

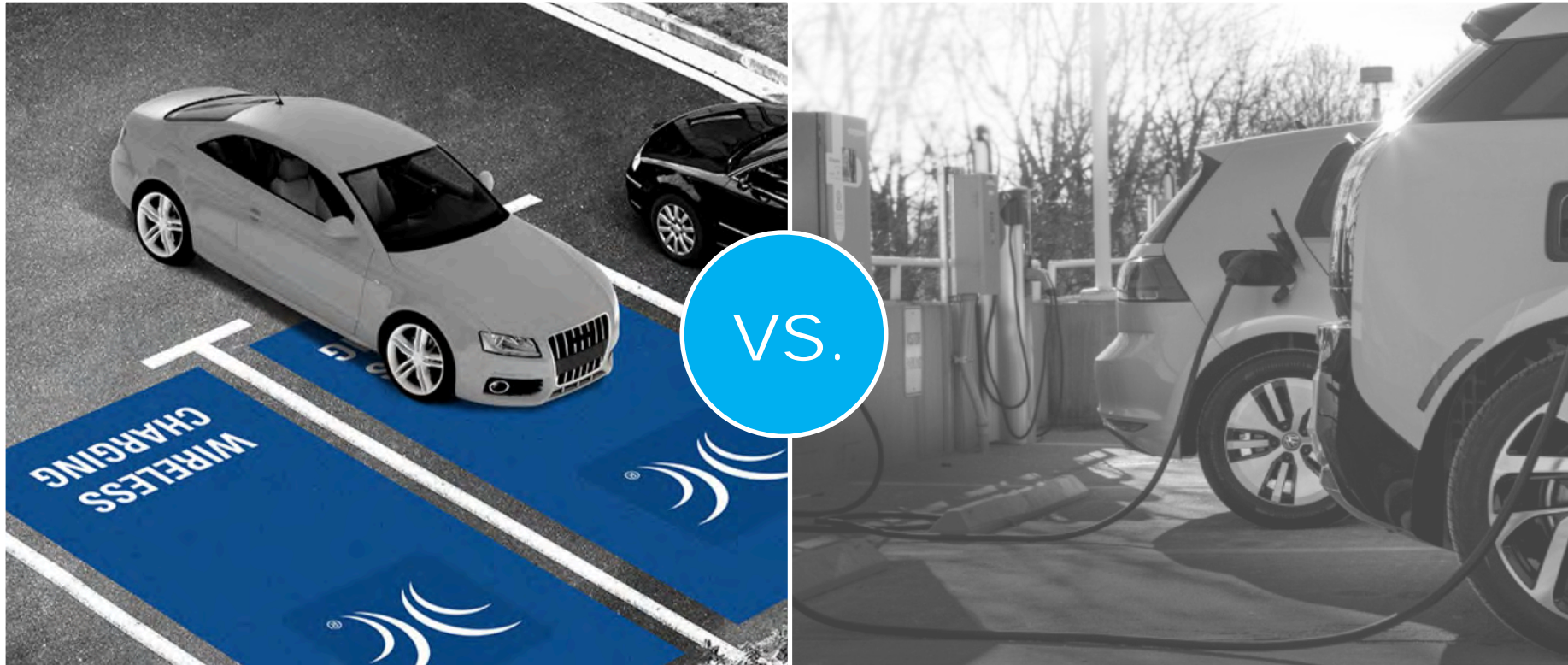


David Schatz
VP Sales & Business Development
July 1, 2020



The future is electric, autonomous and *wireless*.

