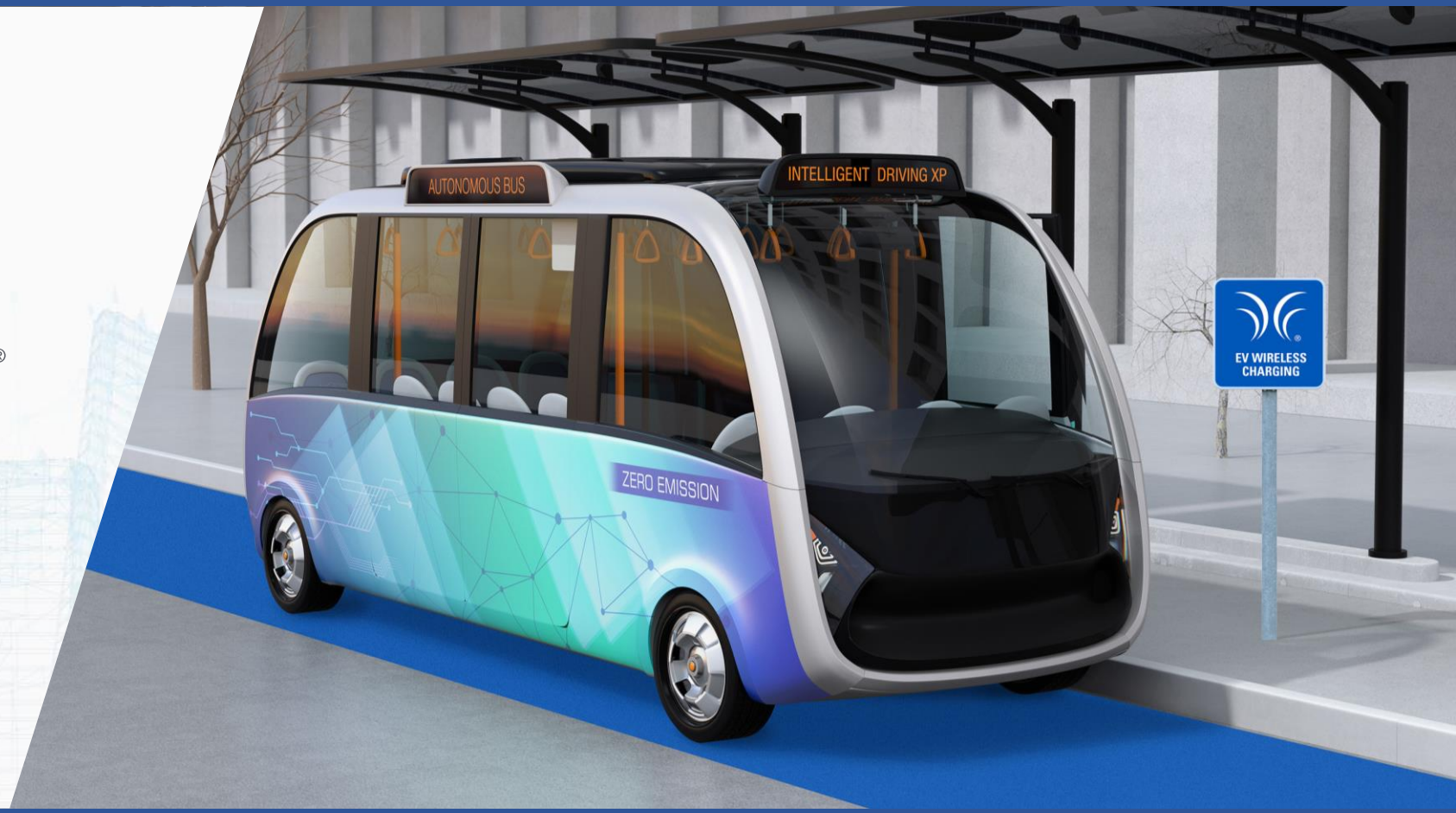
WiTricity®

Powering life, wirelessly.



The future is electric, autonomous and ***wireless***.

Bio: Tom Okada, Executive Director, Business Development – Global Automotive & Infrastructure

Tom Okada is an experienced executive with expertise in building and managing global teams and global accounts in the technology industry. His career includes leadership roles in engineering and business development, EV automotive electronics, mobile devices, hardware, semiconductors, and embedded software. Tom has a strong global business network in the US, Europe, Asia Pacific, and Japan.

