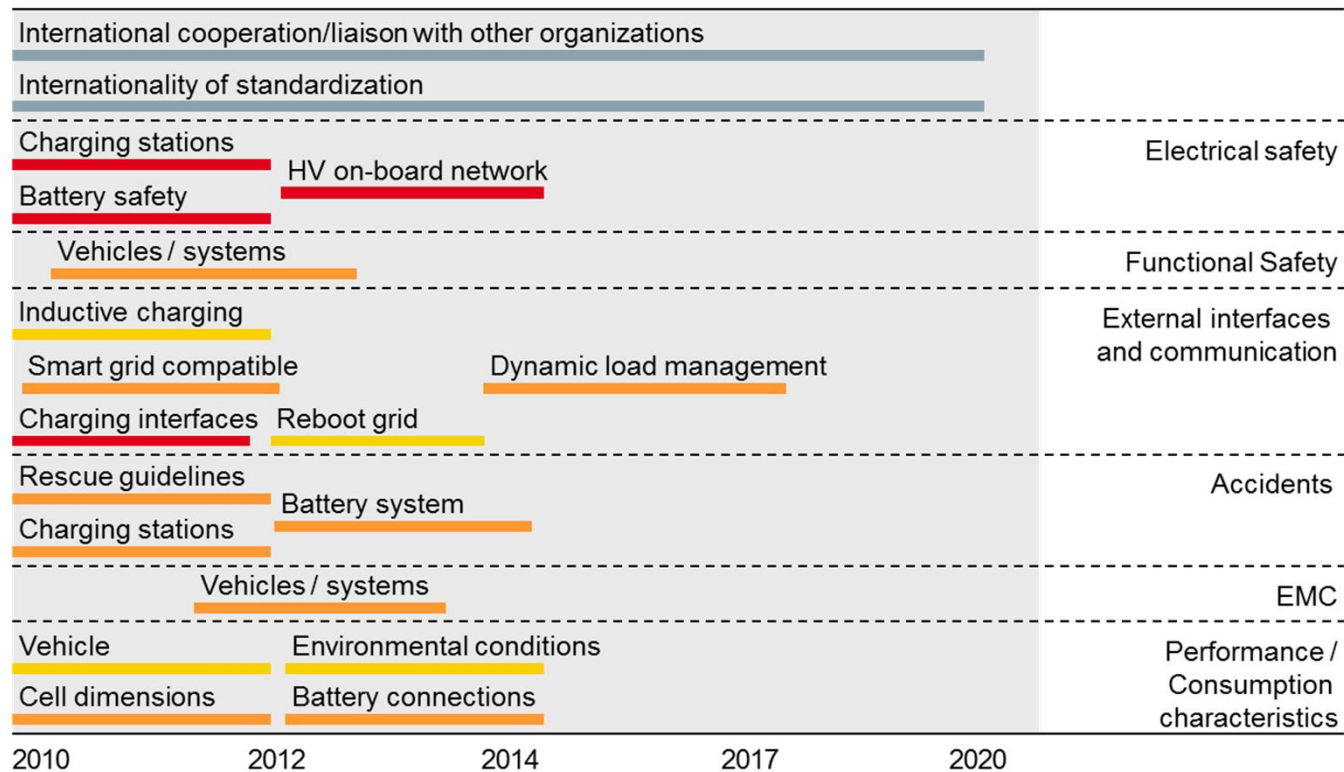
Task of the WG 4 of the National Platform E-Mobility

Motivation of the standardization roadmap E-Mobility

- International standards are the key to the market
 - Platform for all stakeholders
 - Strategic orientation and bundling of all activities
-
- Overview of the national and international standardization landscape
 - Systemic overview of the overall vehicle system - infrastructure with thematic classification of standards
 - Prioritized guidance for standardization, research and politics in chronological order
 - Early coordination of the positions for the international standardization

Topics of the standardization roadmap

Standardization Roadmap topics



Content of the standardization roadmap

- Handover of standardization roadmap version 1 in November 2010 to the NPE
- Key requirements
 - Coordination of standardization activities
 - Interoperability of the charging infrastructure
 - Use of existing product standardizations
 - More efficient standardization processes
 - Participation in international standardization
- Further development and revision of the standardization roadmap is being coordinated by the WG 4