Wireless vs. Wired



Touch-free Wireless Charging



Electric passenger vehicles



Electric people movers



Personal mobility vehicles



Autonomous delivery



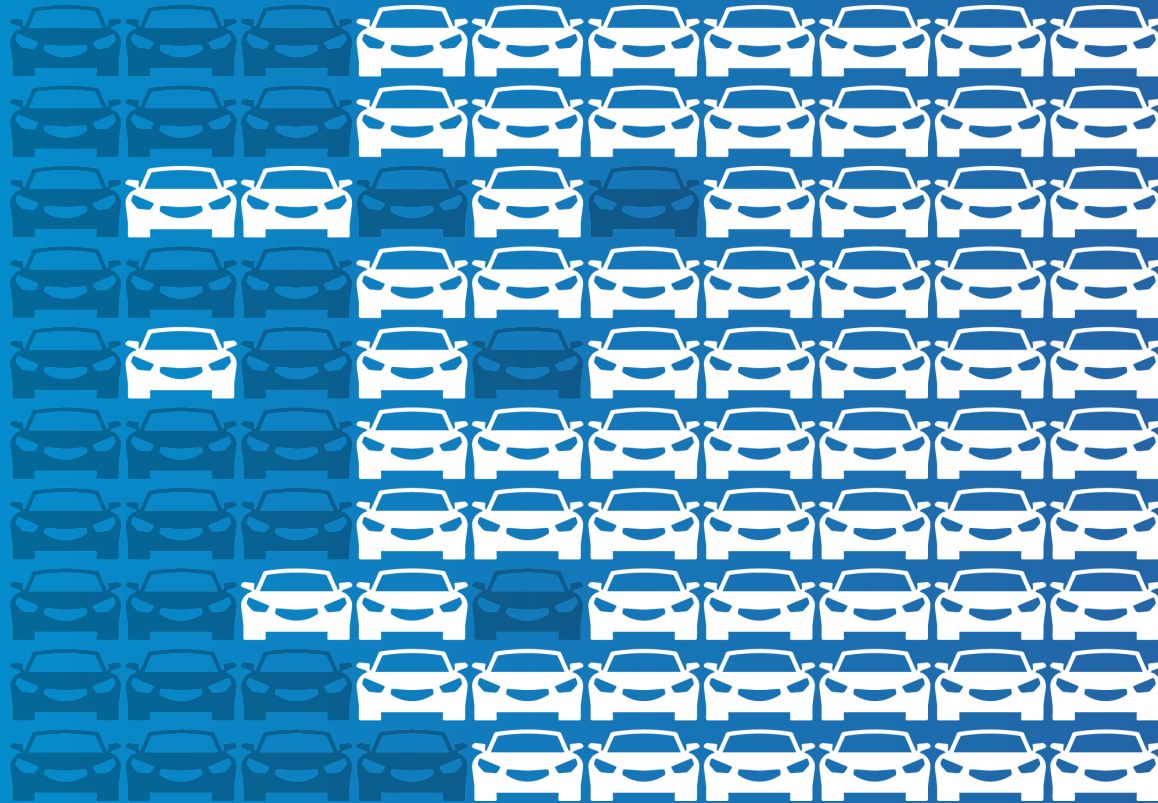
Mobile robotics



Automatic guided vehicles (AGVs)



BMW WIRELESS CHARGING.
BMW 5 Series iPerformance.



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.**

WiTricity's Magnetic Resonance Technology

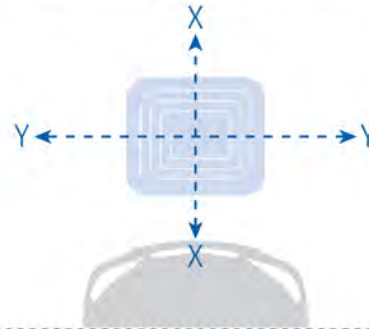
Power Transfer as Efficient as Conventional Plug-in

(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 →



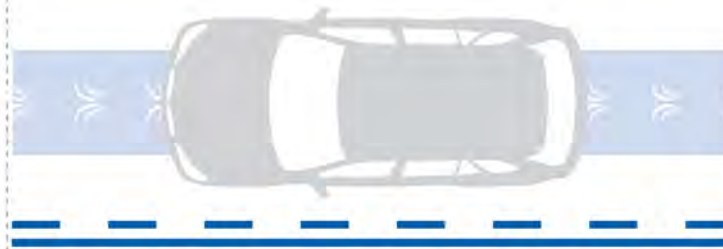
Powers Through Materials (In-ground placement)

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.