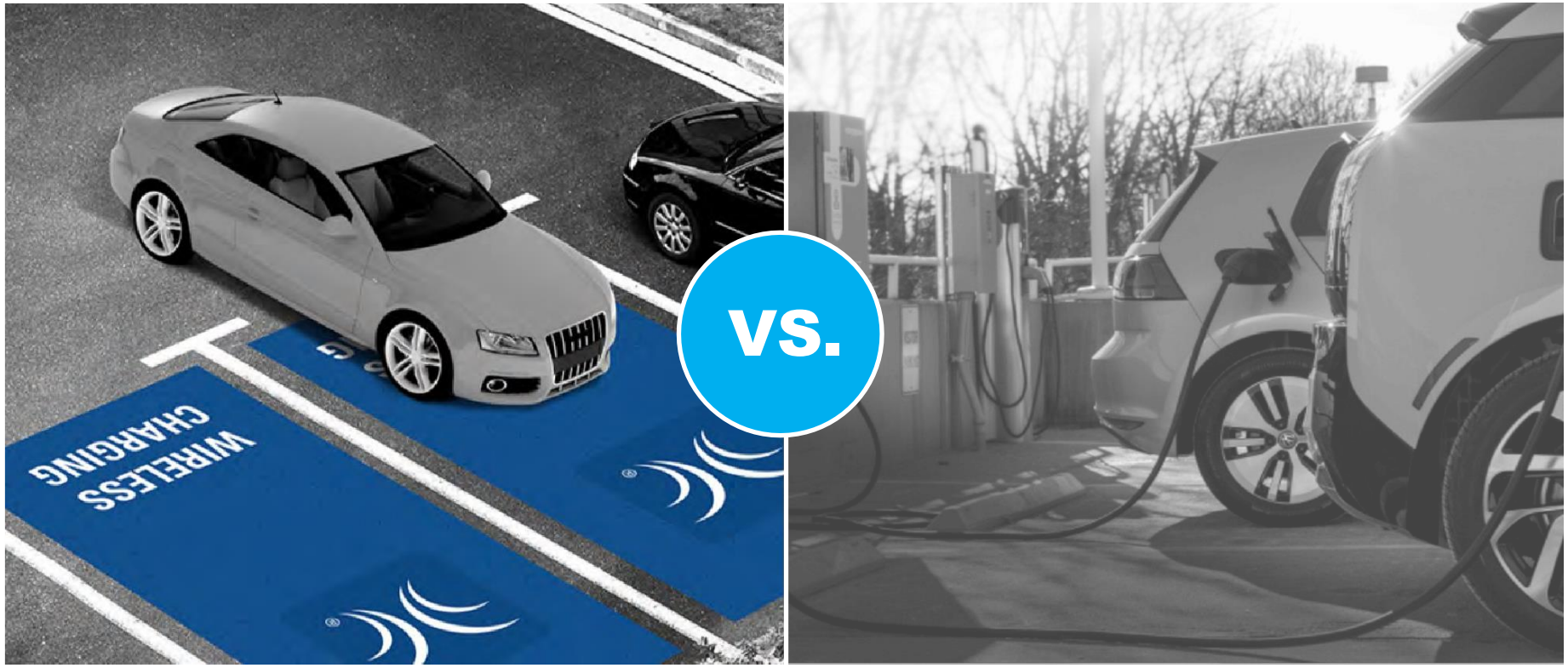
Tom served as a board member of Motorola Japan, Aplix IP Holdings Corporation in Japan and Ecrio Inc. in Silicon Valley. He has managed R&D teams in mobile handset and technology development, and subsequently led business development and sales with major telecom operators, OEMs, and automotive carmakers and Tier1 suppliers.

Tom is now responsible for business development for Japan and US for WiTricity, primarily focused on enabling wireless charging for Electric Vehicles and Industrial automation.

Tom has been involved in various technology communities in Silicon Valley, such as robotics, AI, and automotive applications, which makes him best suited for driving WiTricity's EV wireless charging solutions. WiTricity technology is an essential part of the future of autonomy and electrification.

Tom serves as a mentor for startup companies through Japan's NEDO TCP/NEP program and Next Innovator program sponsored by Japan's METI. Tom holds B.S. Electrical Engineering Degree from Arizona State University and holds 4 US patents in wireless communication and logic design. Born and raised in Japan and later educated in the US, he lives in San Francisco Bay area.

