



Feasibility analysis and development of on-road charging solutions  
for future electric vehicles

# IEC Standardization on WPT

Peter Van den Bossche  
Vrije Universiteit Brussel  
IEC TC69

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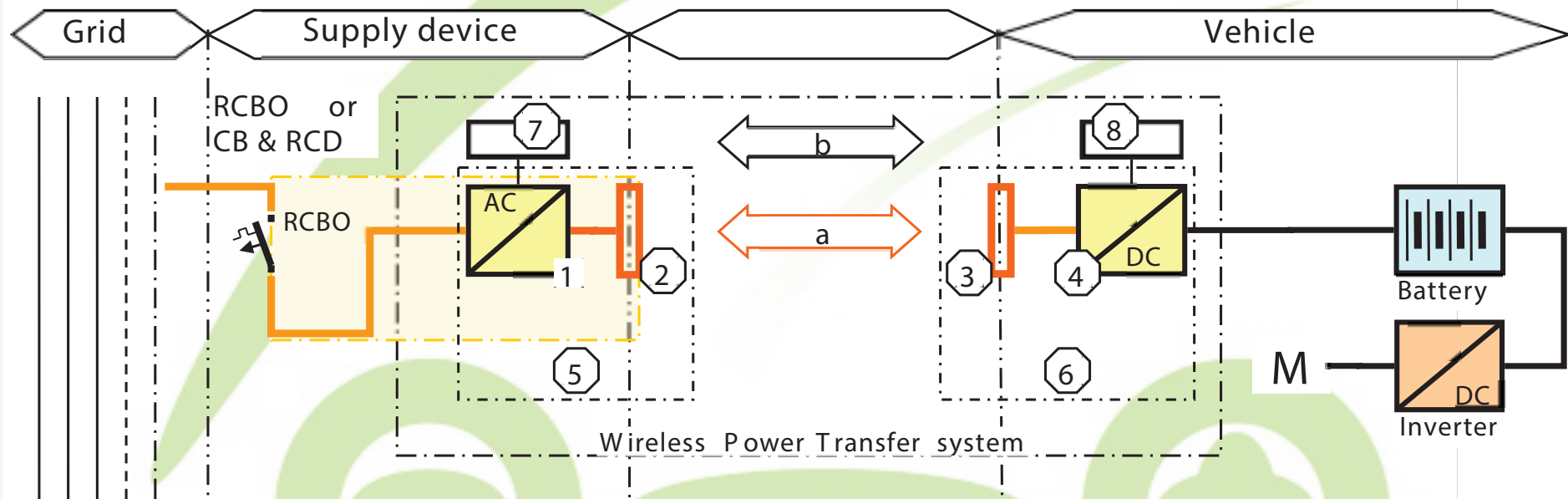
# Standardization committee

- IEC TC69: Electric road vehicles and industrial trucks
  - IEC61980 series:  
Electric vehicle wireless power transfer (WPT) systems
  - Work started 2010
  - Initial IEC work on inductive charging (paddle system) abandoned 2000



