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# Sino-German Cooperation on E-Mobility: Opportunities, Challenges and Bottlenecks

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# Sino-German Cooperation on E-Mobility:

1. Activities of the German Government
2. Background and Motivation
3. Bilateral Cooperation on the Governmental Level
4. Challenges in China
5. Sino-German Electric Vehicle Charging Project





# 1. Activities of the German Government The National Electric Mobility Platform



In May 2010 the National Platform for Electric Mobility (NPE) was established by Federal Chancellor Angela Merkel at the Electric Mobility Summit

The NPE consists of eight working groups made up of top-level experts from national government, industry, trade unions, consumer groups and academia et al.

Four thematic areas: Vehicle Technology; Energy & Environment; Charging Infrastructure and Urban Planning & Intermodality



# Pilot and Demonstration Projects in Germany: The Four Showcase Regions for Electric Mobility

Since 2009, the Federal Government is promoting eight Model Regions for Electric Mobility. In addition, the Federal Government created four Showcase Regions for Electric Mobility in 2012:

- LivingLab BWe mobil (Baden-Württemberg)
- ELECTRIC MOBILITY CONNECTS (Bavaria-Saxony)
- International Showcase Electromobility (Berlin-Brandenburg)
- Our horsepower becomes electrice (Niedersachsen)





## 2. Background and Motivation

- Both, Germany and China, strive for becoming a **lead market** and a **lead supplier** for Electro-Mobility in the future
  - **Germany:** 1 mio. EVs in 2020
  - **China:** 0,5 mio. EVs in 2015; 5 mio. EVs in 2020
- Both countries consider Electro-Mobility as a **key** for an **environmental sustainable mobility** in the future and for the necessary **transition of the automotive industry**
- Against this background the **bilateral strategic cooperation on Electro-Mobility** is valued as a unique opportunity to learn from each other to overcome the challenges and create sustainable mobility solutions and foster innovations and industrial developments.



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# Sino – German Strategic Partnership Electromobility

Announced by Chancellor Merkel and Prime Minister Wen during the 1st Sino – German Governmental Consultations in Berlin, June 2011.





# 3. Bilateral Cooperation on the Governmental Level

Strategic Partnership Electromobility  
(Partner G: BMVI, BMWi, BMUB, BMBF)  
(Partner CN: MIIT, MoST, NDRC, MoF, AQSIQ)

BMVI	BMWi	BMUB	BMBF
Cooperation on Model Regions Partner: MoST	Industrialisation Partner: MIIT	Climate and Environment Partner: MoST	„Elektroautozentrum“ Partner: MoST
Dialogue on Safety Standards and Registration Partner: MIIT	Certification Partner: AQSIQ/CNCA	Battery Recycling Partner: NDRC	
	Standardisation and Norms Partner: SAC	Fuel Economy Partner: MIIT	

## Sino-German Electric Vehicle Charging Project

Supported by the German Government, driven by Industry

Partner: NDRC, CATARC, Tsinghua University, Beijing Municipality



## 4. Challenges in China

### ▪ Charging infrastructure development

- Process of Installation
- 40% of potential customers in BJ were unable to have a charging device installed (China Daily, March 2014)

### ▪ Harmonization of standards and regulations

- Plugs/Interfaces
- Standards for Fast- and Slow-Charging (AC/DC)

### ▪ Protectionism and market access barriers

- Imported EVs have no chance to get incentives from central or local governments
- Main problem in Beijing: Imported EVs are not allowed to be registered as an EV, they have to apply for normal licenses and they have to participate in the lottery for combustion engine vehicles

# 5. Sino-German Electric Vehicle Charging Project

## Key questions

Customer requirements?



Policy & regulation gaps?



**Sino –  
German EV  
charging  
project**

Technical standards?



Infrastructure supply?



Sustainable business model?



Installation process?



Grid implications?