Wireless vs. Wired



Hands-free, Touch-free, Autonomous **Wireless Charging**

Electric passenger vehicles

Electric people movers

Personal mobility vehicles

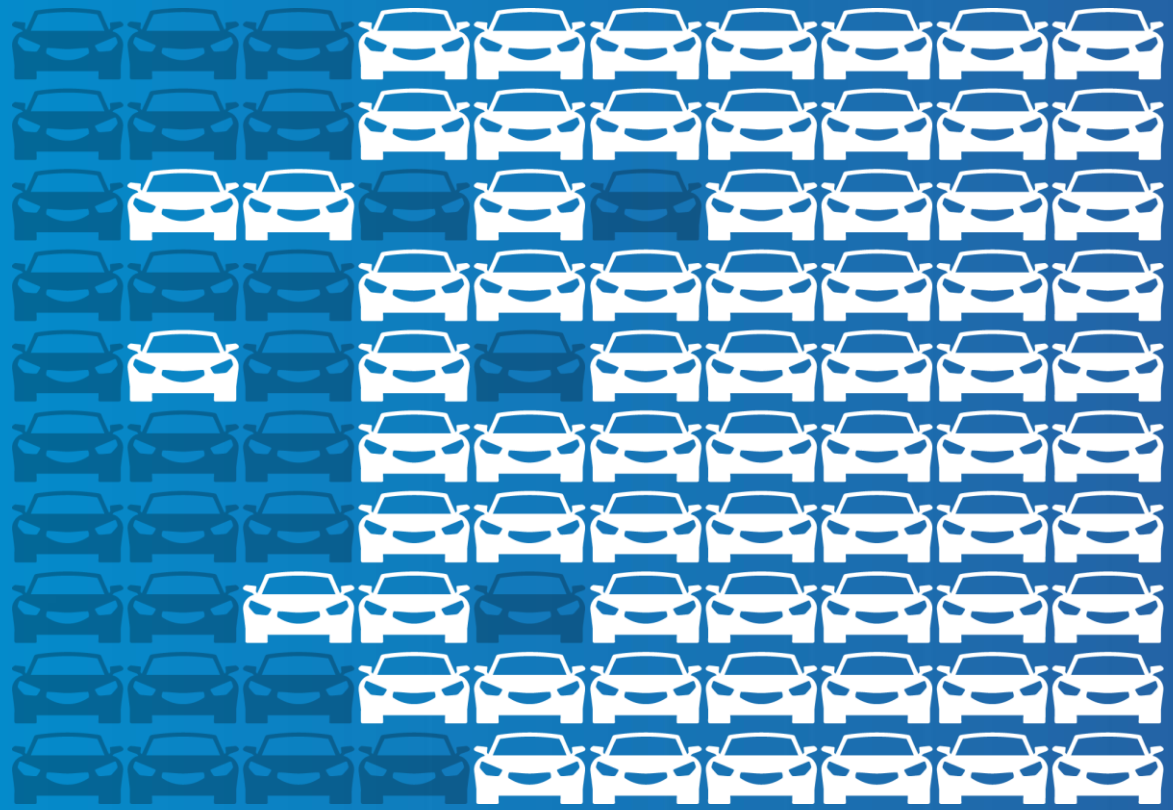
Autonomous delivery

Mobile robotics

Automatic guided vehicles (AGVs)

Will anyone be comfortable **touching a gas pump** or **charging cable** again?

Hands-Free Charging is our Future



More than 2/3

of consumers in Germany planning to buy a car are **more willing to purchase an EV if they could charge it wirelessly.**

SOURCE: J.D. Power Mobility Disruptor Study

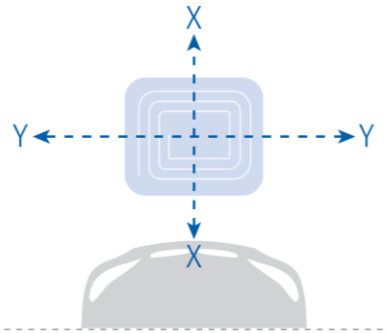
WiTricity's **Magnetic Resonance Technology**

Power Transfer as Efficient as Conventional Plug-in

(90-93% grid to battery)

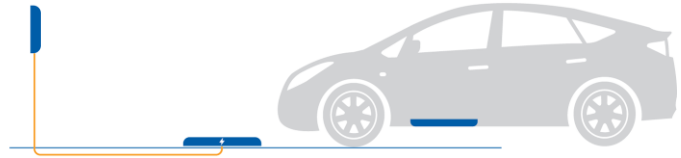
Park-and-Charge X-Y Flexibility / All Vehicle Z Heights

Single design and no moving parts



Charges as Fast as Conventional Plug-in

3.6→7.7→11→22 kW→

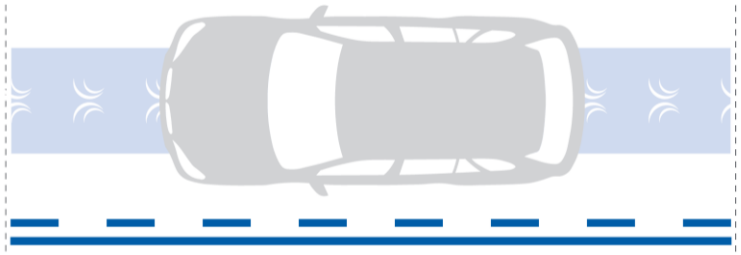


Powers Through Materials (In-ground placement)

Asphalt, cement, snow, ice, etc.

