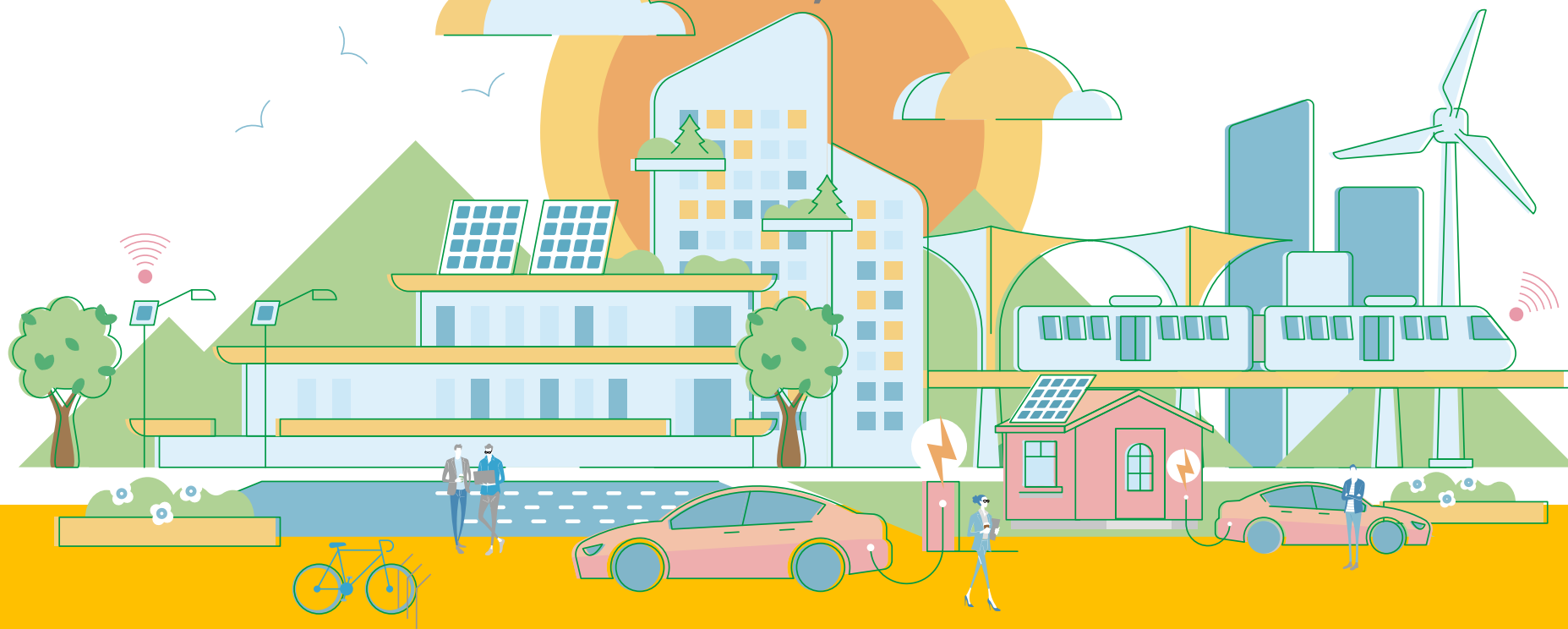




Safety, Interoperability, V2X

Takafumi Anegawa
CHAdemo Association
June 13, 2023



Who killed GM EV1?

GM protest to CARB at EVAA in Sacramento
December 2001



GM used inductive
charging



Ford proposed
conductive
charging

Can TEPCO help?