# Sino-German Electric Vehicle Charging Project



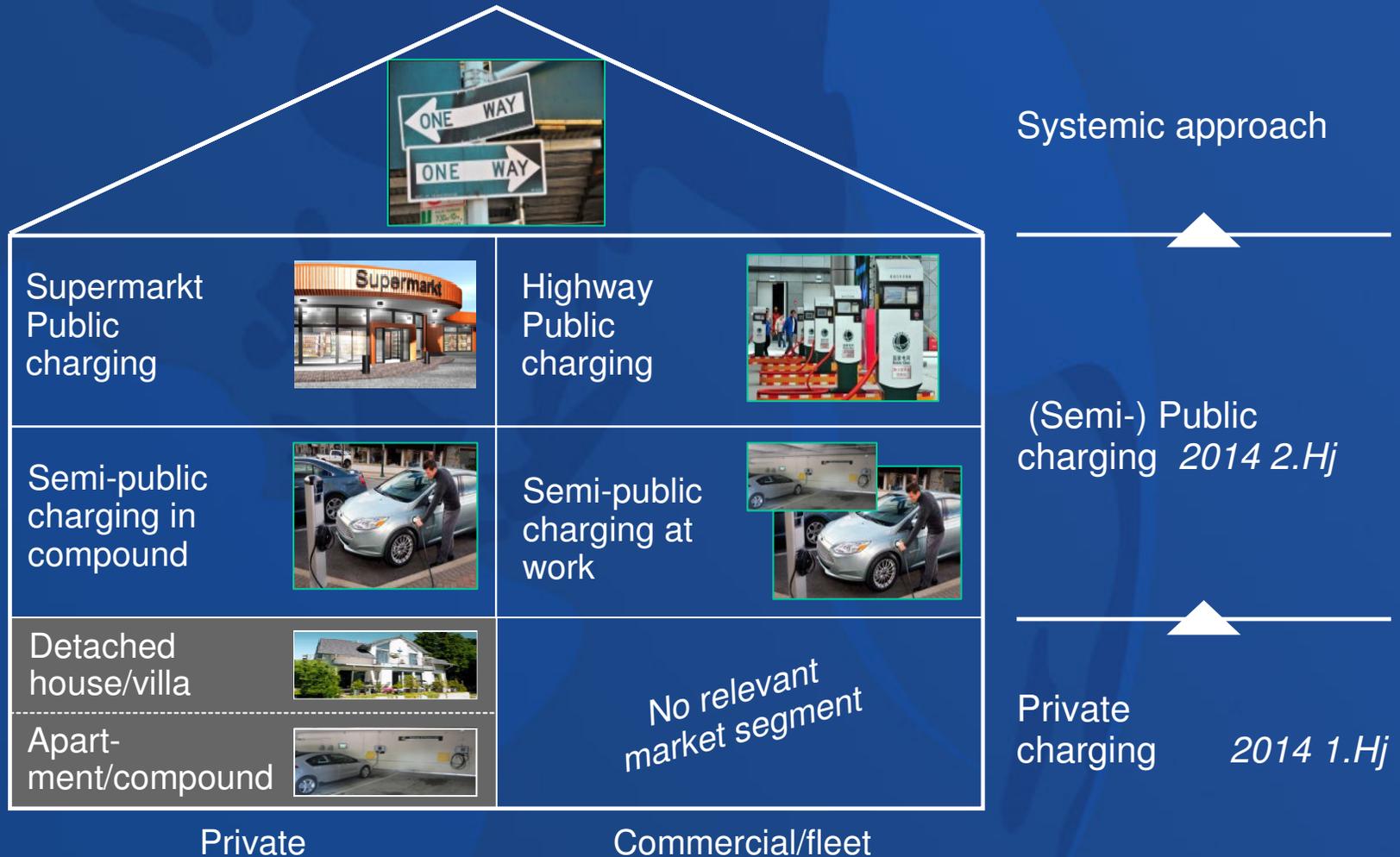
Scientific Partners	Political Partners	Political Coordination	OEMs
<p><b>Tsinghua University</b> </p> <ul style="list-style-type: none"> <li>• Support development of installation standards</li> <li>• Steering the relationship to PMO via PMA</li> </ul>	<p><b>German Ministries</b></p> <ul style="list-style-type: none"> <li>-BMW (lead coordinator)</li> <li>-BMVI</li> <li>-BMUB</li> <li>-BMBF</li> </ul>	<p><b>GIZ</b> </p> <ul style="list-style-type: none"> <li>• Overall political coordination towards German authorities</li> </ul>	<p><b>Local OEMs</b></p> 
<p> <b>Spiegel Institute</b></p> <ul style="list-style-type: none"> <li>• Overall coordination of scientific package</li> <li>• Conducting customer study</li> </ul>	<p><b>Chinese Ministries</b></p> <ul style="list-style-type: none"> <li>-NDRC (lead coordinator)</li> <li>-MIIT</li> <li>-MoST</li> </ul>	<p><b>CATARC Beijing</b> </p> <ul style="list-style-type: none"> <li>• Overall political coordination towards Chinese authorities</li> <li>• Conducting study on business models for private and public charging and installation process</li> </ul>	<p><b>International OEMs</b></p> 
<p>  <b>Fraunhofer Institute/ Beijing State Grid</b></p> <ul style="list-style-type: none"> <li>• Conducting the study on grid implications</li> <li>• Consultants for all grid and energy related questions</li> </ul>	<p><b>Beijing Authorities</b></p> <ul style="list-style-type: none"> <li>-BCST</li> <li>-BMCHUD</li> <li>-BDRG</li> </ul>		



# Sino-German Electric Vehicle Charging Project



## The project will be structured into 3 main phases







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谢谢！ Thank you very much for your attention!