Semi-Dynamic & Dynamic in-motion charging

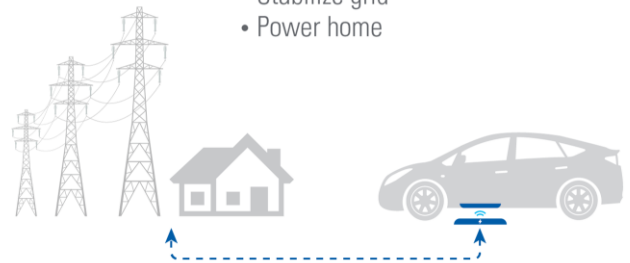
Taxi queues / Charging lanes



Bi-Directional Power Transfer

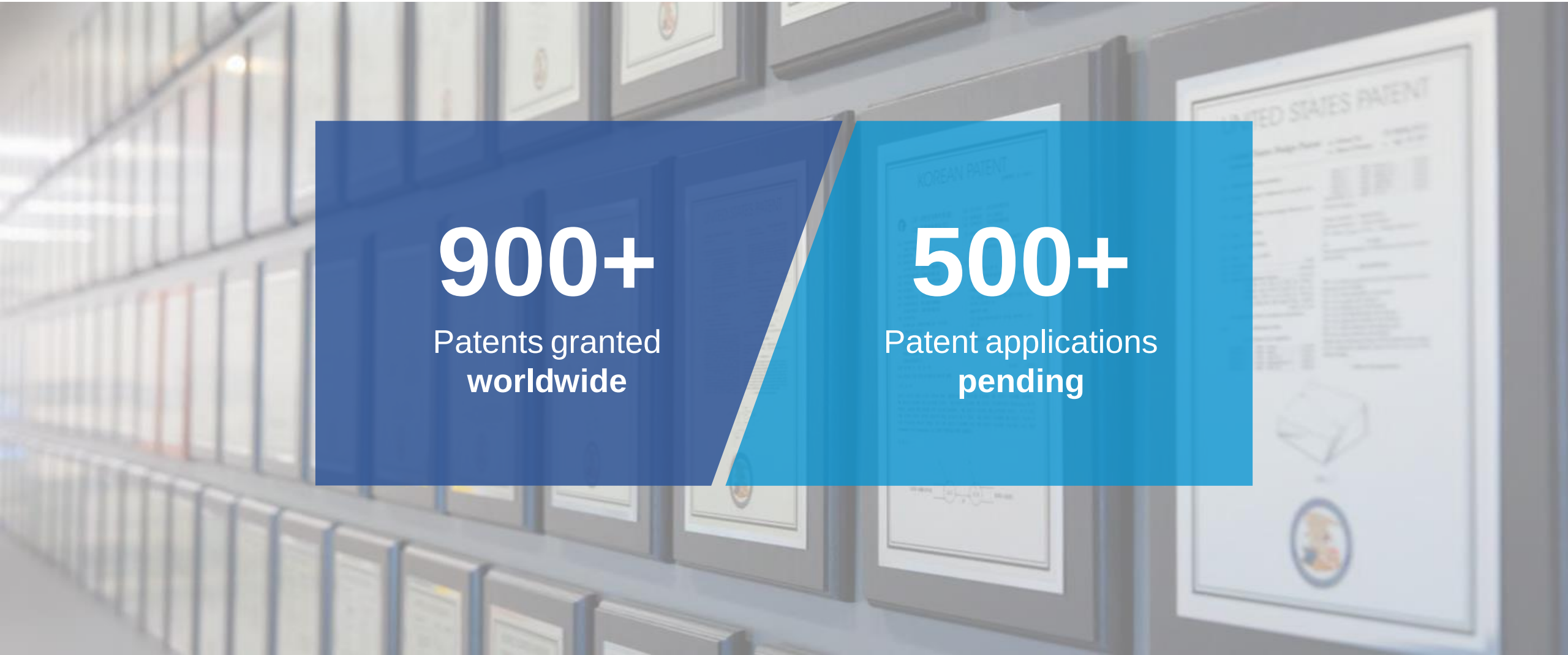
Use large battery on EV to:

- Stabilize grid
- Power home



Broad and foundational IP portfolio

Simplicity, driven by invention.



Driving Global Standards

China National Standards

China GB standard published April 2020
SAE published 2020
ISO/IEC to be published 2021
UL Standard published March 2020

WiTricity®
Powering life, wirelessly.

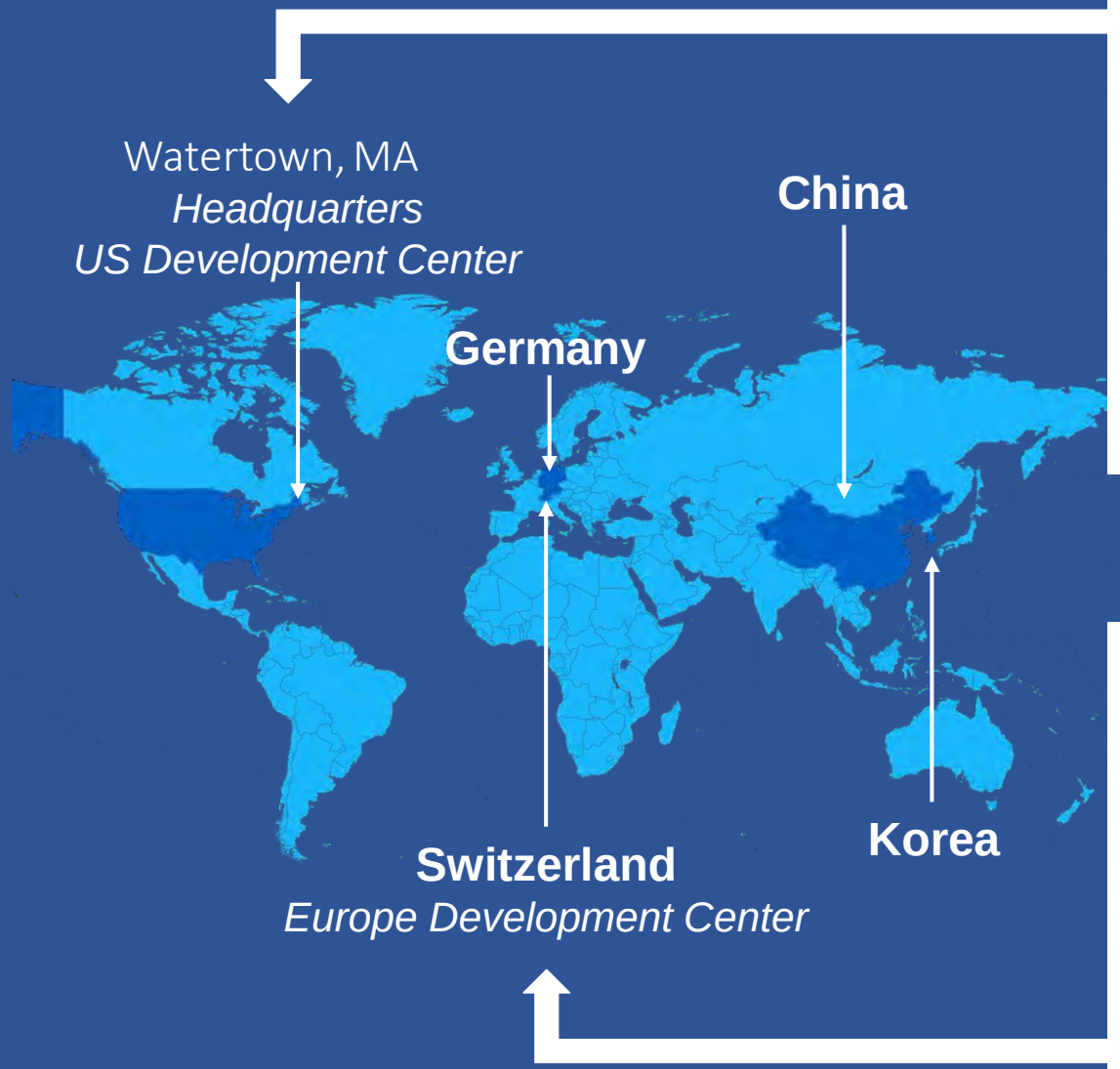
What We Do: Develop and commercialize safe and efficient wireless power transfer over distance

