



# ADS-TEC Energy

Power ... Everywhere

Our mission is to deliver distributed,  
high-capacity power for the All-Electric World

## **Cautionary Language Regarding Forward-Looking Statements**

This presentation includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as “may,” “might,” “will,” “would,” “could,” “should,” “forecast,” “intend,” “seek,” “target,” “anticipate,” “believe,” “expect,” “estimate,” “plan,” “outlook” and “project” and other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. Forward-looking statements are based on our current expectations, estimates, projections, targets, opinions and/or beliefs or, when applicable, of one or more third-party sources. No representation or warranty is made with respect to the reasonableness of any estimates, forecasts, illustrations, prospects or returns, which should be regarded as illustrative only. Such forward-looking statements, which include estimated financial information, involve known and unknown risks, uncertainties and other factors. These forward looking statements include, but are not limited to, express or implied statements regarding our future financial performance, revenues and capital expenditures, our expectation of acceleration in our business due to factors including a re-opening economy and increased EV adoption and expectations related to the effective deployment of chargers. A number of factors could cause actual results or outcomes to differ materially from those indicated by such forward-looking statements. These factors include, without limitation: changes or developments in the broader general market; ongoing impact from COVID-19 on our business, customers, and suppliers; macro political, economic, and business conditions; our limited operating history as a public company; our dependence on widespread adoption of EVs and increased installation of charging stations; mechanisms surrounding energy and non-energy costs for our charging products; the impact of governmental support and mandates that could reduce, modify, or eliminate financial incentives, rebates, and tax credits; our current dependence on sales to a limited number of customers; supply chain interruptions; impediments to our expansion plans; the need to attract additional customers; the effects of competition; and risks that our technology could have undetected defects or errors.

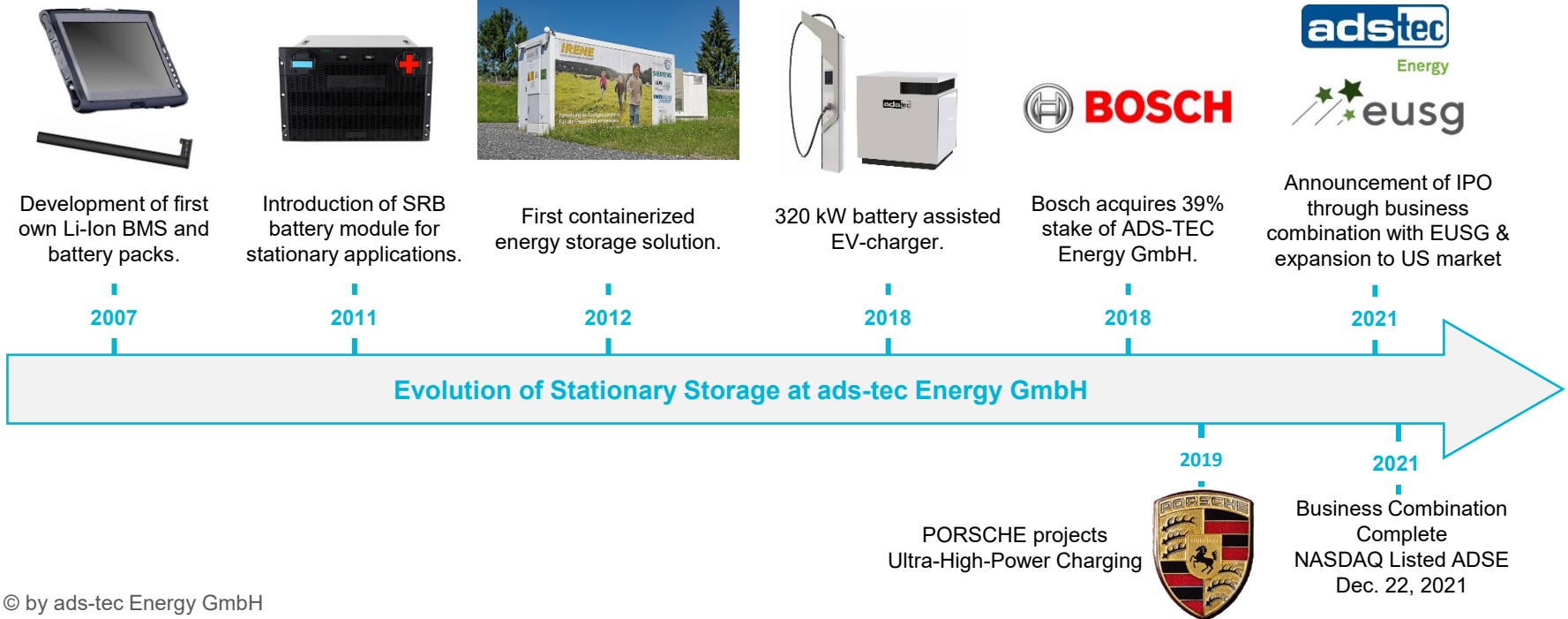
Further information on these and other factors that could affect the forward-looking statements we make in this presentation can be found in the documents that we file with or furnish to the U.S. Securities and Exchange Commission, including our 20-F filed with the SEC on December 29, 2021 and proxy statement/prospectus filed with the SEC on December 7, 2021, which are available on our website at <https://adstec-energy.com/investor-relations-corporate-governance/> and on the SEC's website at [www.sec.gov](http://www.sec.gov). Additional information will also be set forth in other filings that we make with the SEC from time to time. All forward-looking statements in this presentation are based on our current beliefs and on information available to us as of the date hereof, and we do not assume any obligation to update the forward-looking statements provided to reflect events that occur or circumstances that exist after the date on which they were made or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

