



ChaoJi



ChaoJi Standard

Faster, Safer, and Compatible to All

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China Electricity Council
Director

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CHAdeMO
Secretary General



Purpose

- Update ChaoJi Technology constantly to introduce into the market
- Ensure compatibility between ChaoJi and GB, CHAdEMO, CCS for smooth transition and harmonization
- ChaoJi as common language between Car and Charger
- ChaoJi as the base for future international harmonization



Process

- China and Japan jointly lead the project
- Welcome participation and contribution from the world
- Vehicle side and grid/charger side work together



Technical Target

- With updated technology, develop safest and lowest cost charging service
- With high quality of service, make our EV customers comfortable and feel the advantages of EVs
- Contribute to deploy EVs into the market by fully compatible ChaoJi globally

Status of Charging Standards



CHAdemo



Compatible

ChaoJi

	CHAdemo	GB/T	US-COMBO CCS1	EUR-COMBO CCS2	Tesla 
Connector					
Inlet					
 IEC	✓	✓	✓	✓	
 IEEE	✓		 SAE		
 EN	✓			✓	
 JIS	✓	✓	✓	✓	
 GB		✓			
Protocol	CAN		PLC		CAN
V2X Function	✓				?
Max Power	400kW 1000x400	185kW 750x250	200kW 600x400	350kW 900x400	?
Market Power	150kW	125kW	150kW	350kW	120kW
Start @	2009	2013	2014	2013	2012



Proposing

?

?

✓

✓

CAN

✓

900kW 1500x600

50–900kW (TBT)

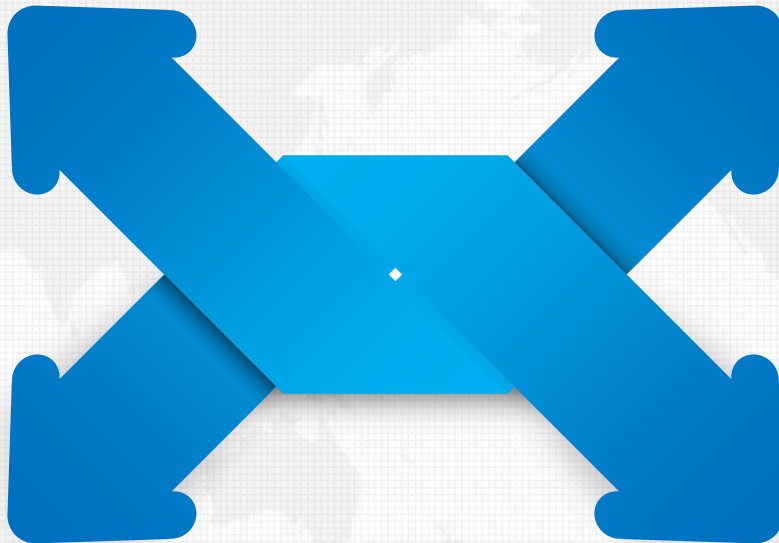
2020

High Power

- Short charge duration
- Higher utilization rate
- Improved efficiency by focused investment