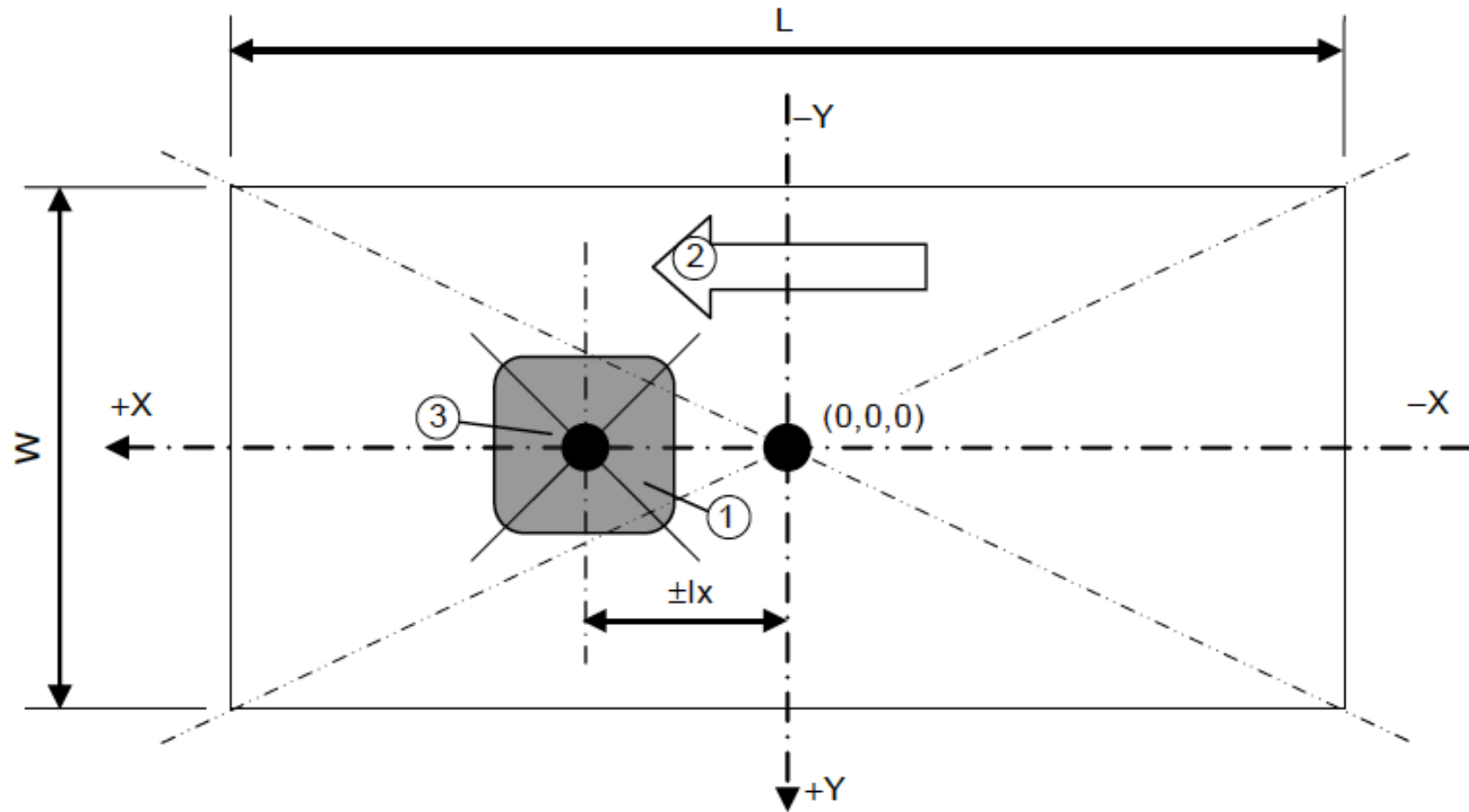
# IEC61980-1: General requirements

- Published 2015
- Terms and definitions
- Measurement conventions



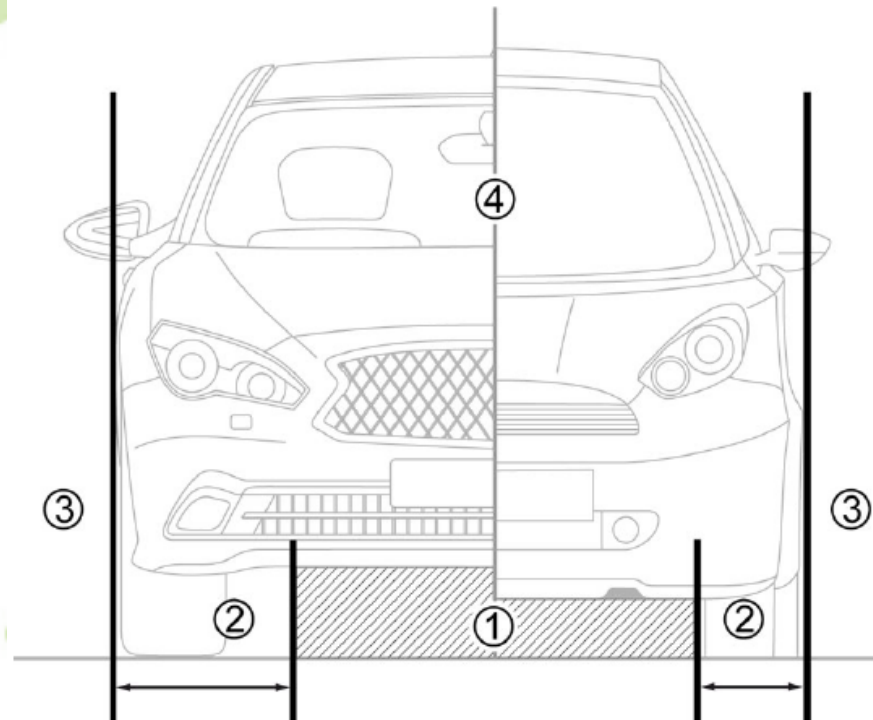
# IEC61980-1

- Position measurement



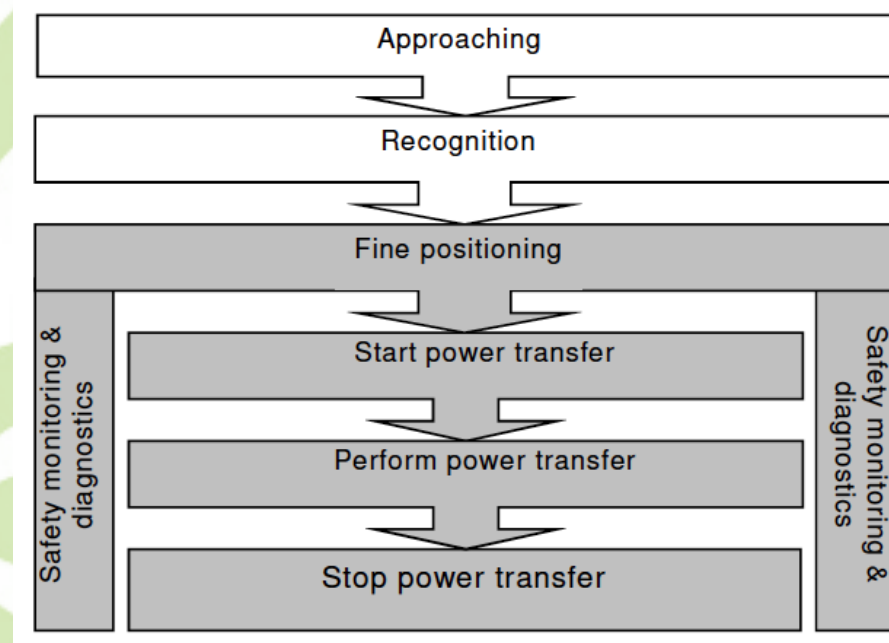
# IEC61980-1

- Electrical safety requirements
  - Protection against electric shock
- Thermal protection
- EMC measurement
- EMF measurement
- Areas of protection



# IEC61980-2: Communication

- Specific requirements for communication between electric road