900+

Patents granted
worldwide

500+

Patent applications
pending

Execution Model

Vehicle Assembly

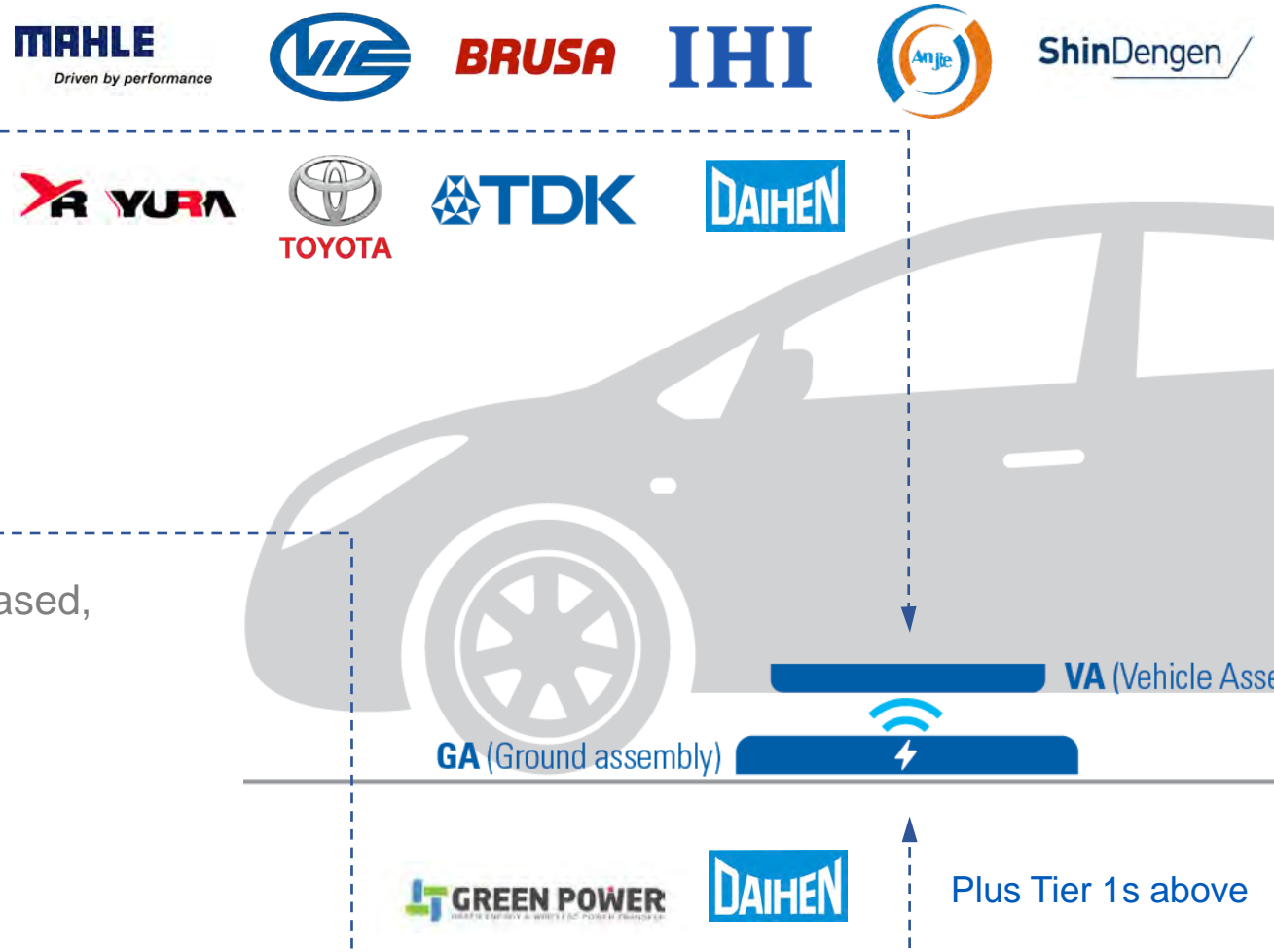
Deliver customized reference designs to enable Tier 1/OEM fleets