➡ CARB picked
Ford Proposal

CHAdemo Spent 4 years for Development

Joint development started in 2005 with Subaru

**Launch 2009 Mitsubishi i-MiEV
and 2010 Nissan Leaf**



Subaru R1e
January 2005



Trial Use in TEPCO
April 2007



TEPCO introduced dozens of
i-MiEV September 2009

CHAdemo Shared IP for Free

CHAdemo was born in 2005 and spread to the world

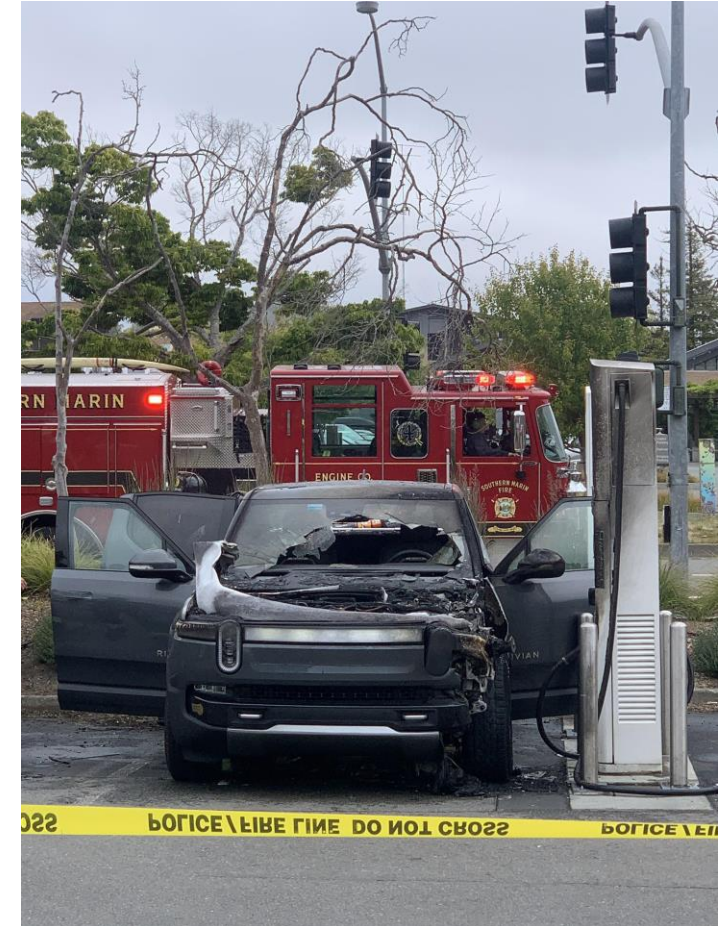
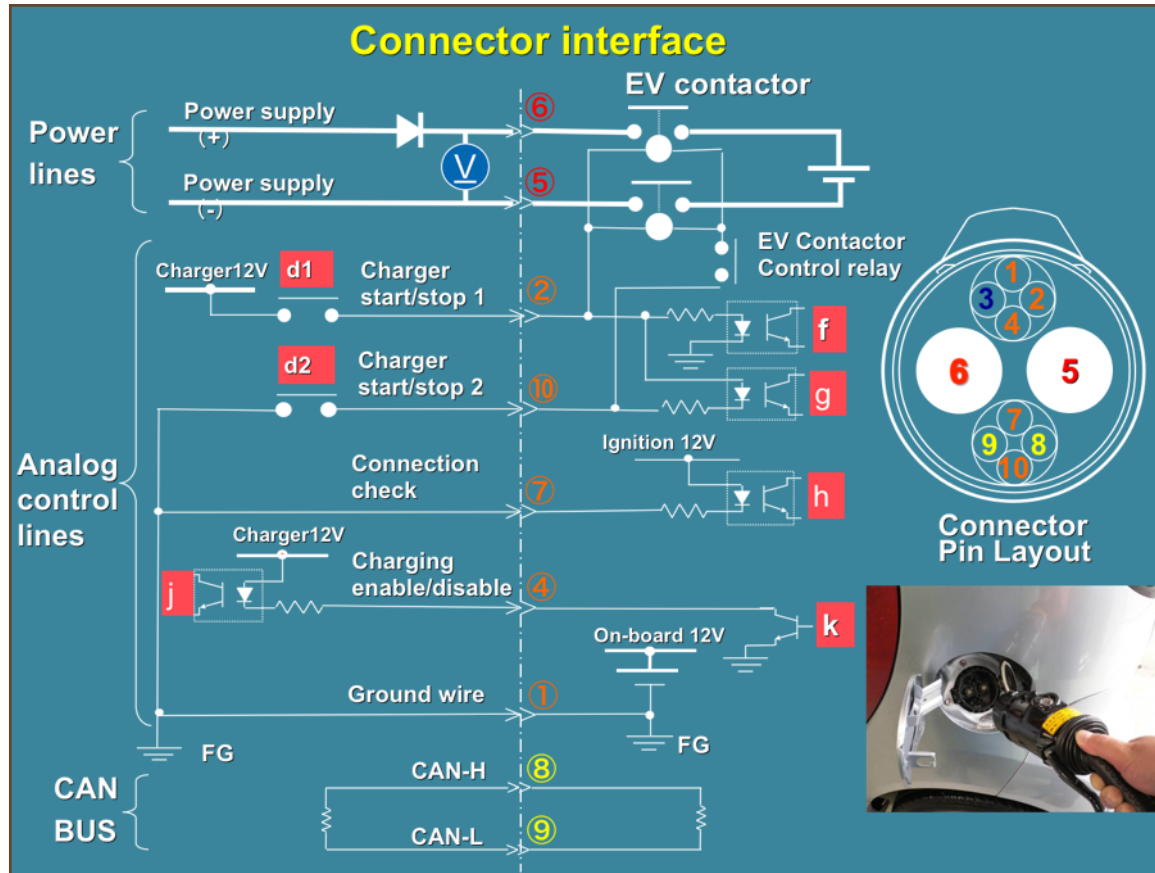
Variants developed



