LCPDelta

Home Energy Management

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

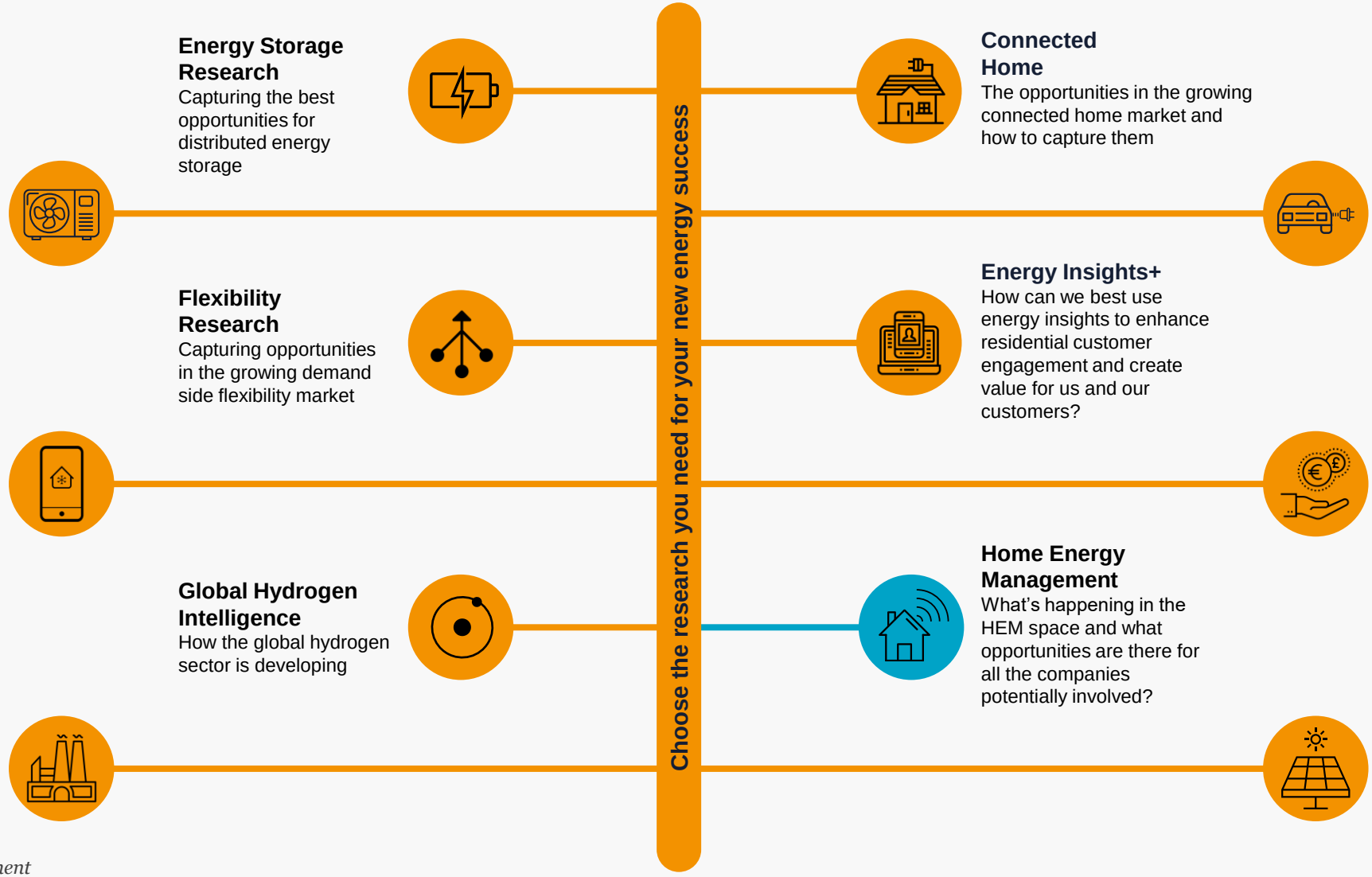
Data integration and analysis is at the heart of the energy transition. However, sourcing and navigating complex, wide-ranging datasets is challenging. At LCP Delta, we combine and curate proprietary and public datasets to provide you with a single source of truth across the energy spectrum and make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