- Tech transfer & engineering support
- IP licensing
- Royalties

Ground Pad & Electronics

Charging infrastructure providers deploy standards based, ubiquitous charging pads

- Level 2, 7 -11 kW
- Global interoperability
- Full product availability – WiTricity + licensees



Driving **Global Standards**



China National Standards



China GB standard published April 2020

SAE to be published 2020

ISO/IEC to be published 2021

UL Standard published March 2020



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

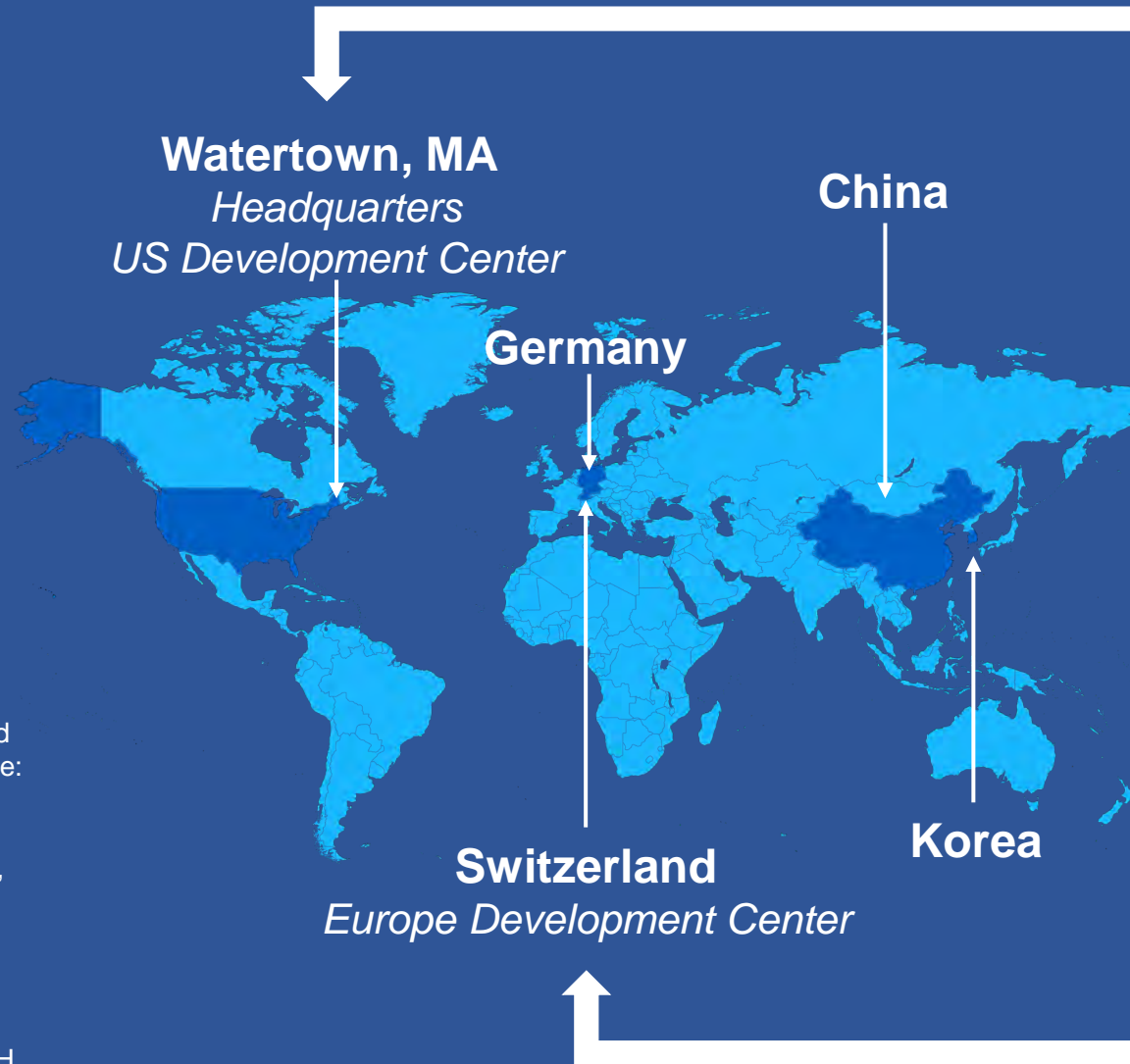
Core Technology: Highly Resonant Wireless Power Transfer over distances; referred to as magnetic resonance