Safety First

User safety is CHAdeMO highest value

No major accidents in 16 years



Not a CHAdeMO Charging Station

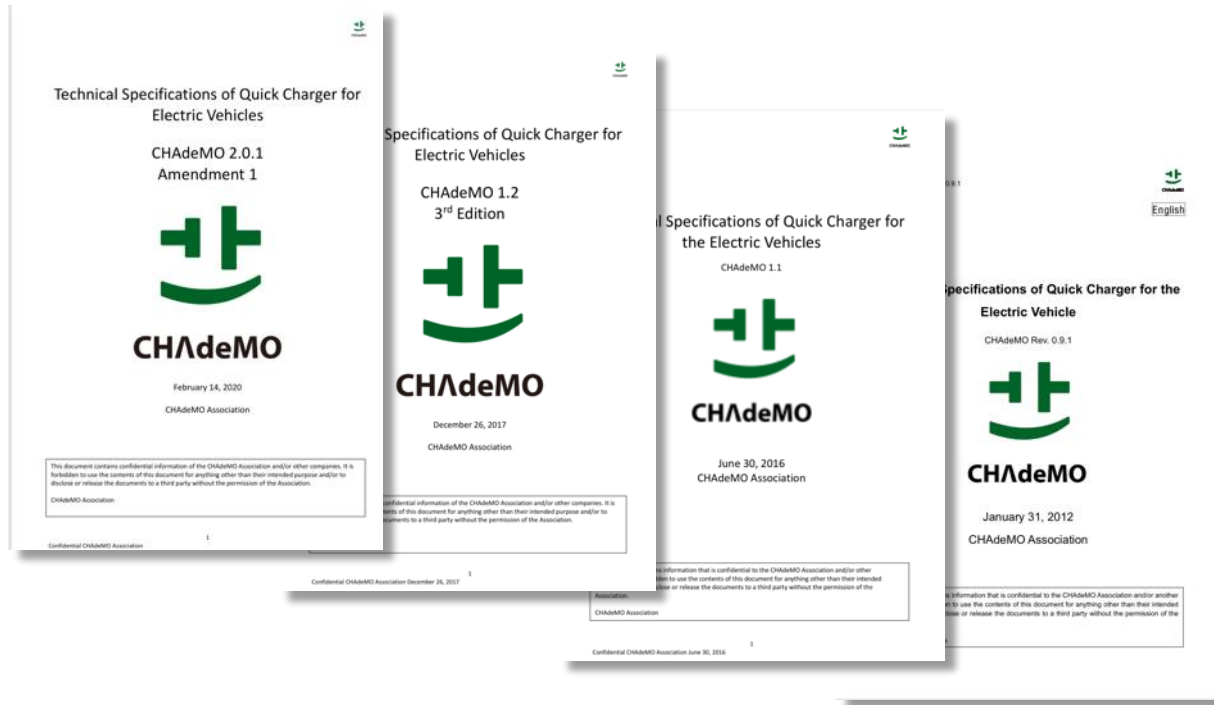


Excellent Interoperability

Well-defined specification and certification process

More than 99% availability

Tech-Spec continuously version up



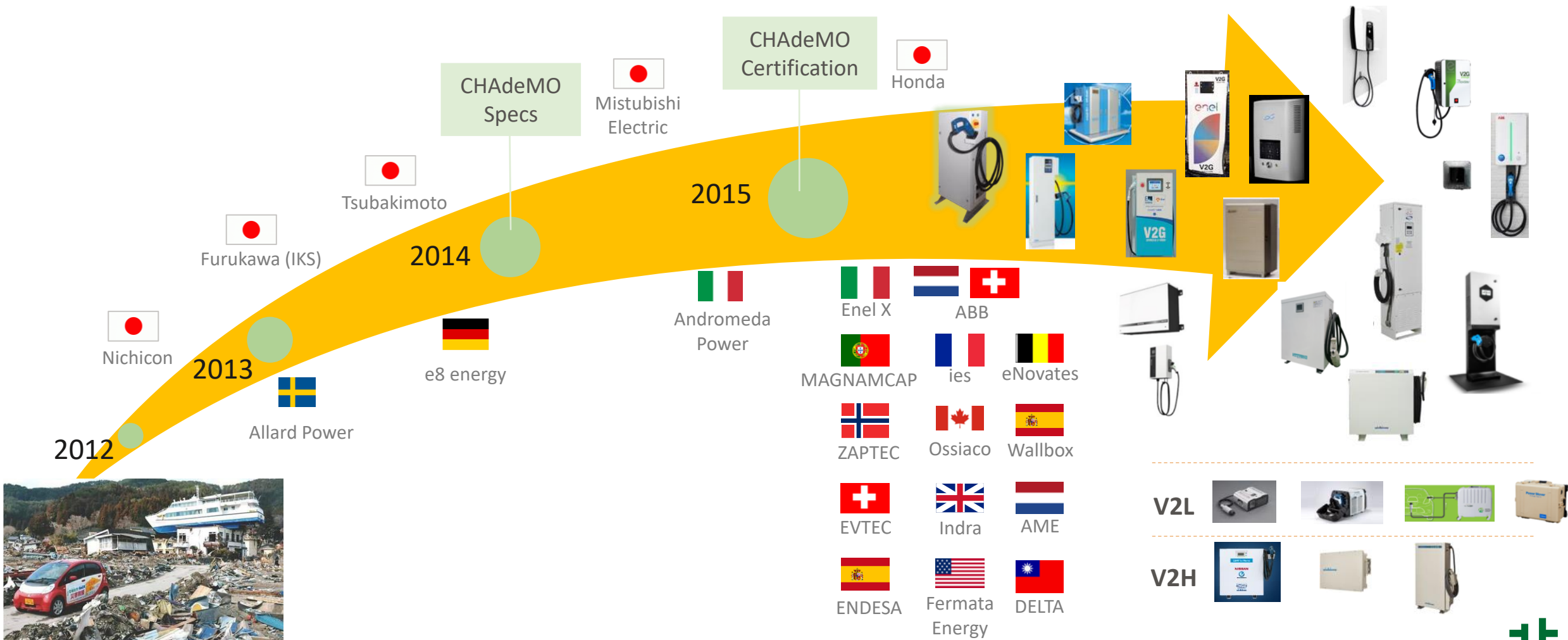
International Certification Bodies



V2X Products are in the Market

V2X Tech-Spec established in 2014














Please visit CHAdeMO
Booth 408 to view



Market Needs and Competitions Improve our Service

Most suitable design depends on battery size

Please visit CHAdeMO
Booth 408 to view

Specification	Power, battery size	Application examples
CHAdeMO3.0 (ChaoJi-2) CHAdeMO 4.0 (Ultra-ChaoJi) (Soon) 	<ul style="list-style-type: none">Chaoji-2 900kW 1500V 600AUltra-ChaoJi. 1.8MW (1500V 600AX 2)	    
<ul style="list-style-type: none">CHAdeMO 	<ul style="list-style-type: none">50-150kW150-500VBattery 50kWh+	 
<ul style="list-style-type: none">e-PTW CHAdeMO (NEW) 	<ul style="list-style-type: none">1-10kW20-120VBattery 2-10kWh	 
<ul style="list-style-type: none">EPAC CHAdeMO (NEW) 	<ul style="list-style-type: none"><800W36V nominal / 42VmaxBattery <1000Wh	





CHAdemo will Never Die

We Love EVs

