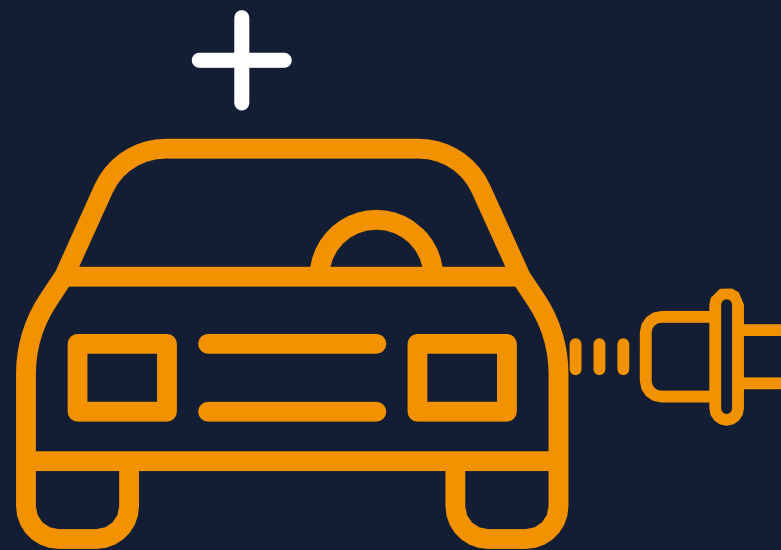




# *EV Charging Service*

Insights, data, market intelligence & advice

goes here



# About LCP Delta

## Our mission is to enable a better, faster energy transition for all

Founded in 2004 and based across the UK, France, Norway, the Netherlands and beyond, LCP Delta provide data-driven research, consultancy, technology products and training services to companies investing in and navigating the energy transition.

We are a diverse team from a variety of backgrounds including engineers, data analysts, environmentalists and more.

LCP Delta is a mission driven organisation - all of us want to make a difference to the energy transition and accelerate the path to a low carbon future.

The energy market is becoming increasingly complex. As consumers become more empowered and as energy systems around the world decarbonise, there is a need to understand both the generation and demand side to effectively navigate the rapid changes occurring.

*We know it's a complicated topic, and we're here to help.*

**Andy Bradly, Partner, LCP Delta**

LCP Delta was formed through the merger of Delta-EE and LCP Energy to bring together deep generation and consumer-side expertise, to provide our clients with a single partner to help them on their journey and provide them with a 360° view across the energy spectrum.



**Andy Bradley**  
Partner  
andy.bradley@lcp.com



**Jon Slowe**  
Partner  
jon.slowe@lcp.com



**200+**  
Global clients

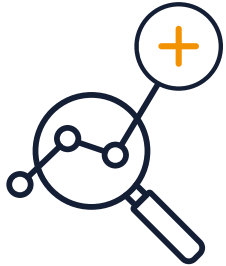


**6**  
offices



**110+**  
Colleagues

# *LCP Delta provides the best advice, support and tools to enable the energy sector to drive the energy transition*



## Subscription research services

Our portfolio of subscription research services offer in-depth insights across the energy transition landscape. We have been undertaking primary research with organisations active in the energy transition since 2004 – we have an unparalleled international network of contacts we can draw on. Each service focuses on a particular aspect of the energy transition.

## Market and strategic advisory consulting

We provide support across the full energy value chain with bespoke research, insight, forecasts and advice tailored to them. Our consultancy offerings draws on expertise and data from across LCP Delta, from strategic market entry analysis through to detailed half-hourly revenue forecasting.



## We support our clients in four ways



## Technology & data

Data integration and analysis is at the heart of the energy transition. However, sourcing and navigating complex, wide-ranging datasets is challenging. At LCP Delta, we combine and curate proprietary and public datasets to provide you with a single source of truth across the energy spectrum, and make this data interactive using our cutting-edge technology.