Direct Current

- Higher efficiency
- Stable for Power Grid
- No on-board charger on the EV side



Charge and Feed

- V2X function

International

- Safe and reliable standard
- Harmonization

ChaoJi Project History



CHAdEMO



ChaoJi Members



CHAdEMO

TEPCO



ISUZU



TOYOTA



kti Korea Testing Laboratory

HASETEC
Electronics, Plastics & Massifera

nichicon

NS-TEXENG

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DAIMLER



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奥特迅

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echarge.net.com

NARI
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WOER

HUBER-SUHNER



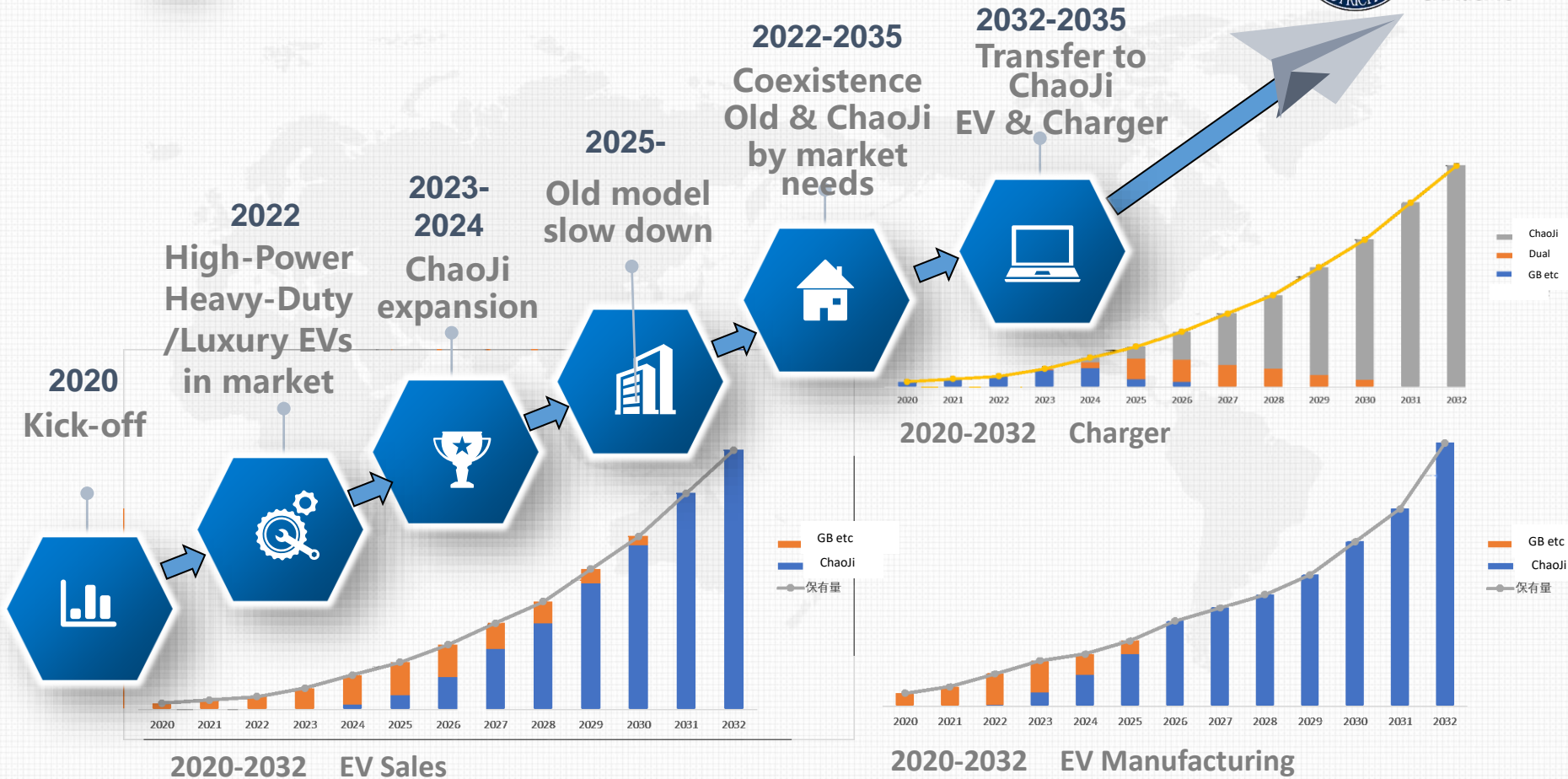
Bureau of Indian Standards
The National Standards Body of India



ChaoJi Development Plan



CHAdemo



Increasing ChaoJi Attractiveness

- Ensure backward compatibility with ALL global standards
 - > Utilizing current existing asset for EV and chargers
- Provide safe and reliable charging service with minimum Cost
- Applicable from heavy-duty, large vehicles to small cars
- Localization with certification system
 - > Empower local businesses and support local deployment
- Propose as international standard

Introduction

- ✓ IEC TC69 WG12 use of adapters
- ✓ IEC TC69 MT5 CHAOJI CP Circuit (61851-23AnxBB)