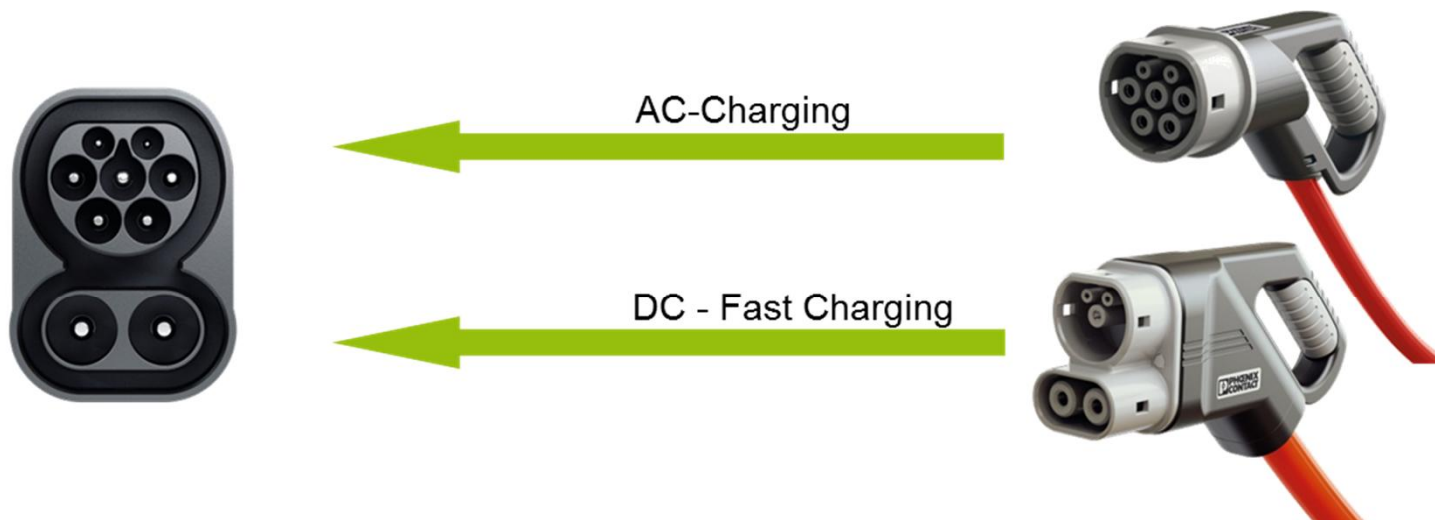


Harmonization of national regulations, e.g. of the charging infrastructure, is necessary in favor of European respectively international solutions

International collaboration

The Combined Charging System

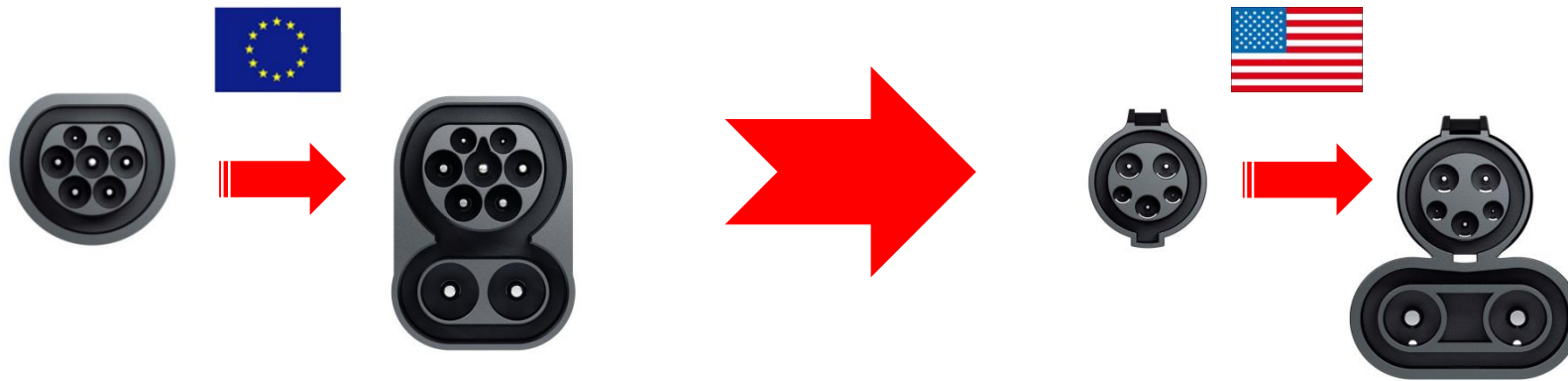
- One physical charging interface at the vehicle for AC and DC charging
- Suitable for high-performance charging, prepared for the next generation of batteries
- Integration of vehicle and charging infrastructure into the Smart Grid