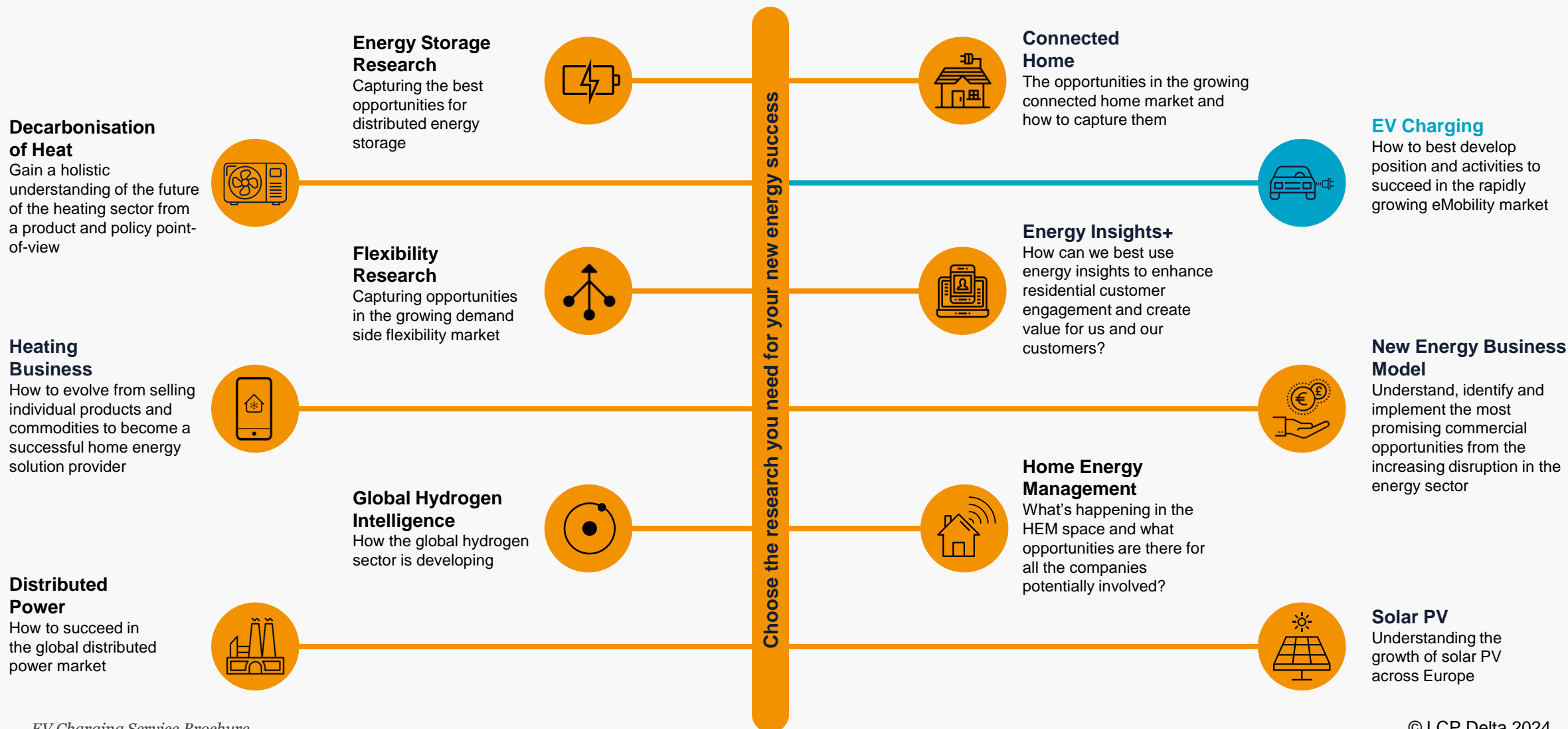
## Training

Our training helps professionals quickly develop their new energy knowledge, accelerating their impact for organisations who want to capture opportunities. We provide meaningful, concise and easy to understand short courses.



# Subscription Research Services

Use a combination of our subscription research services, bespoke consultancy projects and training services to gather the information you need to ensure your business's success in the energy transition.



# The European EV market is undergoing explosive growth

The opportunities are great – but the landscape is complex and rapidly evolving

**~70  
Million**

## 7Vs on European roads by 2030

The growth of EVs in Europe is well underway. By the end of this decade, we expect there to be over 8 million public chargepoints and over 26 million home wallboxes installed.