Founded: 2007

Target Markets: Automotive & Industrial

Investors: Global corporate investors now include Qualcomm, Toyota, Intel Capital, Delta Electronics Capital, Foxconn, Haier, and Schlumberger. Venture investors include: Stata Ventures, Argonaut Private Equities, Airwaves Wireless Electricity, LLC, Ace & Company, OMZEST Group, Stage 1 Ventures, and Haiyin Capital.

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



WATERTOWN LAB



EUROPE DEVELOPMENT CENTER



History of WiTricity

2005

- A beeping phone wakes MIT professor, Marin Soljačić, who started thinking of physical phenomena that could power devices without wires.
- Soljačić and colleagues at MIT develop the physical theory of how to enable strongly coupled magnetic resonators to transfer power over distance.



- Filed first patent application.

2007

- MIT team demonstrates highly resonant wireless power transfer concept by lighting bulb wirelessly over 2 meters – results published in *Scientific American* magazine.



- WiTricity Corporation is formed to commercialize highly resonant wireless power transfer.

2006

- The MIT wireless power research drove massive interest from the press and public, resulting in more than 300 print articles and radio reports globally.

2010

- MIT granted the first patent for highly resonant wireless power transfer, which it licenses exclusively to WiTricity.



2012

- License agreements signed with Toyota and IHI.
- First system sold to BMW.

2015

- WiTricity granted 100th patent.
- Headquarters moved to 57 Water Street.



2014

- Toyota and Honda begin field testing EV wireless charging systems.
- Intel announces plans to develop wireless power transfer for consumer products on magnetic resonance.
- WiTricity Appoints Alex Gruzen as CEO.
- License agreements signed with TDK and BRUSA.

2017

- Dell Incorporates WiTricity's Magnetic Resonance Technology in World's First Wireless Charging 2-in-1 Notebook.



- WiTricity granted 300th patent.
- WiTricity collaborates with Nissan.
- License agreements signed with Daihen and Shindengen.
- SAE International Publishes J2954™ Recommended Practice Enabling Wireless Charging to 11kW.
- Company puts 100% focus on EV wireless charging.

2016

- WiTricity granted 200th patent.
- GM begins testing with WiTricity.



2018

- Hyundai demonstrates wireless charging at Geneva Motor Show.
- License agreements signed with Anjie.



2019

- WiTricity acquires Qualcomm Halo.



- License agreements signed with Mahle, VIE and Yura.
- WiTricity establishes development center in Switzerland.
- WiTricity controls over 1,500 patents (750 issued/750 pending).



2020

- WiTricity's patented technology is foundational to the Chinese national standard ("GuoBiao" or GB standard) for wireless electric vehicle (EV) charging ratified and published by the China Electricity Council (CEC) on April 28, 2020.