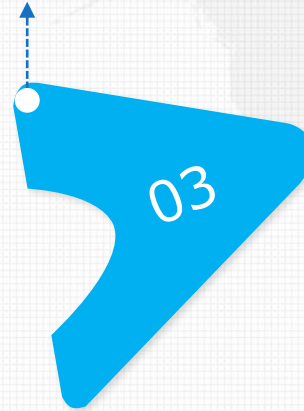
Acceleration

- ✓ IEC SC23H CHAOJI adapter proposal
- ✓ IEC TC69 CHAOJI Safety System Proposal



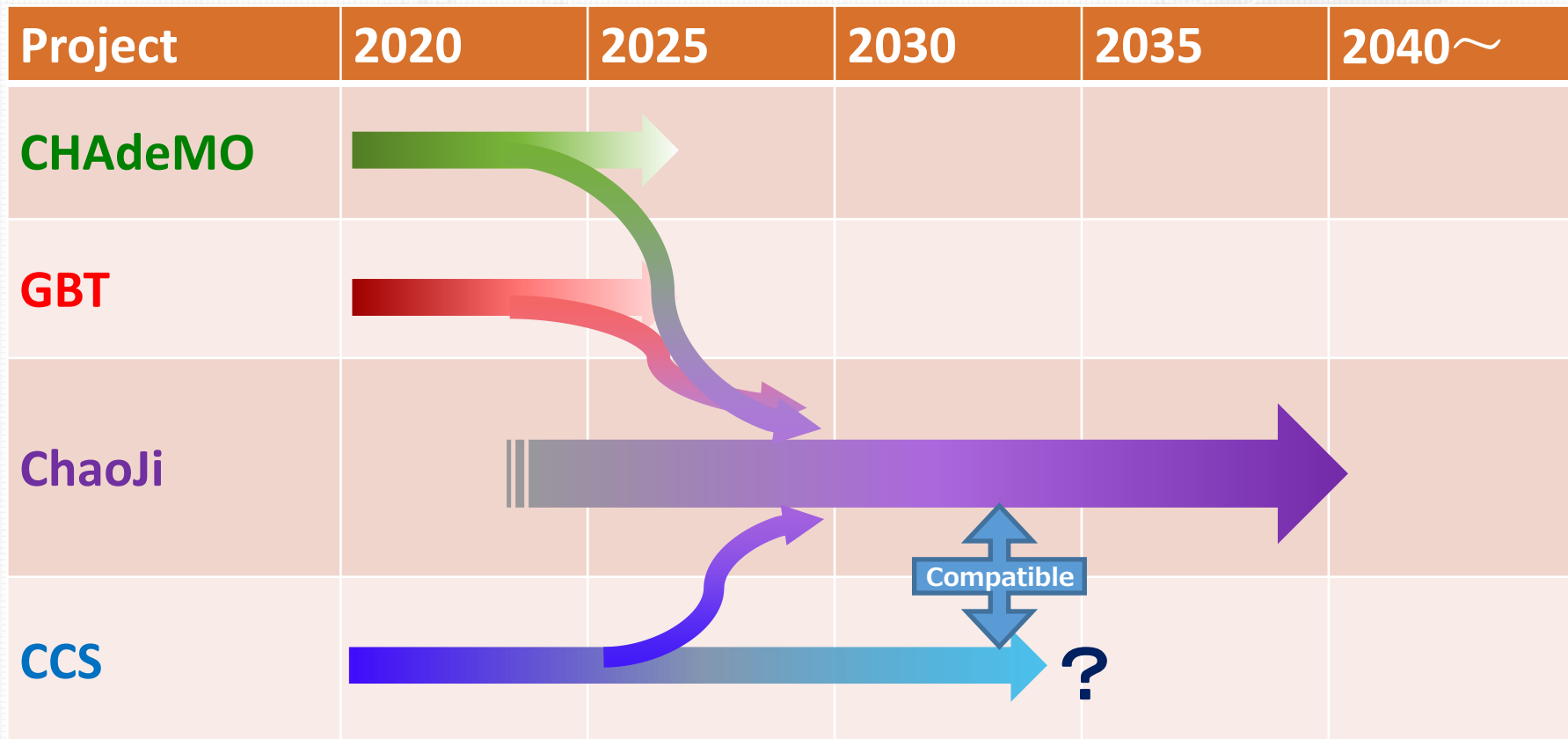
Development

- ✓ IEC SC23H 62196 CHAOJI connector Assy proposal
- ✓ Proposal to IEC 61851-23
- ✓ CHAOJI Control Pilot proposal



Harmonized
Compatible
International
Standard

ChaoJi Towards Harmonization





Thank you!
谢谢!
ありがとうございました!