**>35%  
CAGR**

## Rapid growth providing plenty opportunity

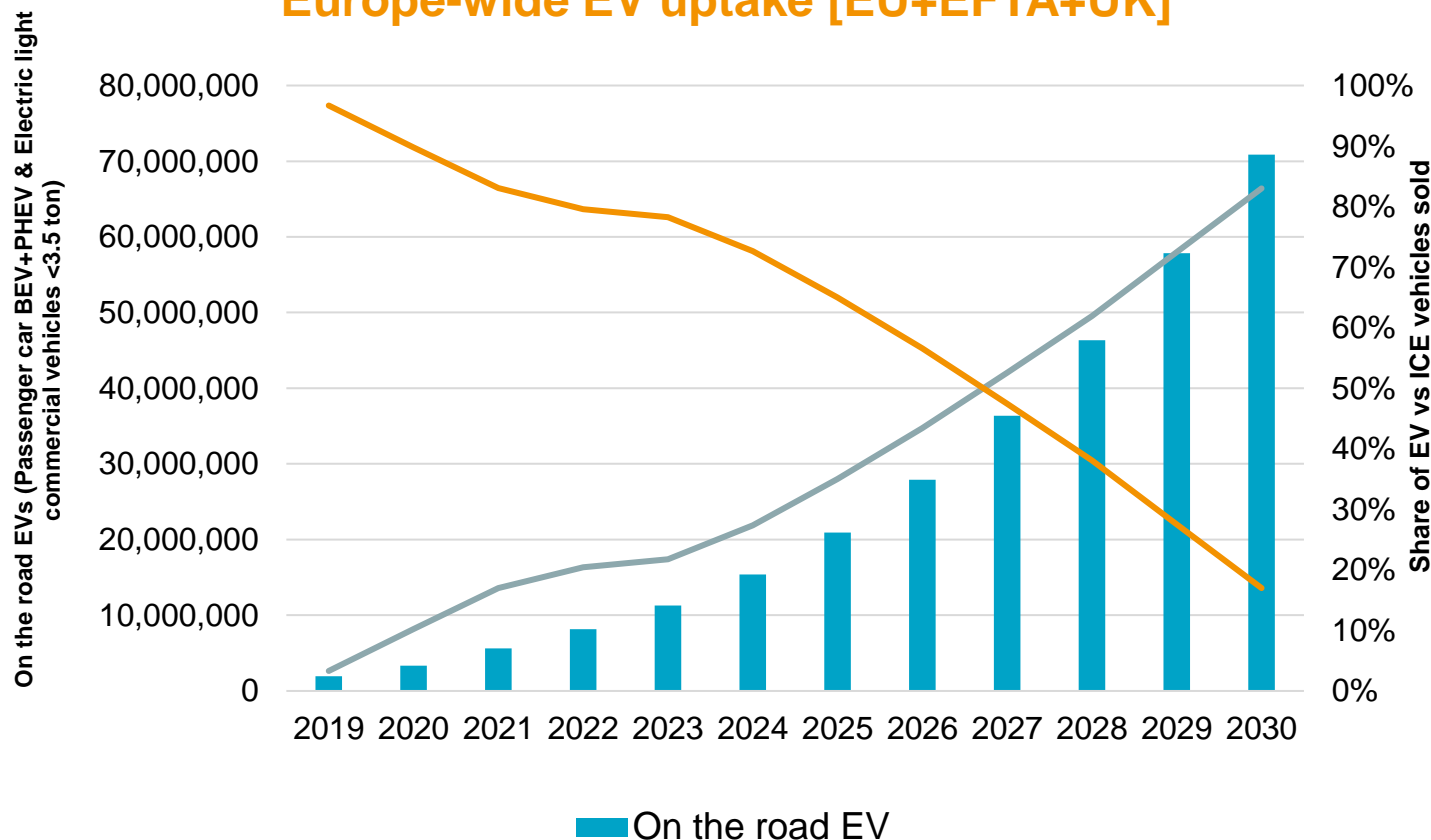
But the companies that will succeed in 5 years time are those that are developing partnerships and propositions today.

**100s of  
players**

## Competitive landscape is intensifying

As the EV market takes off, we are seeing the intensity of competition escalate as companies seek differentiation, profitability and the much-prized end customer relationship.

## Europe-wide EV uptake [EU+EFTA+UK]



# EV Charging Research Service

Supporting companies develop the strategies, products and propositions to succeed

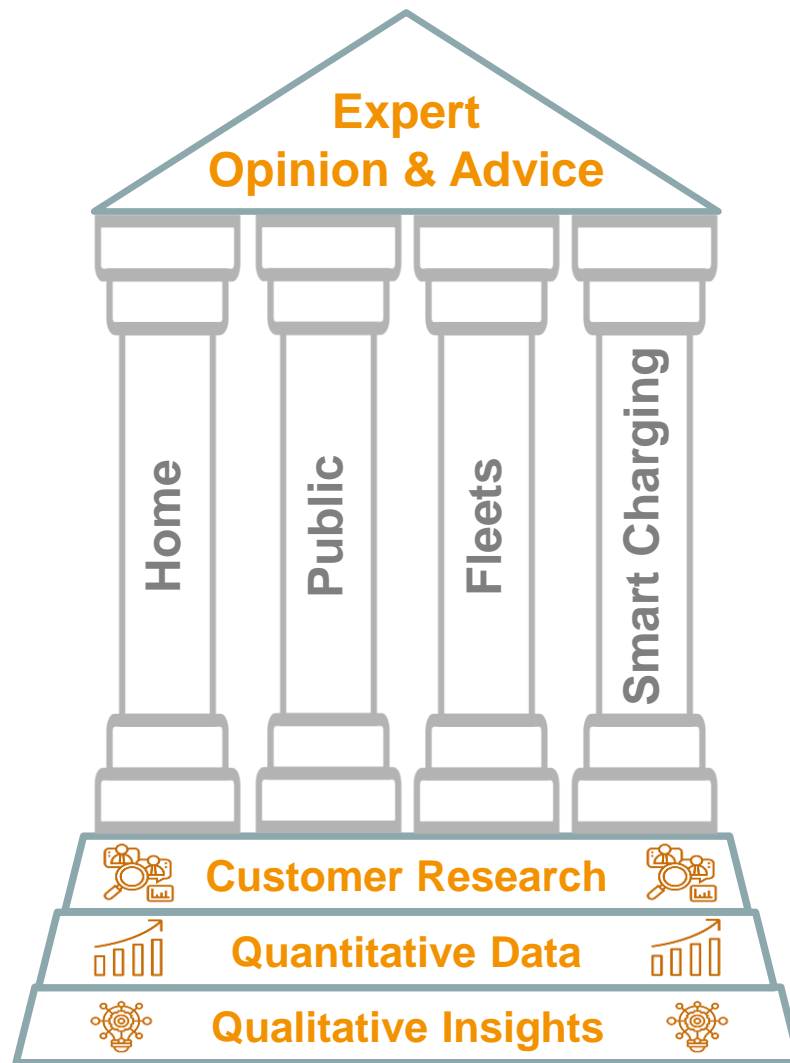
LCP Delta's EV Charging Research Service is providing market-leading insights, data and market intelligence on the European EV charging sector.