Energy Storage Research
Capturing the best opportunities for distributed energy storage

Decarbonisation of Heat
Gain a holistic understanding of the future of the heating sector from a product and policy point-of-view

Flexibility Research
Capturing opportunities in the growing demand side flexibility market

Heating Business
How to evolve from selling individual products and commodities to become a successful home energy solution provider

Global Hydrogen Intelligence
How the global hydrogen sector is developing

Distributed Power
How to succeed in the global distributed power market

Connected Home
The opportunities in the growing connected home market and how to capture them

EV Charging
How to best develop position and activities to succeed in the rapidly growing eMobility market

Energy Insights+
How can we best use energy insights to enhance residential customer engagement and create value for us and our customers?

New Energy Business Model
Understand, identify and implement the most promising commercial opportunities from the increasing disruption in the energy sector

Home Energy Management
What's happening in the HEM space and what opportunities are there for all the companies potentially involved?

Solar PV
Understanding the growth of solar PV across Europe

When we talk about HEM to organisations across Europe, it is at the center of the innovation roadmaps, or already part of the day-to-day business.

Home Energy Management

LCPDelta

Market landscaping and strategy

How is the market evolving, and what trends and opportunities are emerging?

How are companies positioning themselves in the market, and who are the successful players?

What's the current state of interoperability in home energy management systems, and how will this evolve?

Technology

How will home energy management evolve as the number of energy assets in homes increases?

How are protocols, standards, and communications technology developing, and how will this affect the Home Energy Management market?

Business case

What are the most promising business models and propositions in the Home Energy Management market?

How will global technology trends and big tech impact the Home Energy Management market?

