

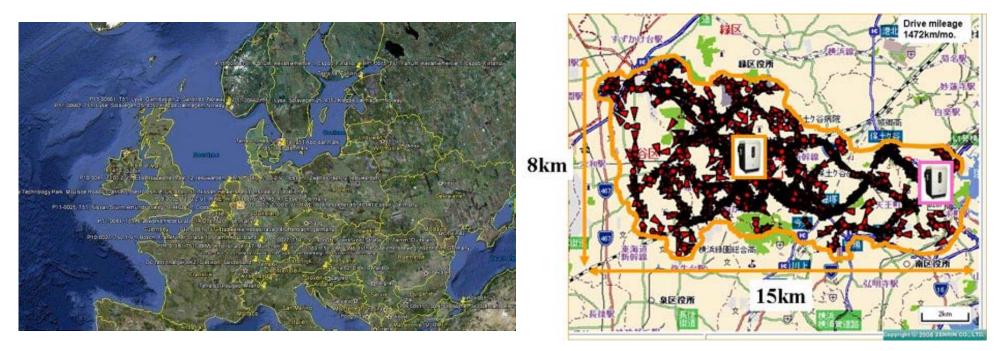
Hans Streng, ABB EV Charging Infrastructure

### CHAdeMO – EU perspective From Startup to Standard



#### CHAdeMO infrastructure roll-out in Europe

- Rollout pace is ~20/week
- ABB value proposition: charger connectivity, minimized Total Cost of Installation and Servicing (TCIS) and easy integration with B2C platforms
- Market drivers for 2012: EV availability, large-scale projects and plug&play interoperability





## Several open-market Billion-EUR programs initiated ... participants must have a longterm solid profile





#### Further market acceleration for CHAdeMO is at risk

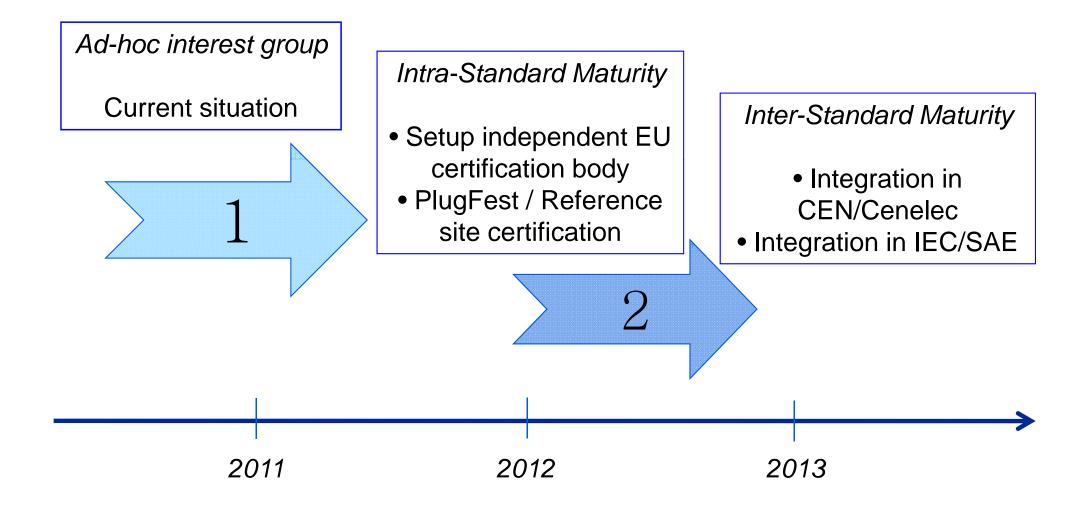
- 1. Anticipated introduction of IEC-Combo:
  - German Car-OEMs on the move now
  - Limited influence of Europe on CHAdeMO standard
- 2. CHAdeMo perceived as Nissan-proprietary standard:
  - "10k Charger", "400 for-free" Chargers > ability of distribution partners to install, connect, maintain and service these chargers? Long-term industrial supply chain?
  - CHAdeMO-Chair
  - Mandatory EV-specific charger specification
- 3. Lack of unambiguous certification of all Quick Chargers and EV by independent notified body

• "Open market" requirements in Europe

• First evidence for market delays and wait-and-see attitude

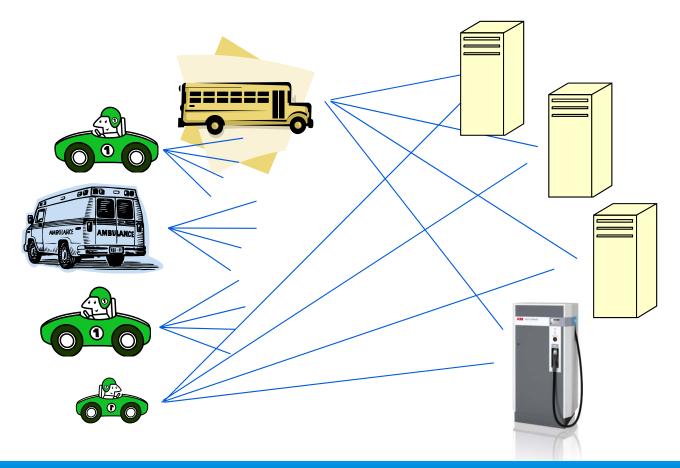
Risk of stalling market due to non-fullfillable forward-looking promises
and lack of certification transparency

# CHAdeMO has to build a mature EU process ... Soon 2-step approach toward Standard Maturity





#### CHAdeMO has to build a mature EU process ... soon PlugFest / Reference site certification



- <u>All</u> charger and EV suppliers who wish to get certification join in
  - Independent notified body is running interoperability testing
- Backward/forward compatibility of 1.0/0.9 EV with 0.9/1.0 Quick Charger



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