Existing clients are at the leading edge of the transition to electric transport and include oil & gas majors, utilities, network companies, car manufacturers and investors.

Our research focuses on four pillars of EV charging: **Home, Public, Fleets & Smart Charging**.

Subscribers have unlimited access to all our existing EV charging materials via the online portal. There are over 100+ reports and datasets available, and insights gathered from over 3,300 EV drivers across Europe.

All available to download now.



Our coverage is Europe-wide  
(US market coming in '24)



# *EV charging infrastructure – summary of our offerings*

Research that provides expert insight and data into a rapidly emerging sector; consulting that brings in-depth knowledge and commercial acumen; and training to help develop your human capital

## *Subscription Research*

### **EV Charging Research Service**

Market data, forecasts, business models, customer attitudes, regulations insights & opinion

Delivering monthly reports, data and Viewpoints across the European EV charging market.

#### **Segments:**

- Home
- Public
- Fleet
- Workplace
- Smart Charging
- Voice of the EV Customer

## *Tech & Data*

### **CHARGEtrack**

A comprehensive benchmarking tool for monitoring European public EV charging tariffs.

- Search through thousands of tariffs by CPO and eMSP with ease
- Compare tariffs on a like-for-like basis using LCP Delta's driver profiles
- Closely monitor the tariffs of competitors in real time
- Track price trends and identify new entrants and big movers

## *Consulting*

### **EV Charging Consulting**

- Commercial due diligence
- Competitor analysis & benchmarking
- Value of EV flexibility
- Customer insights
- Market sizing & forecasts
- Strategic insight advisory
- Innovation and product management
- Policy impact analysis
- Market analysis and entry

## *Training*

### **EV Charging Training**

#### Foundation level

- Energy transition
- Introduction to fundamentals of EV charging.

#### Advanced level

- EV charging sector training

#### Expert/Bespoke

- Detailed and tailored to requirements

# *What makes our EV charging research unique?*

LCP Delta is the leading provider of market insight on the European energy transition. Our research is based on broad and deep expertise. The topics we cover are driven by subscriber interest.

## **Breadth and depth of expertise**

Our EV Charging Service offers analysis across all of Europe, with in-depth insights, and granular market data provided for all the leading countries.

## **Based on primary research**

Our analysis is based on insights and data gathered from our extensive network of industry contacts. We also conduct primary customer research with EV drivers and fleet managers.

## **Rolling research programme driven by subscriber interest**

We continuously engage with our subscribers. This ensures that our research is focused on your key questions and needs.

## **A relationship-based service**

Our team of experts is always available to answer your questions. We also have webinars, calls and on-site presentations with each of our subscribers to discuss our latest research.

## **Cost-effective**

Subscribers receive access to €100,000s-worth of research and data for a small fraction of the cost.

## **Our track record**

We have been immersed in new energy for over 15 years. Our team of EV experts is regularly invited to speak at high-profile events across the globe and subscribers often seek additional insight via our consulting services.



# Size the European EV charging market: past, present & future

Granular market sizing and forecasts of EV charging infrastructure across all segments: Home, public, workplace

Sizing the European EV charging market and developing robust forecasts to 2030 has become an integral part of the EV Charging Research Service.