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# 14 Years of Developing Core Capabilities

Advanced Energy Storage, Power Conversion, Digital Control Systems, Software Platforms



# Energy Storage and Control Systems for Commercial and Residential Applications



Microgrid in Lithuania; managing mixed input feed while Battery-Buffering System provides 150KWhr.

**Stable, Reliable Energy Far from Power Supply Networks**



Isolated Off-Grid Power Plant; managing very large-scale mixed feed while Battery Buffering System provides multi MWhrs of capacity.

**Hybrid Power Plant Energy Generation**



Home Power Plant in Switzerland; Battery Buffered System providing 9MWh (year 1): **PV, Solar, Thermal, Storage**

# Leading DC battery-buffered Ultra Fast Charging for Porsche

Meeting The Challenging Requirements of the New Porsche Taycan even at power limited grids



3 Years of Joint Development



Efficient Ultra Fast Charging  
without Dependency from  
High-Power Grids



Delivering up to 320KW even  
on power limited grids



Integration of Advanced Silicon Carbide Charging Technology with  
Lithium-Ion Battery Buffering, Cooling System and Controls

# The Need for Power: **The Need for Speed**

## BEV models & max. charging power<sup>(1)</sup>



F-150 Lightning Pro  
150kW<sup>(2)</sup>



Proterra ZX5+  
35ft / 12m bus  
355kW<sup>(3)</sup>



Porsche Taycan  
270kW



Polestar 2  
Long Range  
150kW



Tesla Model 3  
Perf.  
250kW



Ford Mach-E GT  
150kW



Audi E-tron  
150kW



Hyundai IONIQ  
5 LR AWD  
232 kW



VW iD.4 1st  
126kW

## Charging time<sup>(4)</sup>

How long do  
**40 kWh**  
**(~100 miles)**  
take to charge?<sup>(5)</sup>

Level 1  
(≤1.9kW) ~21 hrs

Level 2  
(3.7-22kW) ~4 hrs<sup>(6)</sup>

FC  
(>50kW) ~50 mins<sup>(7)</sup>

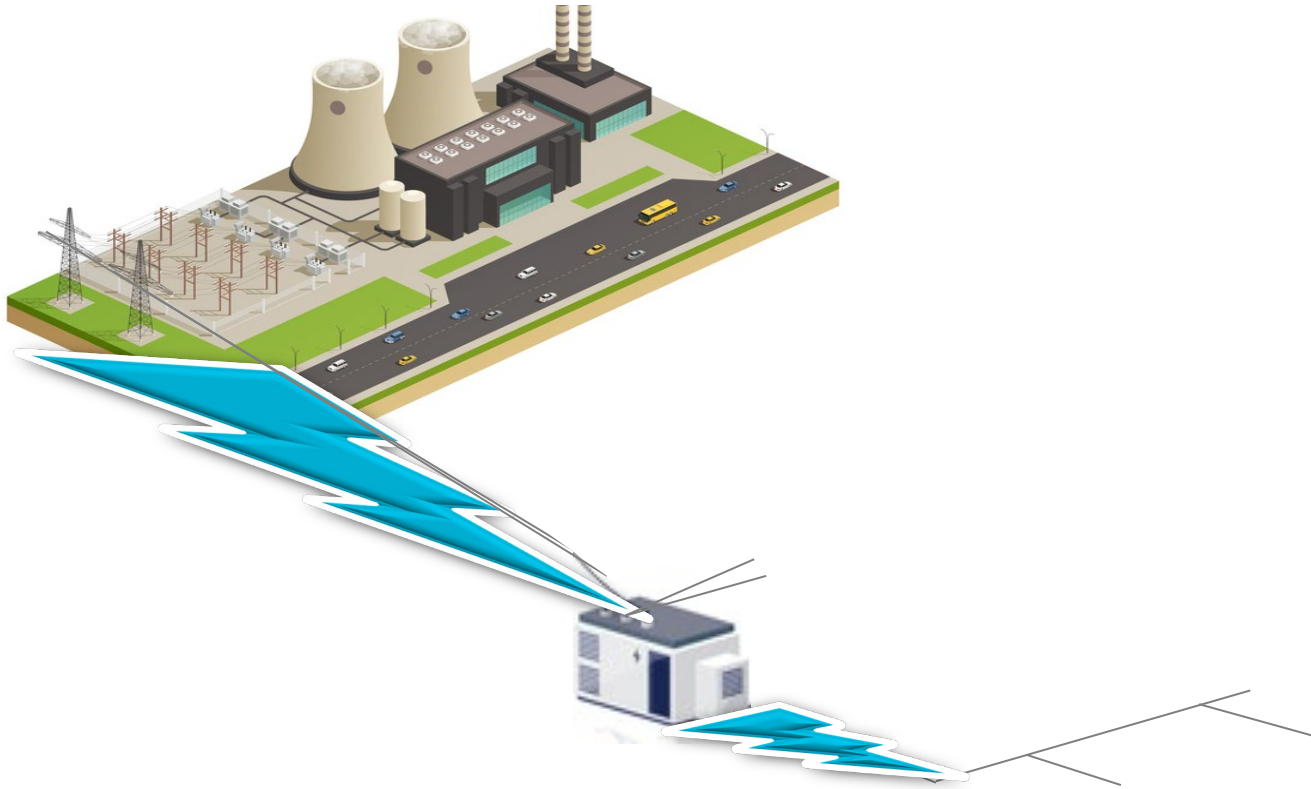
**Ultra-fast**  
(>150kW) **~10 mins**<sup>(8)</sup>

Sources: EV-Database.org, company data

Notes: (1) Illustrative selection, model specifications and figures based on EV-database.org; (2) Expected for 2021; (3) Maximum overhead charging rate for 35 foot Proterra ZX5 bus; (4) Available grid power and capability of car provided; (5) Assuming a power consumption of 40kW per 100 miles; (6) Calculated for 10kW charging power; (7) Calculated with 50kW charging power; (8) Calculated for 250 kW charging power (output & car capability provided).

# High Power is Only Availability in Limited Areas

Advanced Battery Buffering Allows for The Added Power Needed at the end of the line