Core Technology: Highly Resonant Wireless Power Transfer over distances; referred to as magnetic resonance

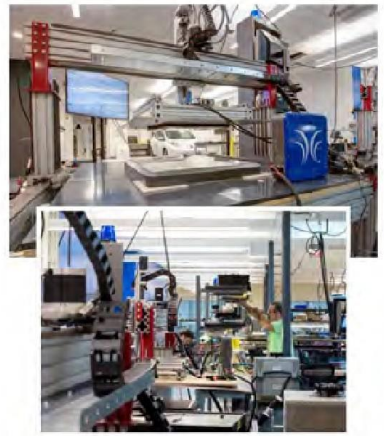
Founded: 2007

Target Markets: Automotive & Industrial

Offices: Headquarters: Watertown, MA
Europe Development Center: Zurich, CH
Support Offices: Germany, China, Korea



WATERTOWN LAB



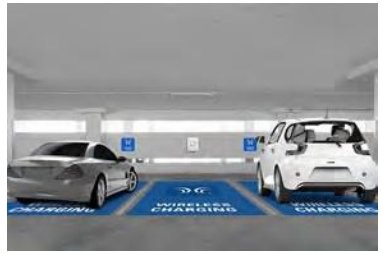
EUROPE DEVELOPMENT CENTER

Technology Roadmap - No limits

Electric Mobility

Residential/Home > Public > Higher Power > Highest Power > Taxi Queues > Smart City/V2G >

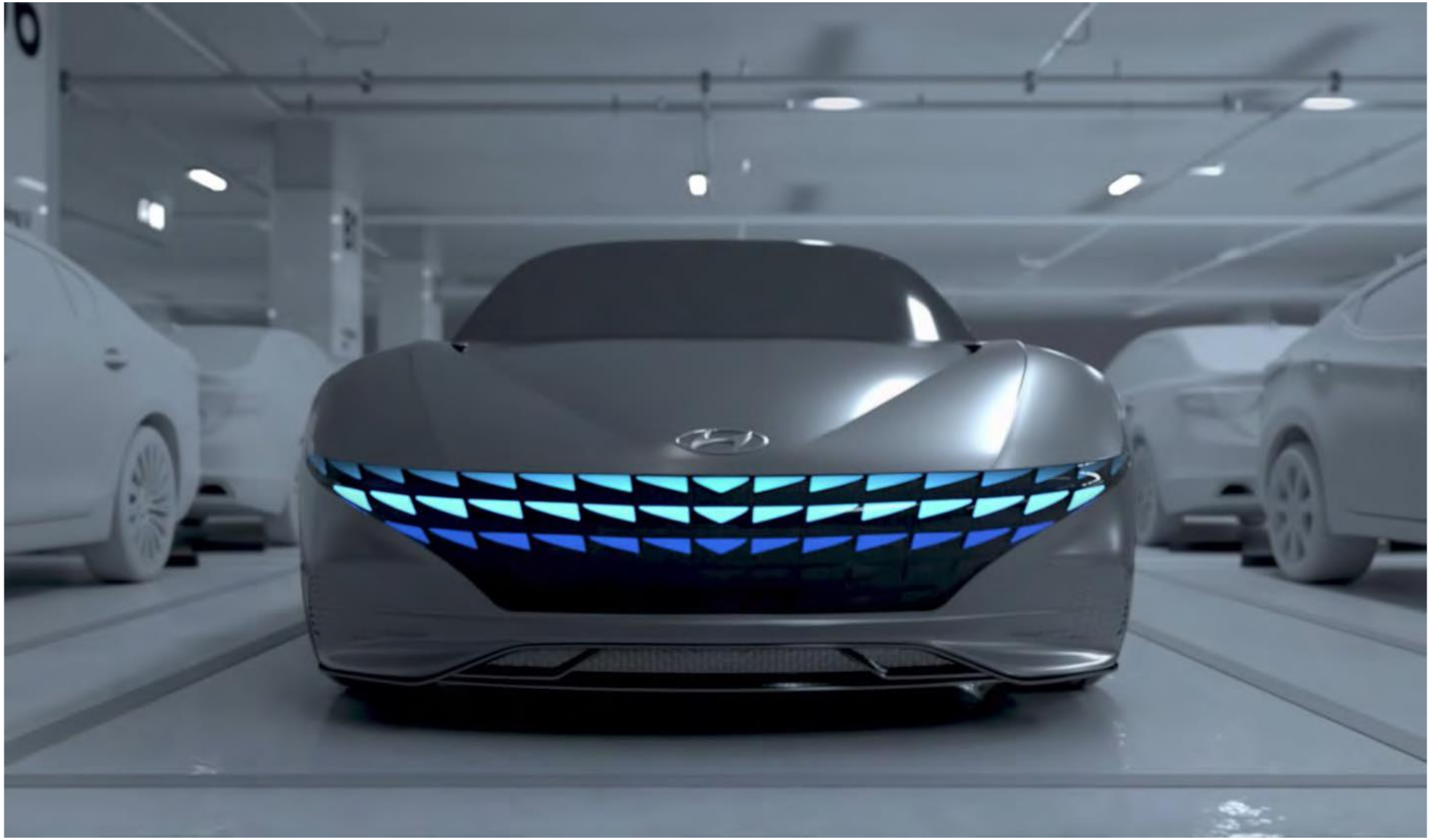
Wireless charging is a catalyst for **electric mobility.**