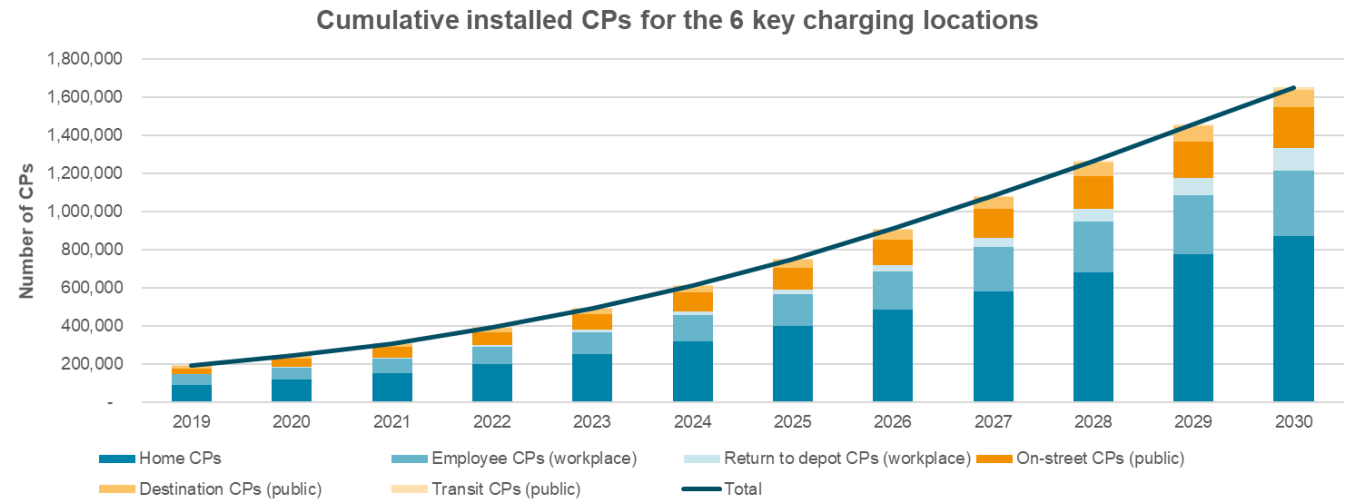
For each of the leading EV markets in Europe, we have carried out detailed market sizing of the charging sector, with segmentation by six key locations and chargepoint speeds. In all cases, we have developed forecasts to 2030.

Our forecasts are underpinned by a sophisticated market model that takes into account many 10s of market parameters. All market sizing data and forecasts are updated at least annually.

Individual country reports contain data in graphical format together with the narrative and assumptions that sit behind the forecasts.

## Key locations:

- Home
- On-Street
- Destination
- Transit
- Return-to Depot
- Employee Charging



## Example parameters taken into account:

- EV uptake rates
- Government policies and incentives
- Building stock, including access to off-street parking
- Chargepoint utilisation rates
- Chargepoint replacement rates
- Fleet characteristics, inc. number of fleets that are return-to-depot vs return-to-home

## Helps you to:

- Understand the size of the market today – and the expected future growth rate
- Establish your market share
- Demonstrate the scale of the opportunity to your key stakeholders
- Validate & challenge your own assumptions
- Prioritise markets and segments

# Understand the EV customer

We survey EV owners across Europe to understand the EV charging products and services they are using at home and on the move

Four annual EV Owner Surveys have collected insights, data and opinion from over 3,000 EV drivers across NINE (and growing) European countries.

## We asked EV owners...

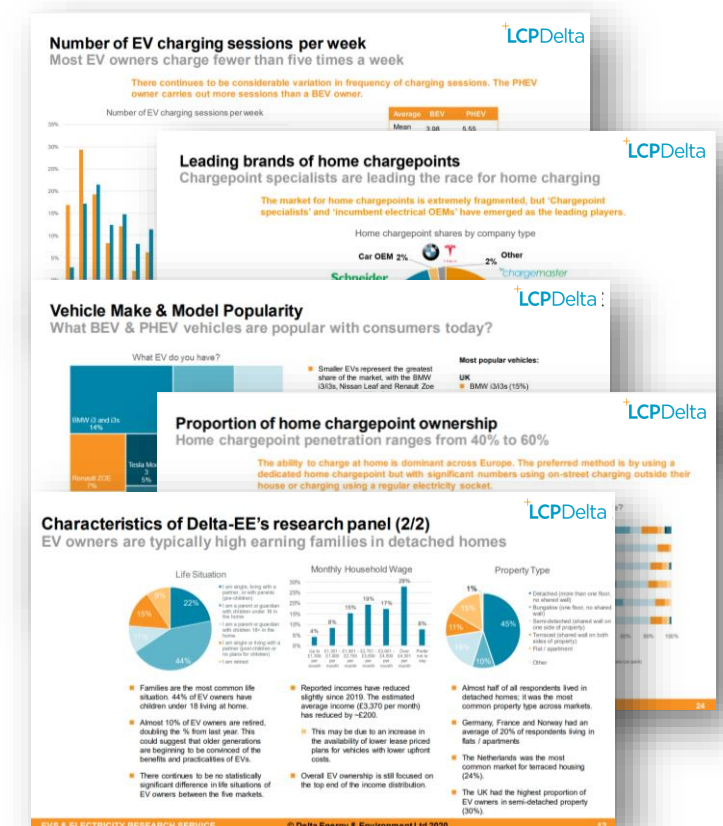
Over the past four years, we have been surveying EV drivers – both BEV and PHEV - across Europe to get ‘under the skin’ of the products and services they are using to charge their EVs.