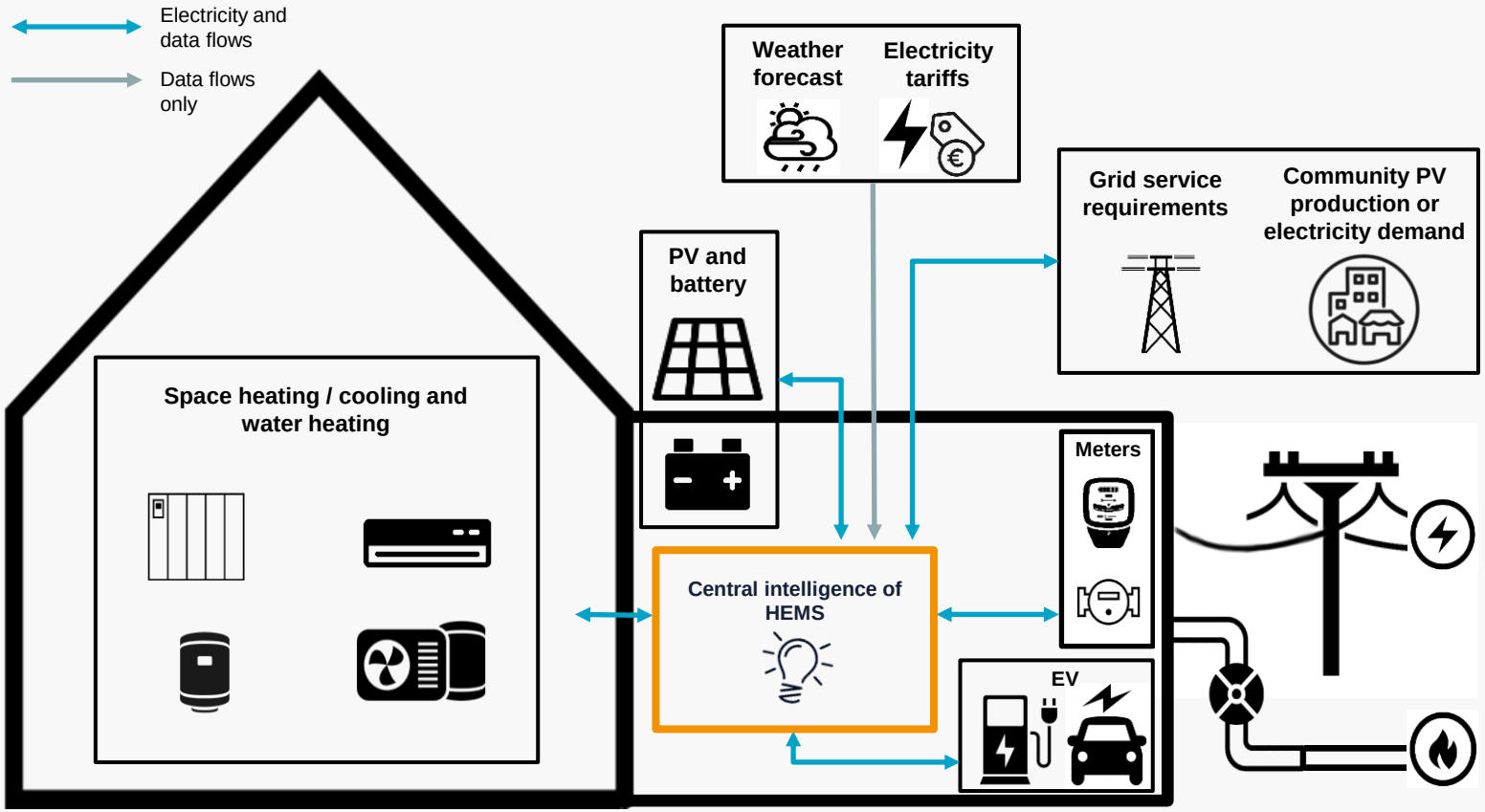
Clients we support

- ***Govt, Regulators & System Operators***
- ***Energy retailers***
- ***Product manufacturers***
- ***Solution providers***
- ***Investors***

Home Energy Management provides...

data, analysis, insights and opinion on how the home energy management market is developing, enabling you to understand and capture the best opportunities