	Premium Experience 2018 —	**Broad Availability** 2022 —	**Essential** 2025 —
			
Deployment	• Home • Work	• Parking garages • Multi-tenant • Fleets	• Urban • Autonomous
New Mobility		• Autonomous parking • Car sharing	• Robo Taxi • Shared mobility • V2G • Smart Cities

BMW Wireless Charging. Car charging in 3,5 hrs. without a cable.

https://www.youtube.com/watch?v=GlrcPrzuPMM

Hyundai Electric Vehicle Wireless Charging & Automated Valet Parking System

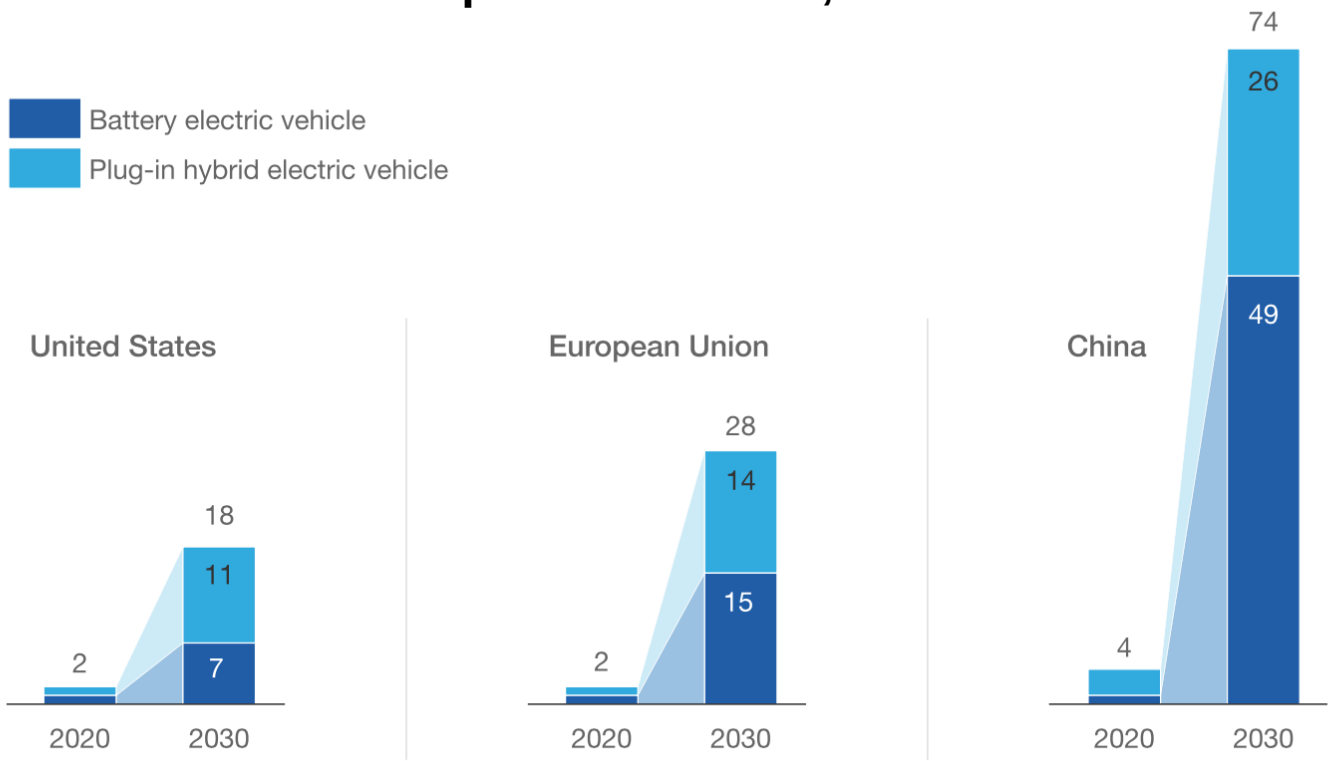


https://www.youtube.com/watch?v=IBN89c-r-dI

Industry experts predict

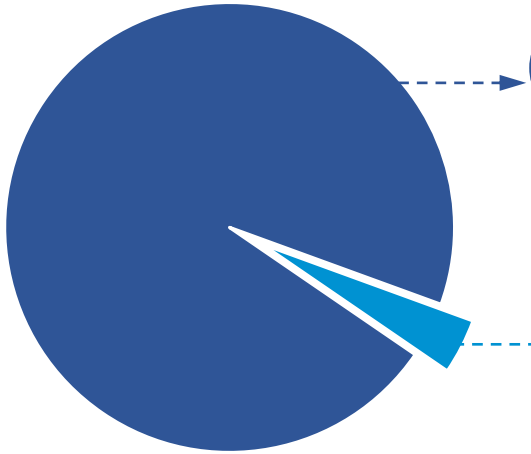