In particular, this helps us to understand how EV drivers are charging their EVs at home: Do they have access to off-street parking? Are they using a dedicated home chargepoint? If so, is it internet-connected? What brand? Have they changed to an EV tariff that provides cheaper electricity at different times of day?

Across four annual surveys – the most recent conducted in March 2022 – we have collected responses from over 3,000 EV drivers in eight countries.

## Helps us to understand:

- Number of home wallboxes installed per country
- Market shares of the leading home wallbox manufacturers
- The percentage of home wallboxes that are smart / connected
- Typical charging mix: Home vs Public vs Workplace
- The appeal of smart charging propositions
- The sales channels EV owners are using to procure their home wallboxes
- How the charging and purchasing habits of EV drivers changes from country-to-country and over time as EVs become more mainstream
- Many other insights...



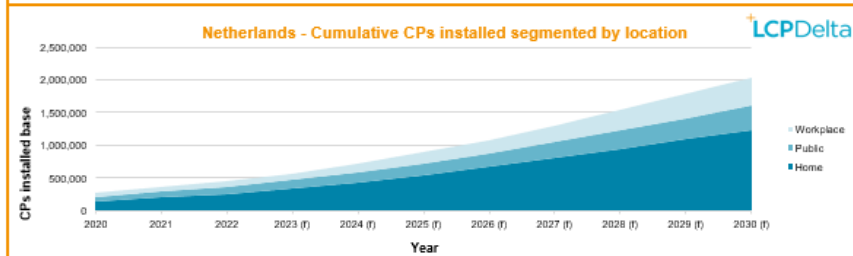
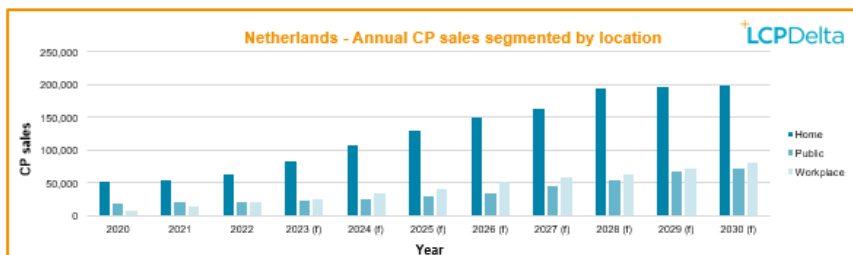
# Market Data & Forecast: EVs & Chargepoints

Example screenshots of Forecast Database (Netherlands data)

CP dashboard - Annual sales and cumulative installations

CP location: Home, Public, Workplace

Year: 2020, 2021, 2022, 2023 (f), 2024 (f), 2025 (f), 2026 (f), 2027 (f), 2028 (f), 2029 (f), 2030 (f)



Copy Graph

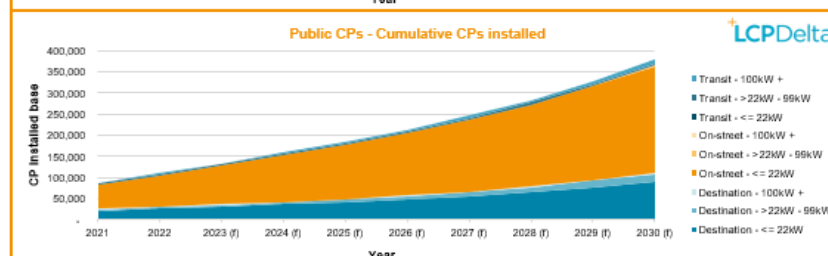
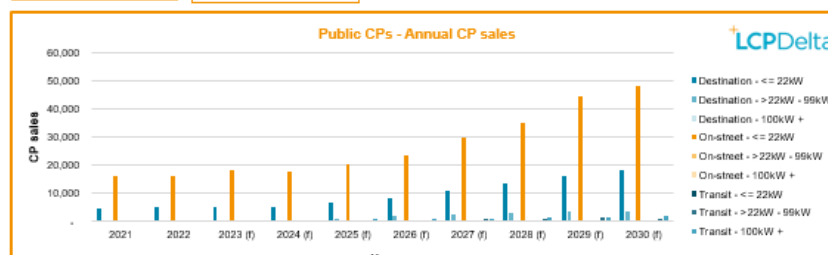
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Public CP data - Annual sales and cumulative installations