vehicle (EV) and infrastructure with respect to wireless power transfer (WPT) systems
- To be published in first phase as Technical Specification (TS)
- Structure and phases of communication

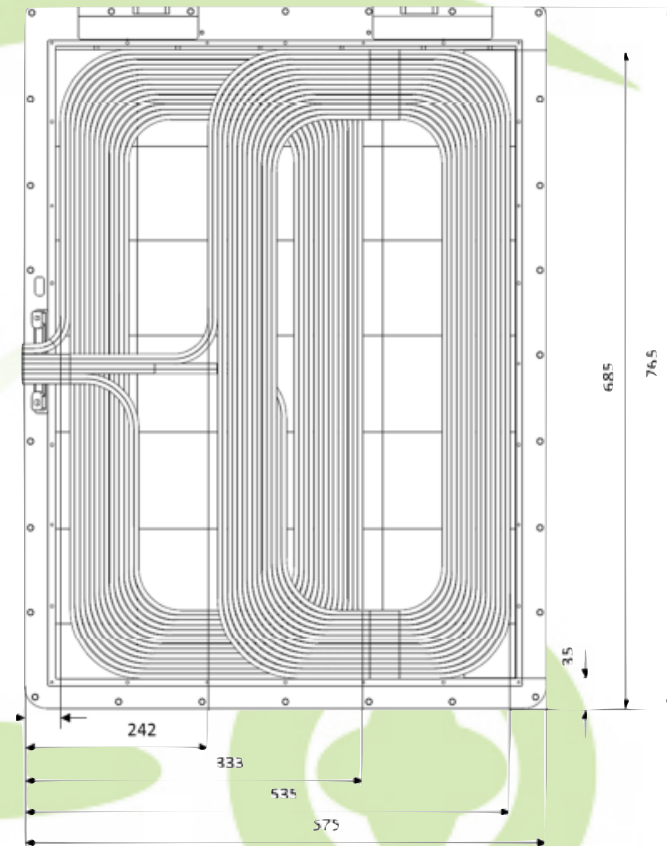


# IEC61980-3: Magnetic fields

- Specific requirements for communication between electric road vehicle (EV) and infrastructure with respect to wireless power transfer (WPT) systems
- To be published in first phase as Technical Specification (TS)
- Efficiency requirements
- Thermal risk tests