- WiTricity licensee Lumen Freedom receives first UL certification for EV wireless charging



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

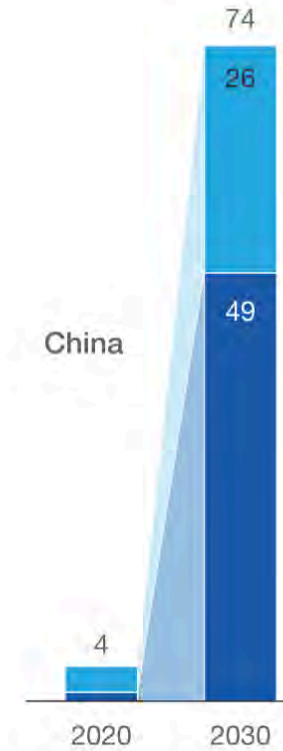
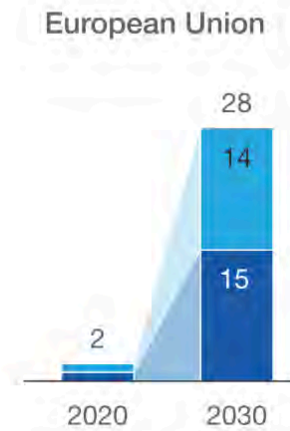
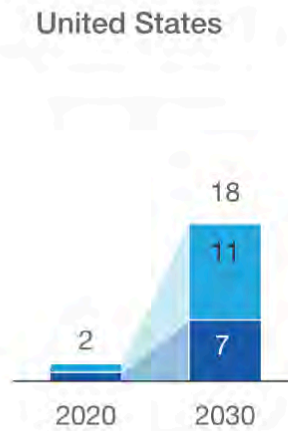
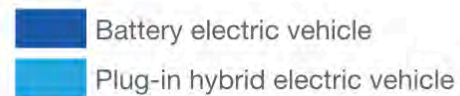


- Robo Taxi
- Shared mobility
- V2G
- Smart Cities

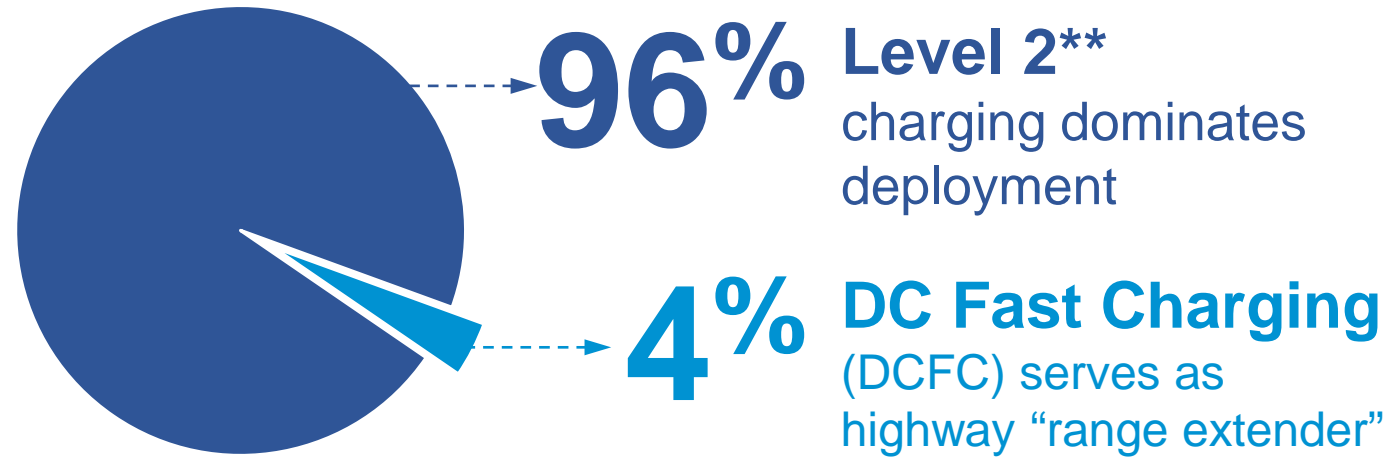
Industry experts predict

120 million electric vehicles on the road by 2030.