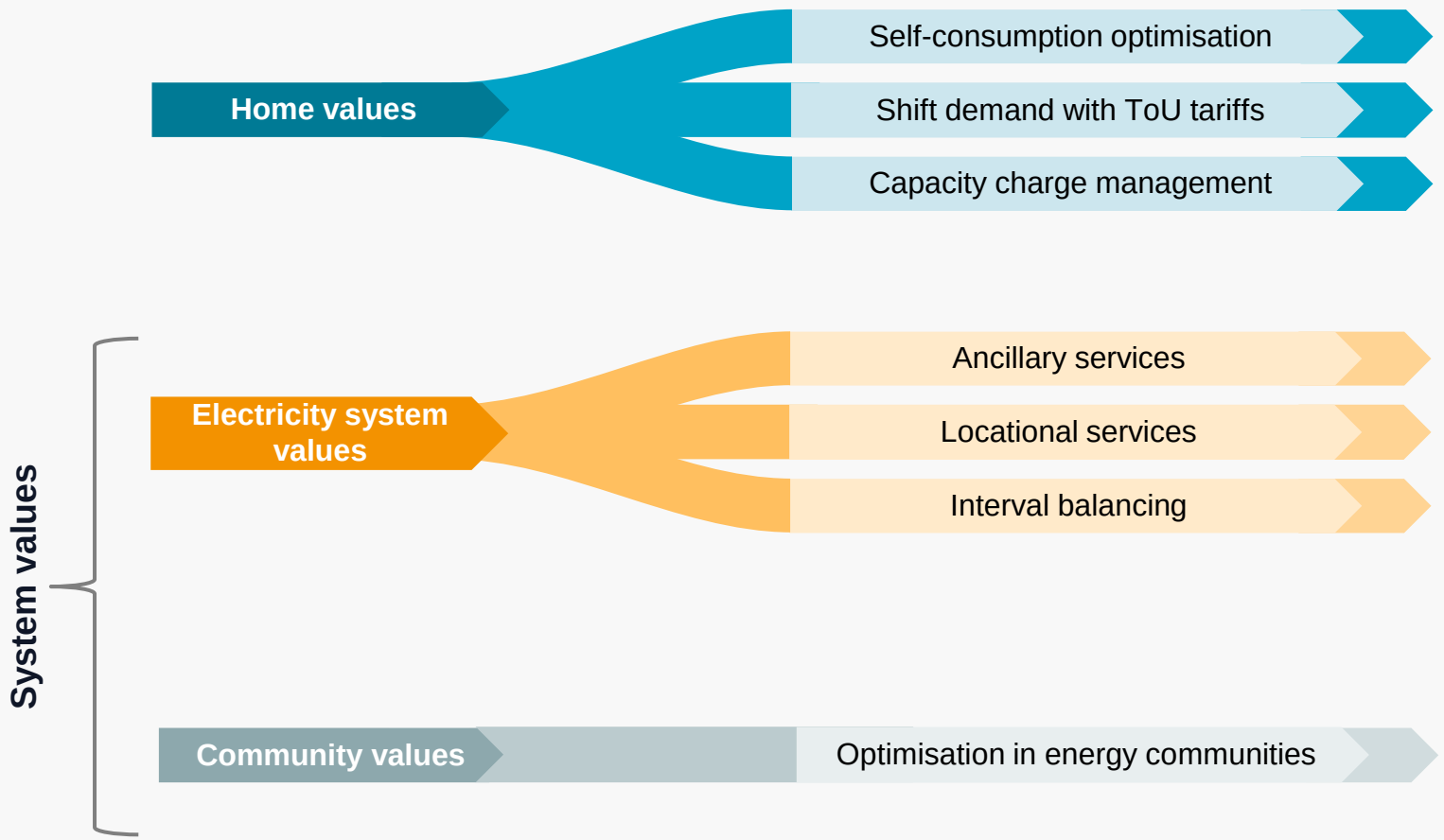
Typical assets involved in a HEMS



Our reports

- ☑ In-depth reports
- ☑ State of the market
- ☑ Viewpoints
- ☑ Customer surveys
- ☑ Databases

Exploring the value of HEM



Direct home values
Primary values for end users, accessible via PV self-consumption or electricity tariff optimisation.

Electricity system values
Grid values that customers can access when shared by companies managing their assets, including TSO ancillary services, local congestion management, DSO services or balancing energy provider's portfolio and retail positions.

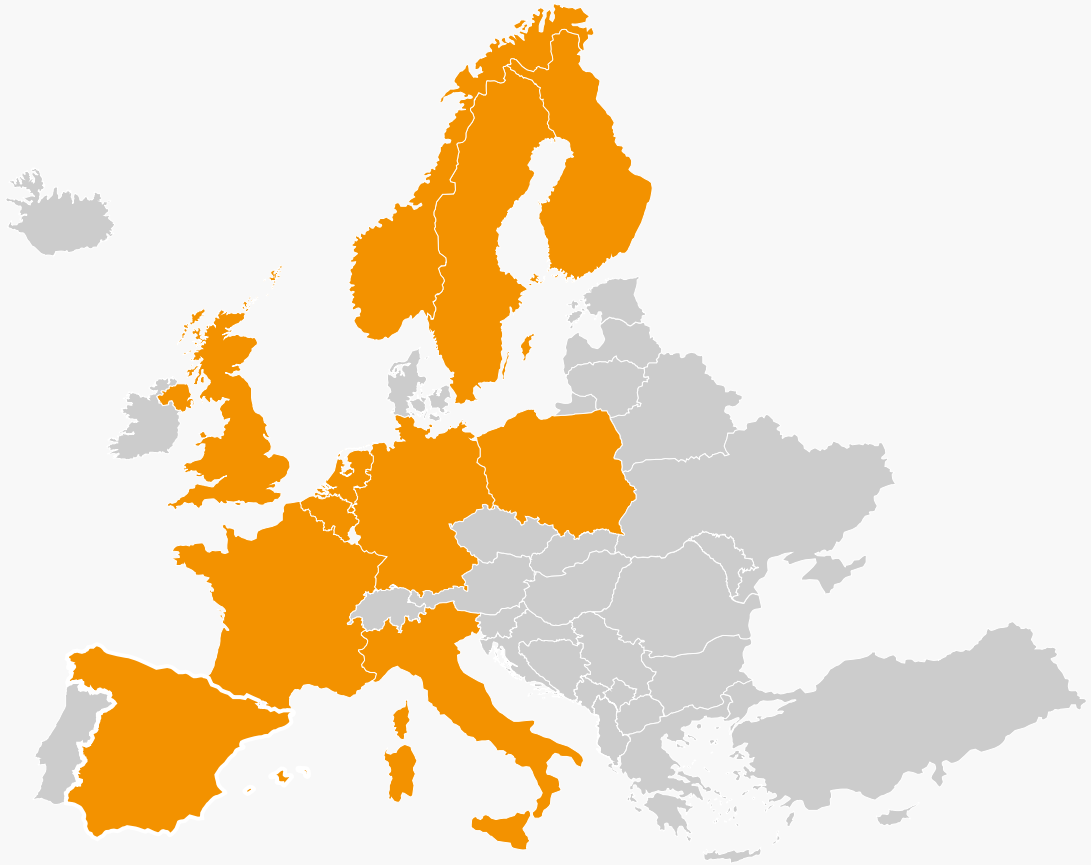
Community values
Optimising the energy supply within a physical or virtual community and enable business models such as Peer-to-Peer (P2P) trading, where customers sell their self-generated PV to each another.