120 million electric vehicles on the road by 2030.

Electric-vehicle adoption base case, million



McKinsey&Company

Forecasted **Charger Demand***



96% **Level 2****
charging dominates deployment

4% **DC Fast Charging**
(DCFC) serves as highway “range extender”

- The National Renewable Energy Laboratory, **DCFC will only be needed 4% of the time**, when EVs are used for longer trips that extend beyond their battery capacity.
- For the vast majority of EV use — **the other 96% of the time, charging happens at home and work with level 2 charging.**

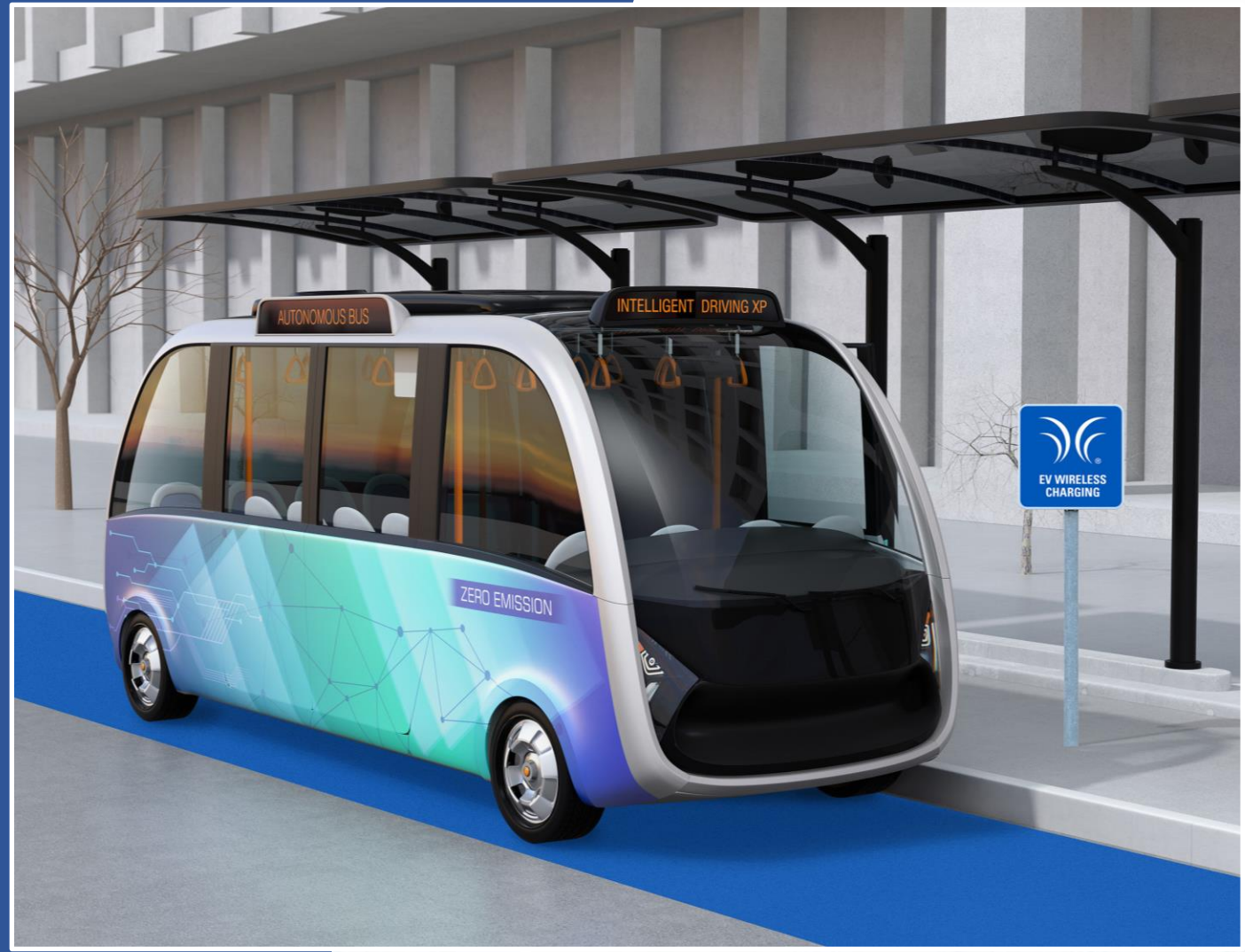
*US Forecast
**Level 2 Charging – typically 240 volt, 3-11 kW