Electric-vehicle adoption base case, million



Forecasted Charger Demand*



- 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



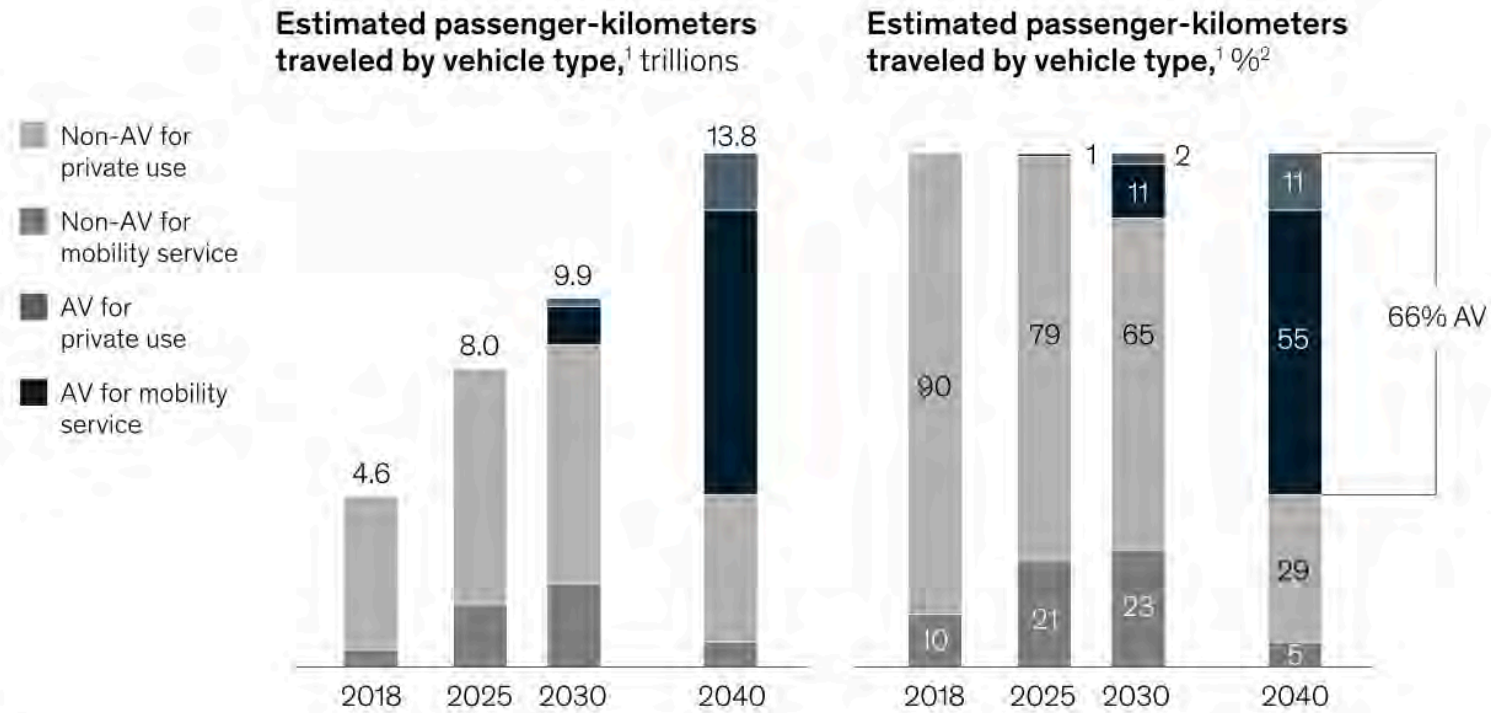
Smart Cities

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

Wireless charging enables:

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

Autonomous vehicles (AVs) will travel about 66% of total passenger-kilometers in 2040... and will need autonomous wireless charging