International collaboration

The Combined Charging System

- Implementation of the concept "Combined AC/DC Charging" on the US AC Connector (Type 1)



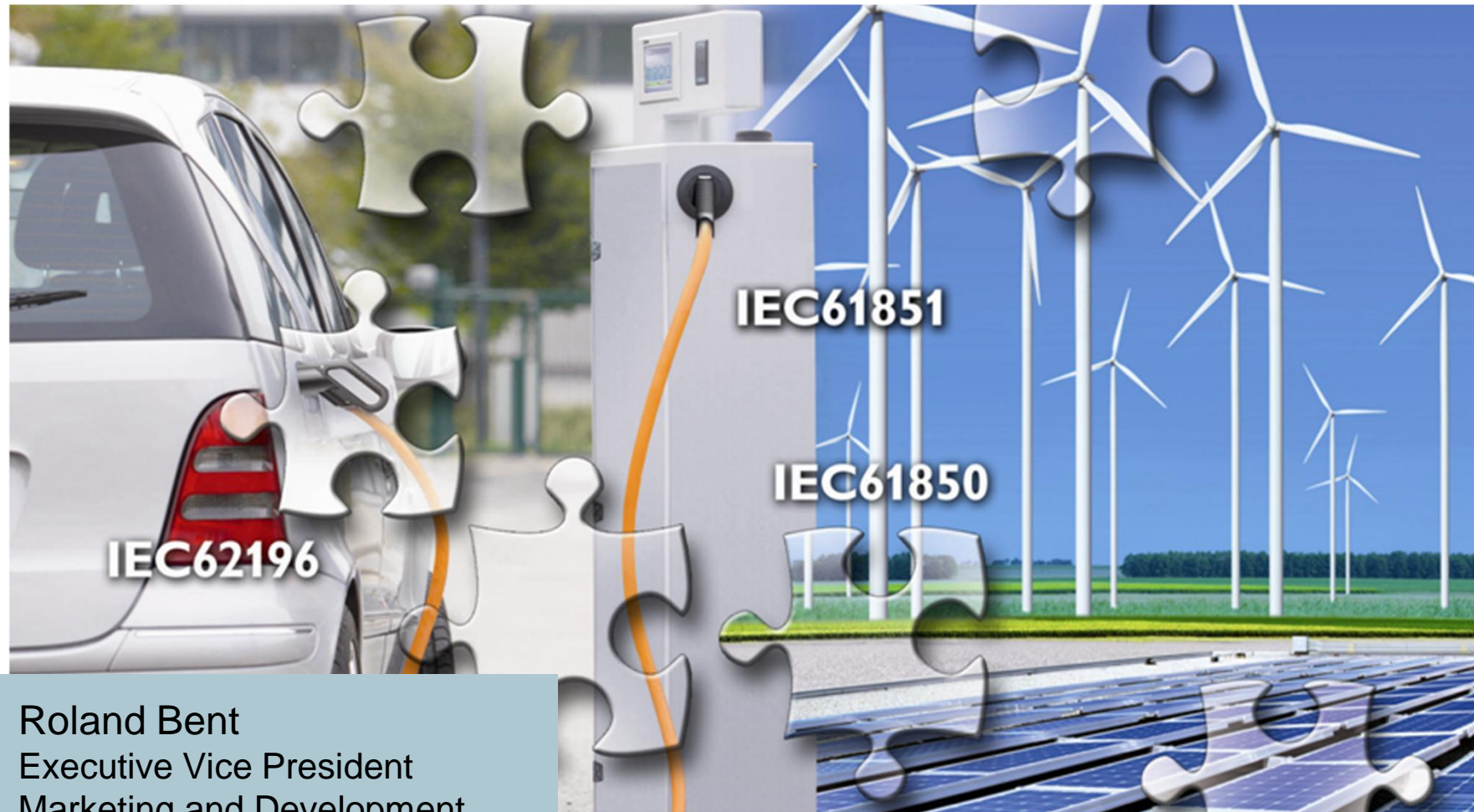
- Supported by all European and US OEMs
- One standard for both versions - IEC 62196-3
- One harmonized communication standard - ISO/IEC 15118

E-Mobility will only be successful on an international level, when its worldwide implementation is harmonized even more than before.



The German standardization roadmap makes significant contributions for this purpose

Success Story Standardization Roadmap E-Mobility



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