TSO: Transmission System Operator
DSO: Distribution System Operator

*Currently not accessible to residential assets in Europe.

European Markets

HEM and HEM-related electrical assets



and expanding…

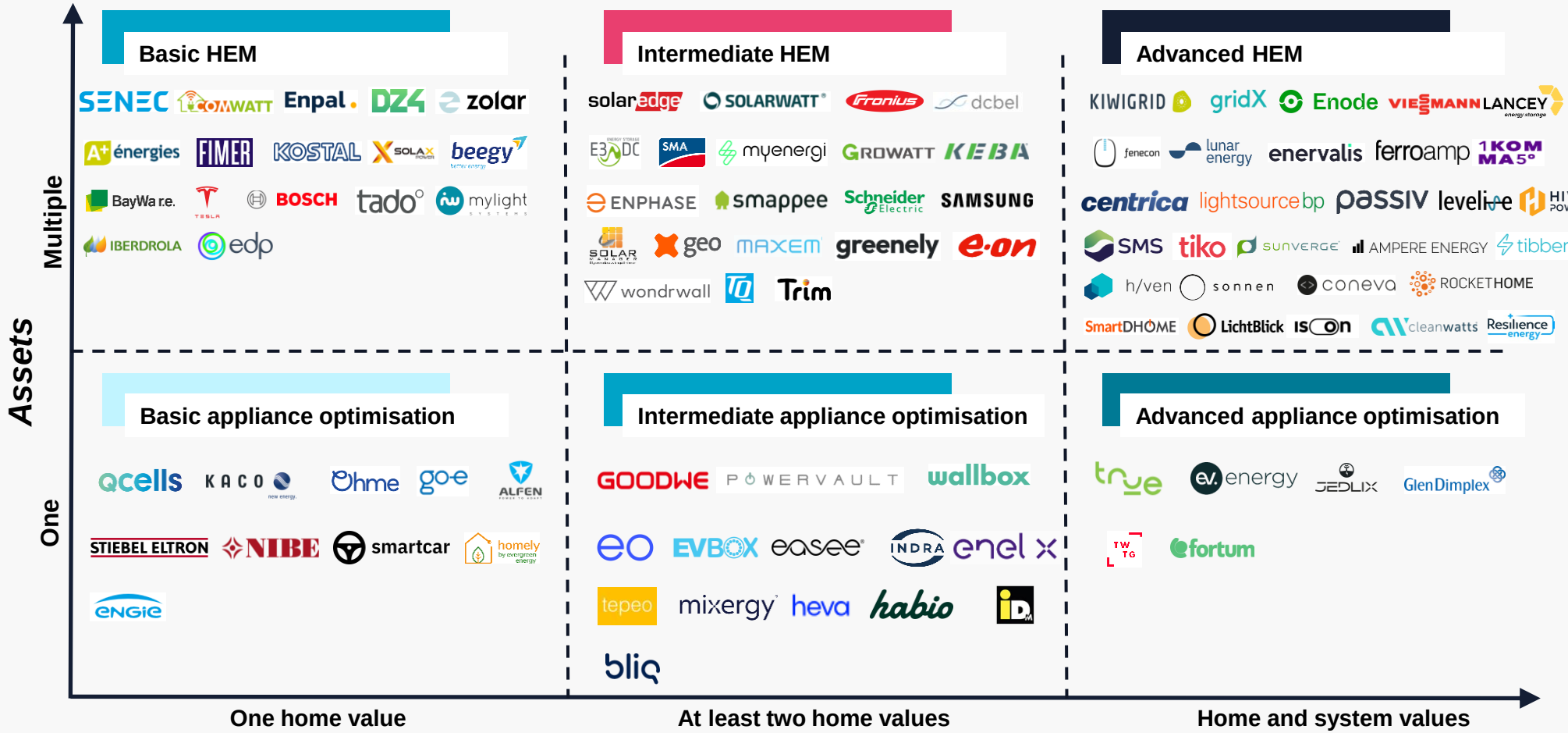
European HEM Players

>70

Actors offering HEMS in Europe

>110

Actors offering HEMS or appliance optimisation systems in Europe

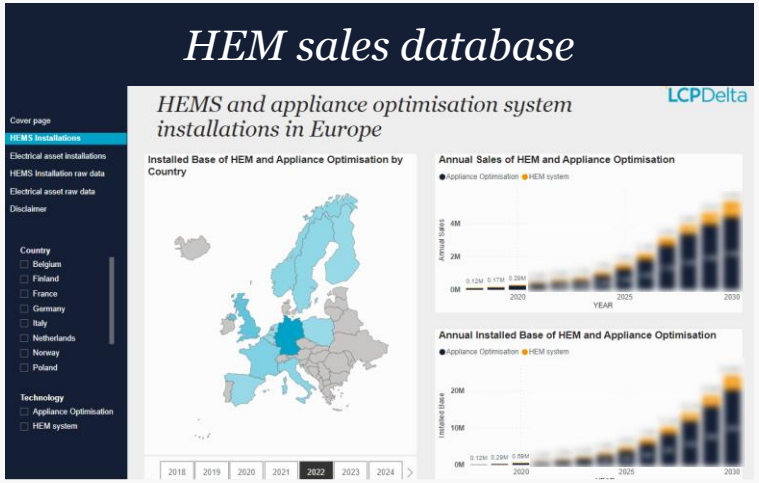


*Non-exhaustive list of major HEM companies in Europe

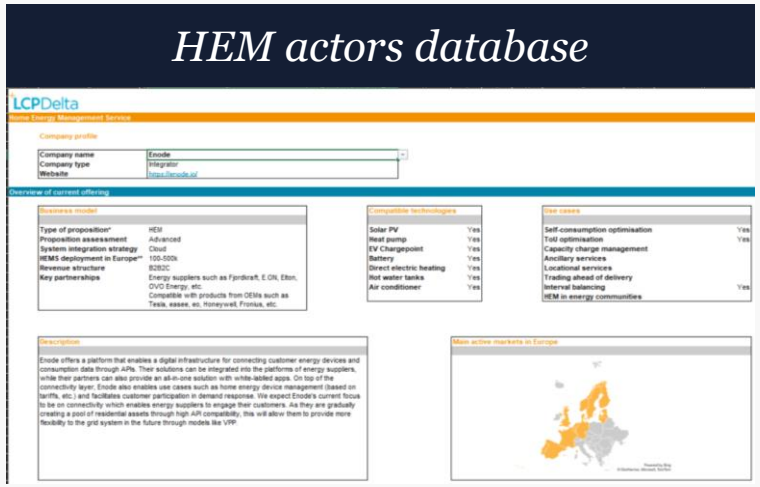
What we cover in our research

Databases

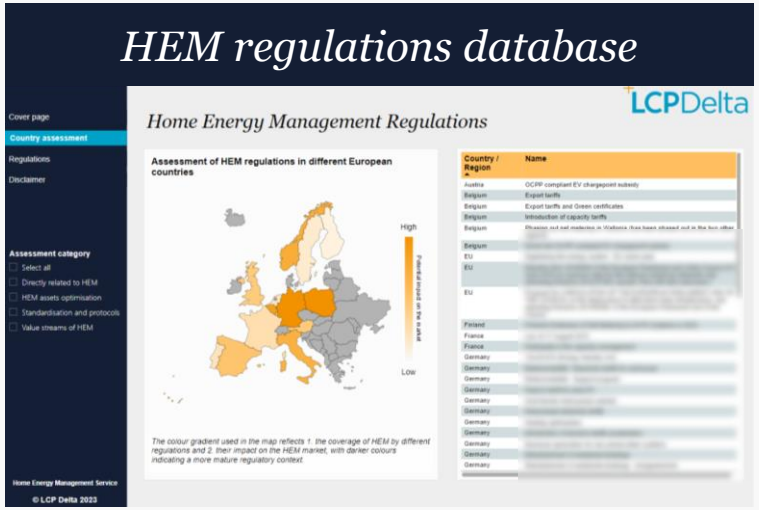
HEM sales database



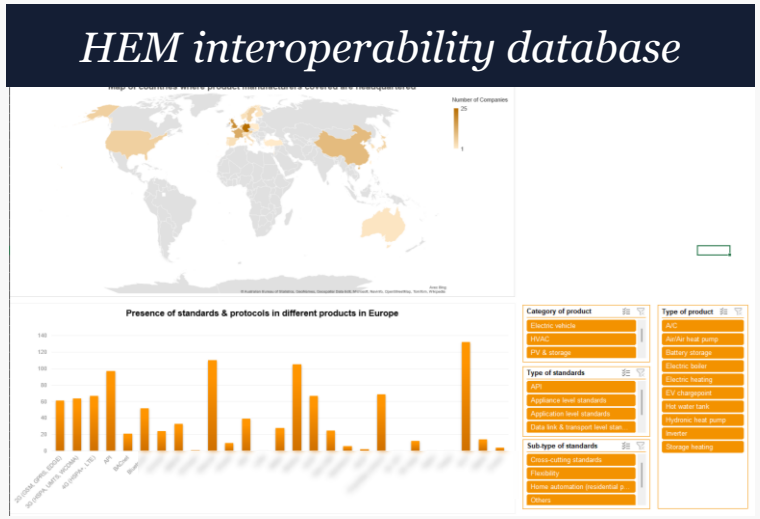
HEM actors database



HEM regulations database



HEM interoperability database



Recently published reports

HEM: EV smart charging

HEM Customer Research 2023

HEM: PV self-consumption optimisation

The role of smart meters in HEM

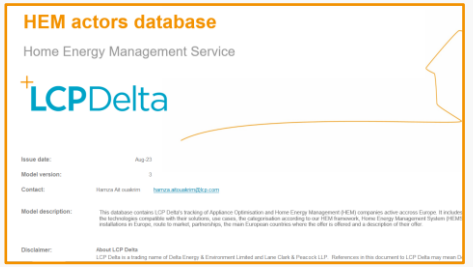
Live research[1]

Matter – A one year summary

Matter – A one year summary

What role will HVACs play in the HEM market?

HEM systems and loads sales database[2]



HEM actors database[2]