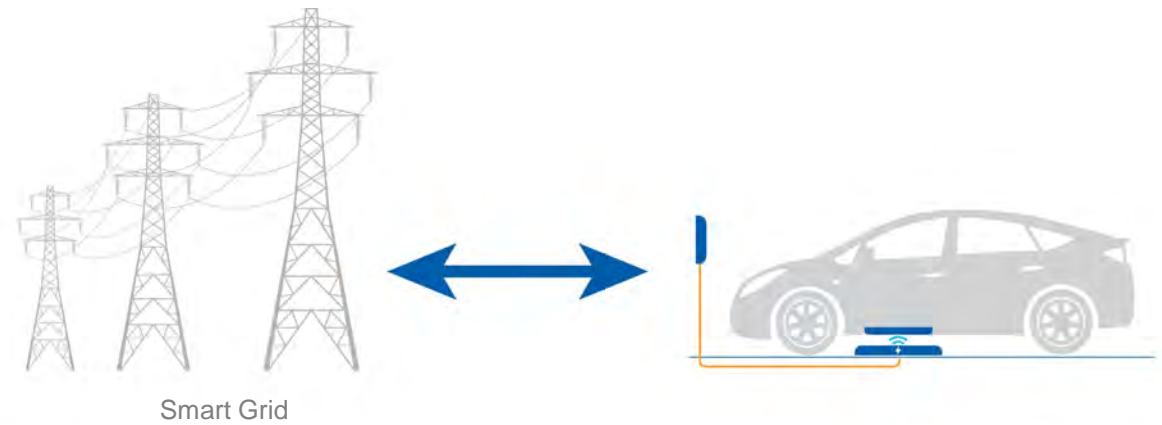
¹Baseline scenario.
²Figures may not sum, because of rounding.



HYUNDAI
MOTOR GROUP

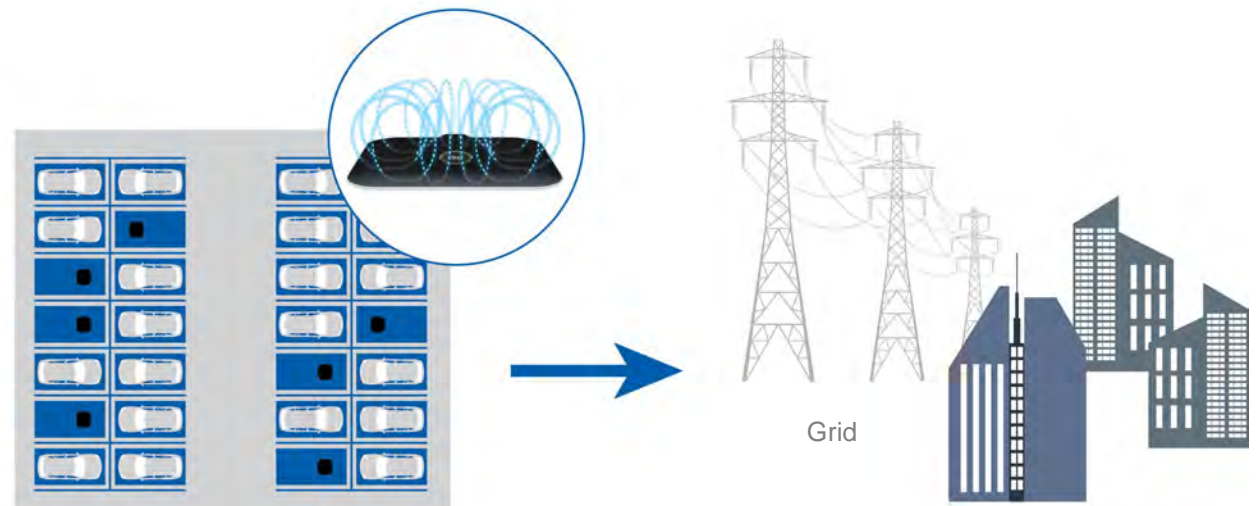
Bi-Directional EV Wireless Charging for Vehicle-to-Grid (V2G)

- 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



Are you ready to
get started?
We are.

[witricity.com](https://www.witricity.com)

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Powering life, wirelessly.