Charger demand by

2030

40 million chargers, private and public

$50 billion of cumulative capital



Smart Cities

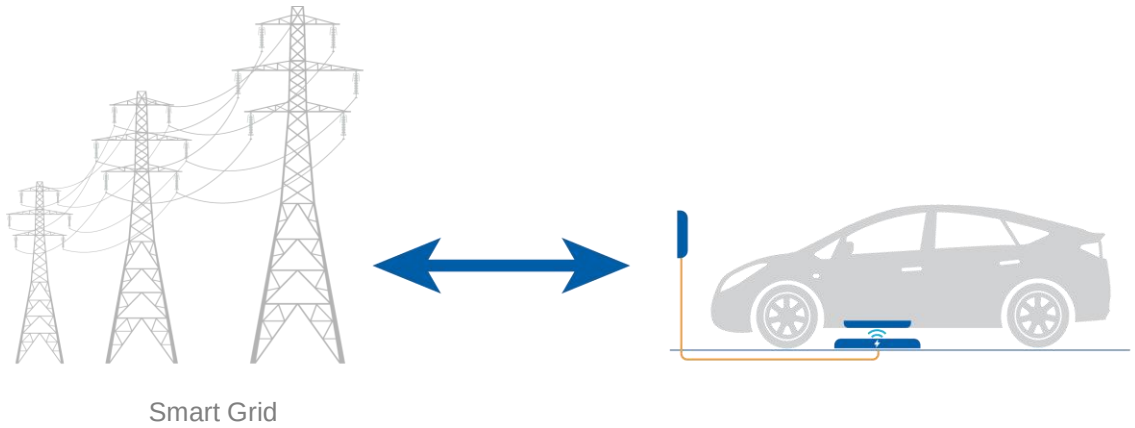
are **electrified**, **wireless**, **autonomous** and **green**.

Wireless charging enables:

- Wirelessly Powered Urban Transit
- Wireless Powered Shared & Autonomous Vehicles
- Intelligent Bi-directional Grid

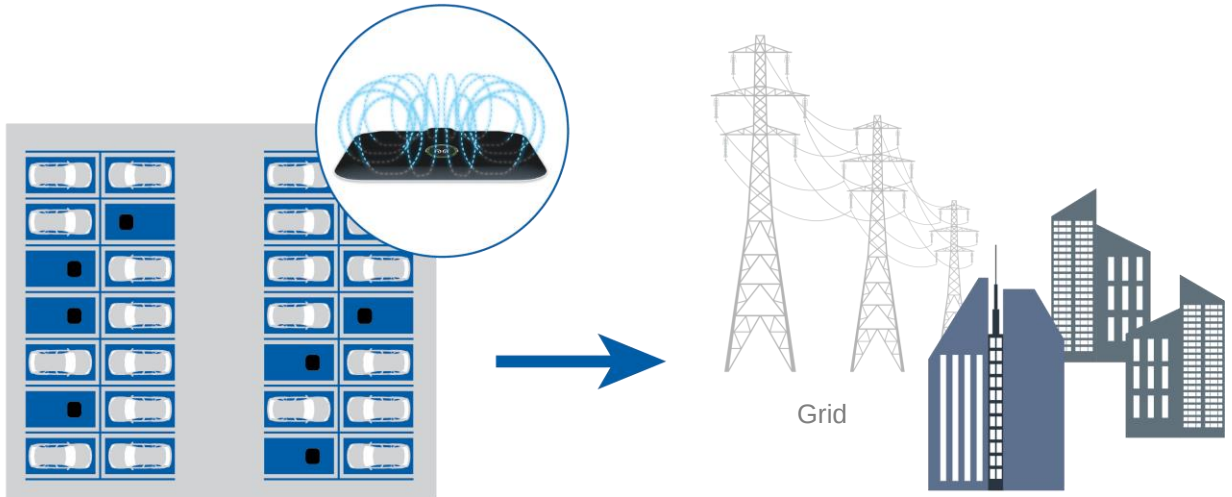
Bi-Directional EV Wireless Charging for Vehicle-to-Grid (V2G)

- Wireless system can charge battery and discharge back to grid with no cable
- Same power as conductive charging
- Wireless V2G is compatible with standards based wireless charging coils
- Enables large scale public and fleet V2G applications



Wireless is a Game Changer for V2G

- V2G needs **many vehicles** to be available to grid to have meaningful effect
- **High availability:** simply park and vehicle is connected to the grid for charging and V2G



Automakers are **aligned** with our vision.

Simpler always wins.
Once a technology goes wireless, it stays that way — you'll never want to plug in again."

— Alex Gruzen, Chief Executive Officer

Additional Videos

A Wireless World of EVs and AVs: The WiTricity Story
https://www.youtube.com/watch?v=4UcJZqR9sUc

DRIVE - Electric Vehicle Wireless Charging Solutions
https://www.youtube.com/watch?v=FxlGPz4kyZw

Are you ready to get started?

We are.

witricity.com

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WiTricity®
Powering life, wirelessly.