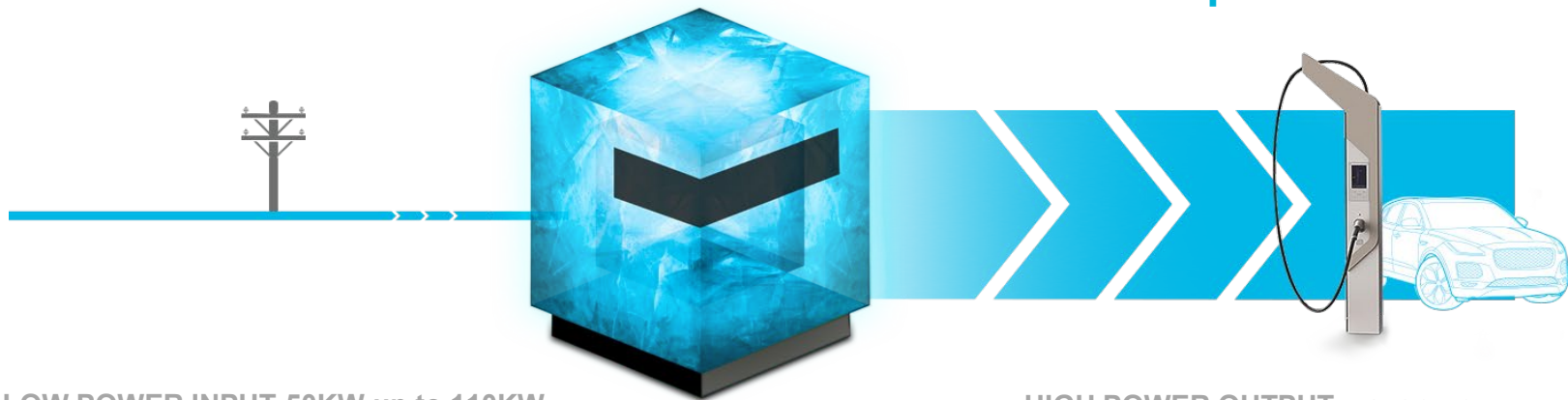


# ChargeBox

Boosts Lower Power Availability to Useful Fast Charging Power

From 110 kW  
Input of 480 V grid AC

Up to 320kW  
Output and 920V DC



LOW POWER INPUT-50KW up to 110KW

HIGH POWER OUTPUT – even up  
to 270KW output with 50KW input

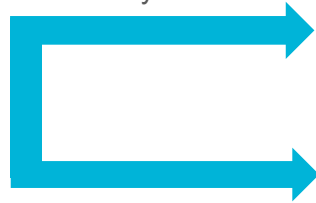


# Input / Output Capacity of the Charging Infrastructure

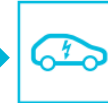
## Competition without battery-buffer



300kW  
Grid



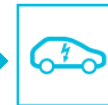
2 x ~ 150kW  
or  
1 x ~ 300kW



## ADS-TEC –Battery-Buffered ChargeBox



50kW  
Grid



2 x ~ 140 kW  
or  
1 x ~ 270kW



2 x ~ 160 kW  
or  
1 x ~ 320kW



110kW  
Grid



# Benefits of ADS-TEC Battery-Buffered Technology

## vs Grid Upgrade and Common DC Chargers

Lower Cost than Grid Upgrade

Far Faster Installations, From Months to Weeks

30% Lower Total Cost of Ownership & Faster ROI

Eliminate Peak Demand Charges

Increased and Flexibility Reliability



Independent Source- Used With Permission: SAI - Typical system installation in the US based on their analysis

(1) Illustrative pricing

(2) 50KW input power

US Government Public Source: NREL - National Renewable Energy Laboratory, Utility published rate charts

# ChargeBox: Lower Installed Cost vs Standard DC Chargers with Grid Upgrade

Reduced Construction Costs, Elimination of Switchgear Upgrades drives lower installed Cost with reduced Construction and permitting Time

	ADS-tec ChargeBox DC fast charger (2 x 140KW) (2)	Non-battery based DC fast charger (2 x 150KW)	
<b>Deep dive Total Cost</b>			
Utility fees	\$ 5,220	\$ 30,000	Dependent on utility and construction allowance
Low voltage cables	\$ 2,175	\$ 3,599	
Mobilization	\$ 2,900	\$ 10,718	• Additional equipment and materials needed • GC travels to sites within market area
Trenching, conduits, backfill	\$ 14,305	\$ 29,571	
Foundation, pads	\$ 10,404	\$ 27,961	Requires more engineering, rebar cages custom built per site, and concrete must be poured in place
Equipment installation and wiring	\$ 8,540	\$ 22,452	
Site restoration	\$ 10,689	\$ 25,438	Typically involves landscape restoration, asphalt and/or concrete pours, seal coat and line striping
Commission, test, document	\$ 2,000	\$ 4,047	
Other	\$ 1,439	\$ 7,059	
<b>Subtotal</b>	<b>\$ 57,672</b>	<b>\$ 160,845</b>	
Charger cost <sup>(1)</sup>	\$ 200,000	\$ 120,000	Charger cost is reflective of bulk pricing from OEM
Switchgear Cost		\$ 35,000	
<b>Total Cost</b>	<b>\$ 257,672</b>	<b>\$ 315,845</b>	
<b>Permitting and installation time</b>			
New utility service	-	2-6 months	
Fabrication of switchgear	N/A	3-4 months	
Construction	2-3 weeks	5 weeks	