CP sub-loc...: Destination, On-street, Transit

CP speed: <= 22kW, >22kW - 99kW, 100kW +

Year: 2020, 2021, 2022, 2023 (f), 2024 (f), 2025 (f), 2026 (f), 2027 (f), 2028 (f), 2029 (f), 2030 (f)



Copy Graph

Copy Graph

Datasets are easily searchable. Slicers can be used to pull out the specific data you need. Data tables can be copied and pasted to use for your own (internal) needs.

Tables of information

Country: Netherlands					Country: Netherlands				
Annual CP Column					Cumulative Column				
Year	Home	Public	Workplace	Grand Total	Year	Home	Public	Workplace	Grand Total
2020	51,350	18,932	7,673	77,955	2020	150,520	65,628	59,160	275,308
2021	53,285	21,841	13,533	88,659	2021	203,805	87,469	69,636	360,910
2022	62,866	21,958	20,739	105,564	2022	261,843	109,427	84,770	456,040
2023 (f)	82,176	24,163	26,239	132,579	2023 (f)	334,362	133,590	104,385	572,338
2024 (f)	107,198	24,650	33,316	165,164	2024 (f)	427,076	158,240	130,568	715,884
2025 (f)	130,442	29,486	41,848	201,776	2025 (f)	538,205	184,444	164,046	886,695
2026 (f)	149,579	35,332	52,570	237,481	2026 (f)	665,575	213,213	205,664	1,084,452
2027 (f)	163,598	45,648	58,777	268,023	2027 (f)	803,100	245,735	253,273	1,302,108
2028 (f)	194,734	54,261	64,283	313,277	2028 (f)	946,484	283,589	306,002	1,536,075
2029 (f)	197,225	66,877	72,601	336,703	2029 (f)	1,090,425	328,625	363,296	1,782,345
2030 (f)	199,549	73,183	79,959	352,690	2030 (f)	1,231,936	379,850	422,817	2,034,602
Grand Tot.	1,392,003	416,330	471,539	2,279,872					

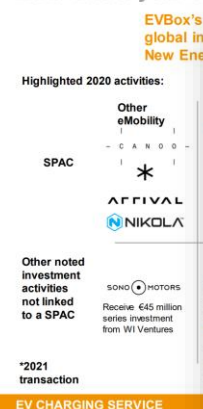
Country: Netherlands									
CP location: Public									
Annual CP Column									
Year	Destination <= 22kW	>22kW - 99kW	100kW +	Destination <= 22kW	>22kW - 99kW	100kW +	On-street <= 22kW	>22kW - 99kW	100kW +
2021	4,795	71	63	4,929	16,161	27	16,188	281	21,841
2022	4,963	123	64	5,150	16,201	28	16,229	290	21,958
2023 (f)	5,041	218	81	5,339	18,063	31	18,094	426	24,163
2024 (f)	5,350	562	86	5,998	17,764	34	17,798	523	24,650
2025 (f)	6,743	1,075	114	7,933	20,387	50	20,437	704	29,486
2026 (f)	8,482	1,771	148	10,400	23,427	72	23,499	913	35,332
2027 (f)	10,885	2,619	197	13,702	29,978	114	30,092	1,166	45,648
2028 (f)	13,665	3,269	238	17,172	34,744	153	34,897	1,407	54,261
2029 (f)	16,128	3,323	259	19,710	44,188	158	44,346	1,617	66,877
2030 (f)	18,131	3,605	292	22,028	48,005	167	48,172	1,192	73,183
Grand Tot.	64,489	16,888	1,543	82,920	208,805	823	209,784	8,465	227,987

# Insights and opinion on the latest hot topics

In-depth reports and opinion-led 'Viewpoints' help you get under the skin of the EV charging sector and understand the 'so what's' for you.