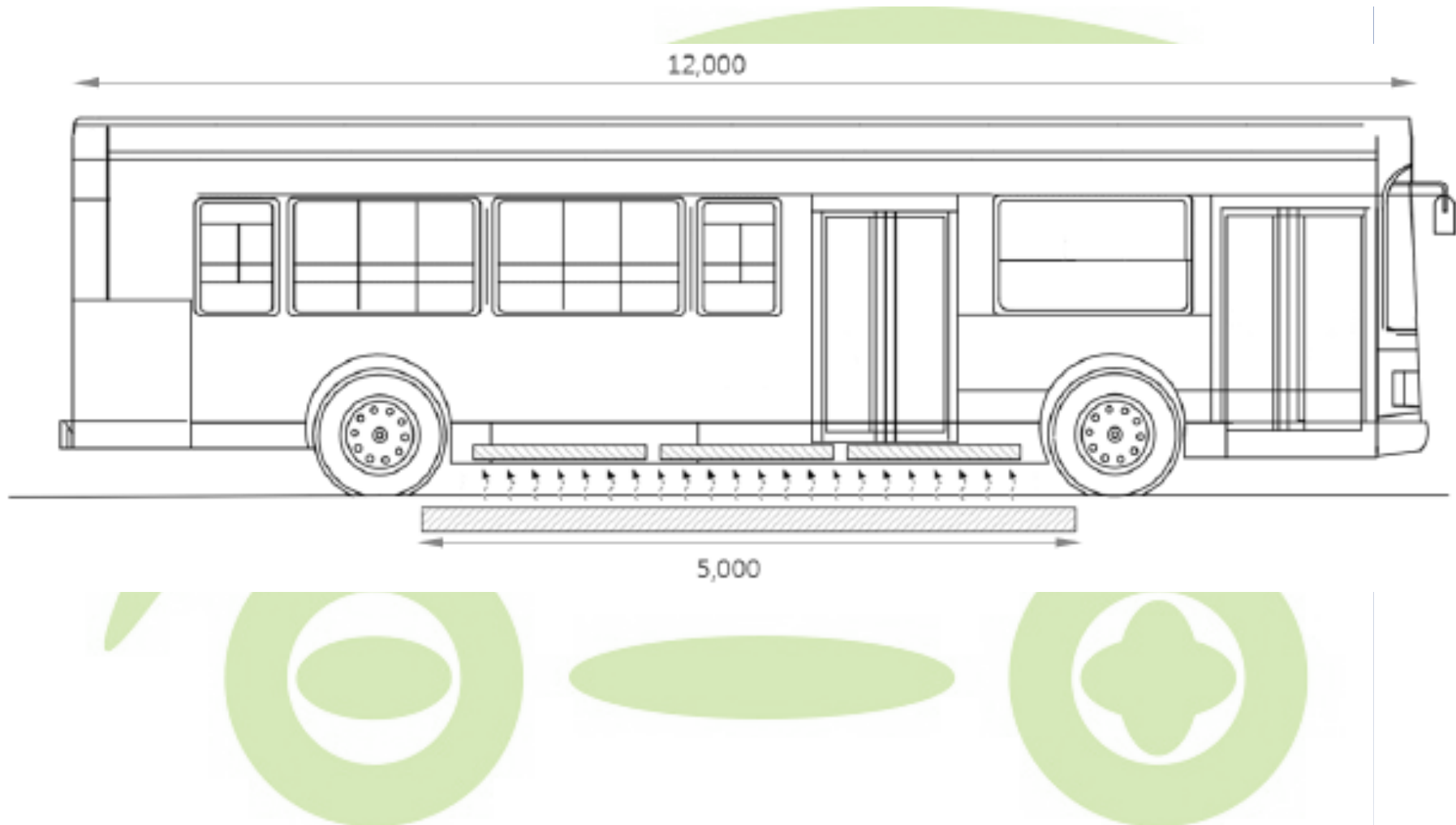
- Annexes: description of several WPT systems





# IEC61980-3

- Annex: WPT for heavy duty vehicles



# European standardization

- CENELEC TC69X
- Standardization work performed at global (IEC) level
- Adoption of IEC documents as EN when they are published
- Parallel voting procedure





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# Thank you!



Peter Van den Bossche  
Vrije Universiteit Brussel  
IEC TC69  
[pvdbos@vub.ac.be](mailto:pvdbos@vub.ac.be)