Increased number of conduits, larger trenches and pad area

5 pieces of equipment to set and wire and switchgear has 3-4 bays. Several days of labor to pull wire and terminate

Cost savings of ~ 18%

Source: SAI - Typical system installation in the US based on their analysis

(1) Illustrative pricing  
(2) 50KW input power

# ChargeBox: Minimal Peak Demand Charges vs Standard DC Chargers

## ADS-TEC's Battery-buffered charging solution cuts peak demand charges

*Selected & indicative*

*Complex formula adjusting energy price/kWh on power level*

Utility	Location	Peak Demand charge \$/kw/month		Peak Demand charge \$ per year	
		ADSE ChargeBox (at 50KW)	Non-battery based DC fast charger (at 300KW)	ADSE ChargeBox (at 50KW)	Non-battery based DC fast charger (at 300KW)
Bartholomew	Indiana	\$ -	\$ 26 \$/kw/month	\$ -	\$ 93,600 300kw/year
Inland	Washington	\$ -	\$ 8 \$/kw/month	\$ -	\$ 28,152 300kw/year
Nemana-Marshall	Kansas	\$ -	\$ 12 \$/kw/month	\$ -	\$ 43,200 300kw/year
Roanoke	North Carolina	\$ 10	\$ 10 \$/kw/month	\$ 5,700	\$ 34,200 300kw/year
Warren	Kentucky	\$ -	\$ 15 \$/kw/month	\$ -	\$ 53,100 300kw/year
Kit Carson	New Mexico	\$ -	\$ 25 \$/kw/month	\$ -	\$ 91,764 300kw/year
Taunton	Massachusetts	\$ -	\$ 15 \$/kw/month	\$ -	\$ 53,244 300kw/year
				<b>Average:</b>	<b>\$ 56,751</b>

**While many of the installed ultra-fast chargers across the US are suffering from peak demand charges, ADS-TEC's CBX is able to avoid such costs based on the battery-based technology further strengthening the overall cost advantage in terms of TCO**

# ChargeBox: ~30% Lower Total Cost of Ownership

Taking into consideration both installation cost and peak demand charges, ADS-TEC's ChargeBox shows a tremendous advantage in Total Cost of Ownership

			ADS-TEC ChargeBox	Non-battery based DC ultra-fast charger
<b>CAPEX</b>			\$ 257,672	\$ 315,845
<b>Installation cost</b>			\$ 57,672	\$ 160,845
Cost of Charger (2 Dispensers)			\$ 200,000	\$ 120,000
Site Rental Fee	Varies by site		Same for both	Same for both
Insurance	%	1.00	\$ 2,000	\$ 1,200
Maintenance	%	3.00	\$ 6,000	\$ 3,600
Cost of Electricity	\$	0.14	\$ 73,584	\$ 73,584
Utilization	%	20.00		
Peak Demand Charge (per kW)	\$	15.00	\$ 0	\$ 54,000
<b>Total</b>	<b>TCO for 10 years</b>		<b>\$ 1,073,512</b>	<b>\$ 1,604,685</b>

