

ISO19363 – Standardisation of the vehicle part of inductive charging systems

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The activities are very ambitious but challenging according to the great technical and organisational complexity.

STANDARDISATION

INTEROPERABILITY

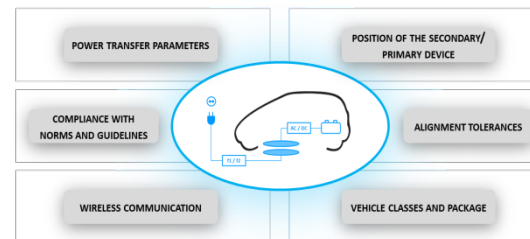
SAFETY

ECONOMIES OF SCALE

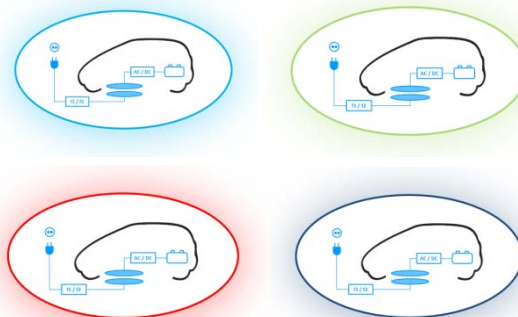
MATURITY OF TECHNOLOGY



TECHNICAL COMPLEXITY








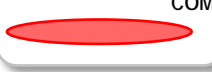

OEMs & SUPPLIERS WORLDWIDE



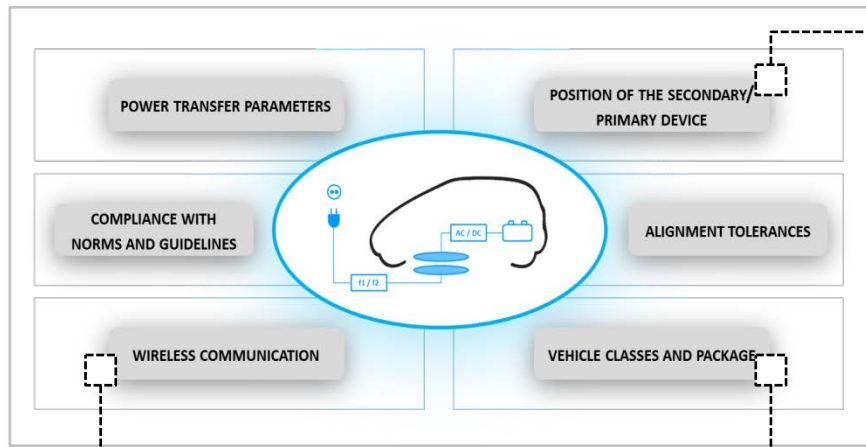
DIFFERENT ORGANISATIONS

STANDARD				FOCUS
IEC 61980-1	IS	Electric vehicle wireless power transfer (WPT) systems Part 1: general requirements		COM
IEC 61980-2	TS	Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure with respect to wireless power transfer (WPT) systems		COM
IEC 61980-3	TS	Part 3: Specific requirements for the magnetic field wireless power transfer systems		COM
ISO 19363	PAS	Electrically propelled road vehicles Magnetic field wireless power transfer – safety and interoperability requirements		COM
ISO/IEC 15118	IS	Road vehicles – vehicle to grid communication interface		COM
SAE J2954	TIR	Wireless charging of electric and plug-in hybrid vehicles		COM
SAE 2847/6	RP	Wireless charging communication between plug-in electric vehicles and the utility grid		COM

Different organisations and groups are currently involved in the standardisation of inductive charging systems.

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ISO/IEC 15118	IS	<i>Road vehicles – vehicle to grid communication interface</i>	
SAE J2954	TIR	<i>Wireless charging of electric and plug-in hybrid vehicles</i>	
SAE 2847/6	RP	<i>Wireless charging communication between plug-in electric vehicles and the utility grid</i>	

Besides the inductive power transfer itself, the technical complexity is enlarged by the integration in different vehicles.

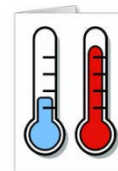


A common position of the secondary device is exposed to different vehicle conditions.

package space



temperature exposures



Wireless charging requires wireless communication and has to cover some new functionalities.

pairing

alignment



others



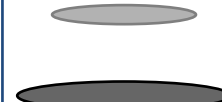
Bluetooth

Different vehicles require different solutions (or movable devices) to enable the power transfer.

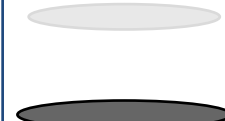
sedan



SUV



offroad



The current approach of the ISO19363 is to define secondary reference devices for testing to derive interoperable systems.