*We are very satisfied by the quality of Delta's studies / reports and the level of support. It is very useful for our development in E-mobility over Europe*  
**Director of Electric Mobility, Major European Utility**

## EVBox becomes a publicly listed EV charging company 2020 was a year of New Energy and Mobility SPACs investment



## A number of factors have led to a global shortage of semi-conductors (chips), effecting 150+ industries.

**The impact on the automotive supply of battery electric vehicles**

*"Just in time delivery is dead"*

- Industry component supplier

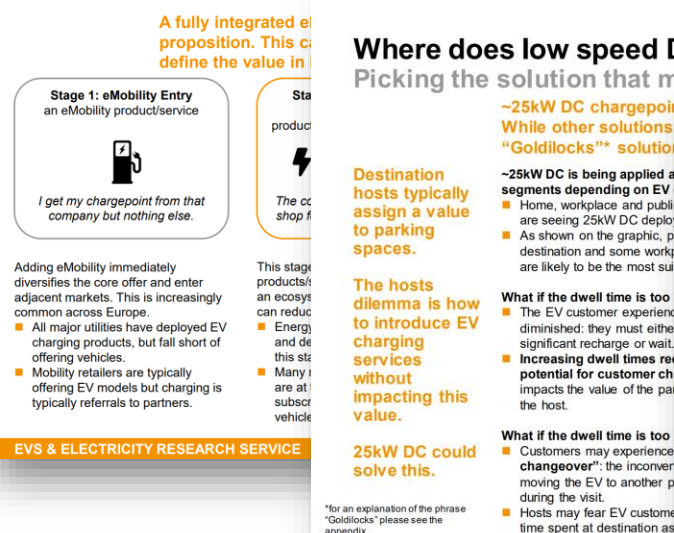
Supply has been interrupted. Over the last 18 months a number of factors have exposed the fragile supply chain and impacted the Key factors include:

- COVID-19 Pandemic – fact production was paused during the lockdown
- In 2020 US imposed trade duties on the biggest chip manufacturer, disrupting the supply chain and forcing de facto production to move to Japan. US manufacturer Ford issues.
- Extreme drought in Taiwan disrupted the manufacture of semiconductors, produces 50% of the global supply.

Other factors are also continuing to impact the supply chain including bottlenecks in freight costs (10-fold reported increase).

**EV CHARGING SERVICE**

## Four stages to build an "EV as a Service" solution The value propositions of integrated eMobility business models



## Where does low speed DC sit in the EV charging market? Picking the solution that matches the destination and use case

**~25kW DC chargepoint**  
 While other solutions are being deployed, "Goldilocks" solution is emerging.

**~25kW DC is being applied across segments depending on EV use case.**

- Home, workplace and public are seeing 25kW DC deployment.
- As shown on the graphic, public destination and some workplace are likely to be the most suitable.

**Destination hosts typically assign a value to parking spaces.**

**The hosts dilemma is how to introduce EV charging services without impacting this value.**

**25kW DC could solve this.**

**What if the dwell time is too long?**

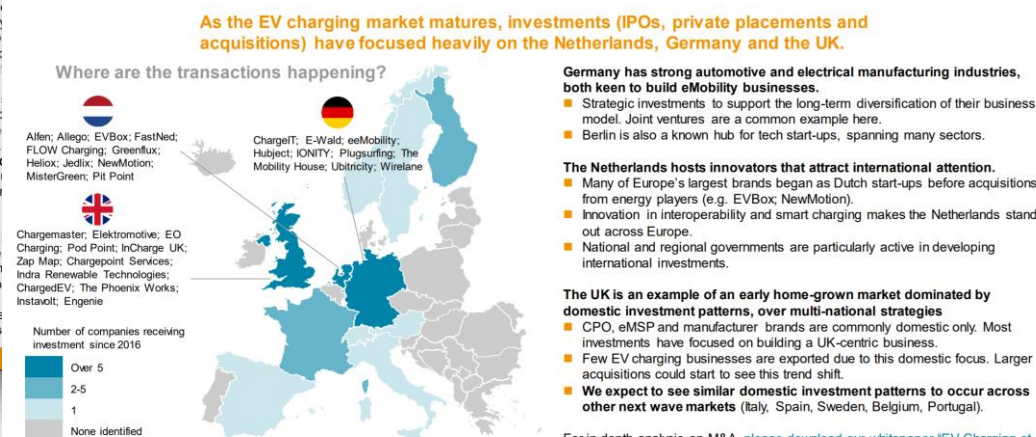
- The EV customer experience is diminished: they must either wait for a significant recharge or wait for a short recharge.
- Increasing dwell times reduce potential for customer choice and impacts the value of the parking space.

**What if the dwell time is too short?**

- Customers may experience "changeover": the inconvenience of moving the EV to another parking space during the visit.
- Hosts may fear EV customer time spent at destination as a loss of revenue.

**EVs & ELECTRICITY RESEARCH SERVICE**

## Three markets have dominated EV charging transactions Which European territories attract the most private investment?





# Contact us



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## About LCP Delta

LCP Delta is a trading name of Delta Energy & Environment Limited and Lane Clark & Peacock LLP. References in this document to LCP Delta may mean Delta Energy & Environment Limited, or Lane Clark & Peacock LLP, or both, as the context shall require.

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