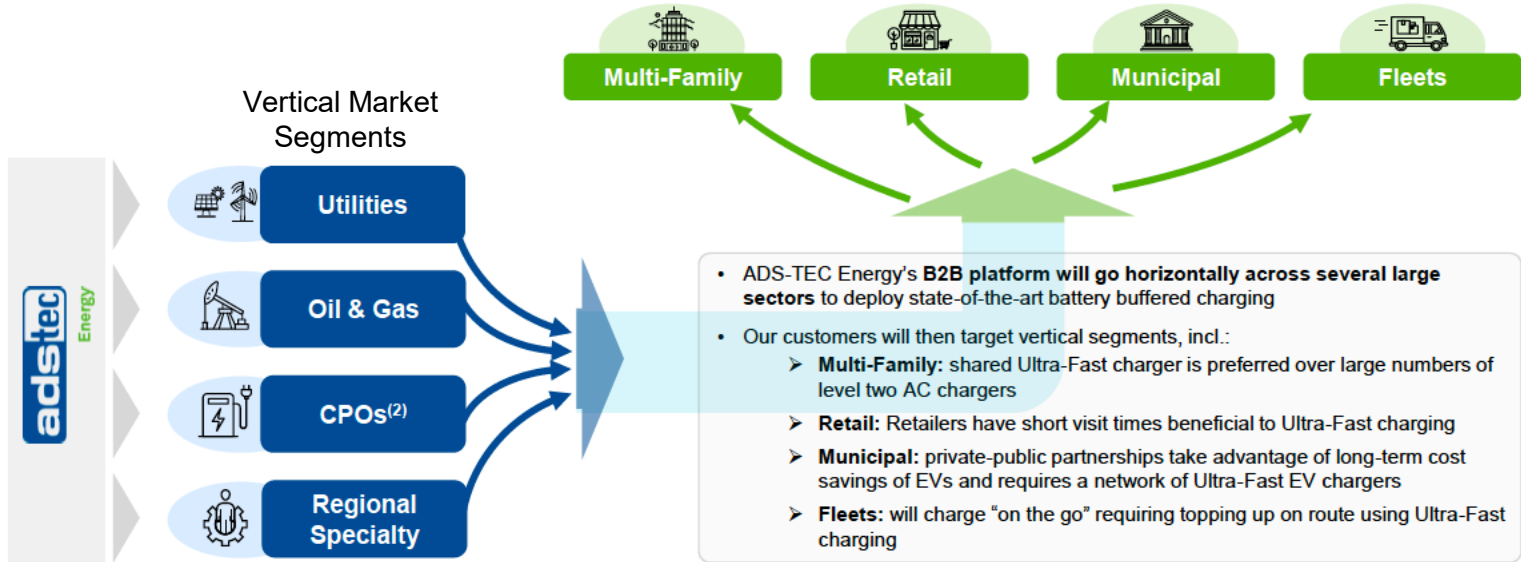
Independent Source: SAI (Typical system installation in the US),  
 Public Source: National Renewable Energy Laboratory & Public Data (Cost of Electricity & Demand Charge)  
 Company Estimates (Insurance, Maintenance, Utilization)

**Total cost savings of ~30% compared to standard DC ultra-fast chargers**

# Route to Market:

## Supply All Charging Network Operators, Uniquely Benefit Vertical Market Segments

Early validation of key markets drives acceleration of ADS-TEC's North American launch



Source: Bloomberg NEF.

Notes: (1) Global number of EV Chargers in circulation excluding China; (2) Charge Point Operators.

# World Class Manufacturing Facilities

## Production plants near Dresden / Germany



- Since 2009 production plant with 4,500 square meter (45,000 sq ft)
- Production for Industrial IT, Energy and EV Charging
- Warehouse and Logistics
- Service



- New production facility since 2020
- In the immediate vicinity of the other ADS-TEC production plant
- State-of-the-art assembly line including end-of-line
- Approx. 6,000 square meters (60,000 sq ft)

# ChargeBox

## Urban Sample Installations



**Spain: Retailer**



**Germany:**  
German Ministry of Environment



Federal Ministry  
for the Environment, Nature Conservation  
and Nuclear Safety



**Berlin:**  
Installed at a Gas station downtown



# Global Senior Leadership: **With Industry Specific Expertise**



**Thomas Speidel**  
Chief Executive Officer  
& Founder

25+ yrs experience



**Robert Vogt**  
Chief Financial Officer  
ADS-TEC Energy GmbH

14 yrs experience



**John Neville**  
Chief Sales Officer

30+ yrs experience



**Thorsten Ochs**  
Chief Technology Officer

20+ yrs experience



**Hakan Konyar**  
Chief Production Officer

24 yrs experience





Energy