Future research

State of the HEM Interoperability update

HEM State of the Market 2024

HEM: the role of inverter companies

HEM regulations database update

Energy suppliers and HEM

Residential battery storage market

[1]To be published in the next few months
[2] Frequently updated

How our research helps your business

The Service provides data, analysis, insights and opinion on how the connected home market is developing, enabling you to understand and capture the best opportunities.

Benefits

- Understand who is really doing what and see who is actually doing Home Energy Management VS those who are not but pretending to
- Be equipped with the best-in-class data to support your decisions
- Challenge your views with some of the best experts about this market in Europe
- Identify competitors and/or partners
- Understand the challenges ahead for those who want to invest in HEM
- Have the confidence that this market is going to be a central point of the energy transition, based on neutral, objective and well researched opinions.

Example clients

- eMobility specialists
- Car OEMs
- Inverter/battery specialists
- HEM specialists
- Energy suppliers
- HVACs
- Electricity OEMs

> *LCP Delta writes reports in a consumer- friendly way, making complicated information simple to understand.*
>
> **Policymaker**

Research highlights

Fundamentals of HEM

Synopsis

The Fundamentals of Home Energy Management (HEM) report explores the HEM ecosystem and its main characteristics. It also presents the LCP Delta HEM framework and analyses the current market status by benchmarking major European HEM players. The main takeaways are:

- A HEMS autonomously monitors, controls and optimises the timing, volume and mix of energy flows within the home, in order to minimise customer's energy costs while meeting customer's preferences (such as comfort, EV use, carbon emission, etc.).
- Advanced HEMSs, while accessing multiple value streams, remain less common than appliance optimisation today.
- HEM providers are evolving towards more advanced models by integrating more assets and expanding use cases while interoperability, technical complexity and customer awareness remain as main hurdles.

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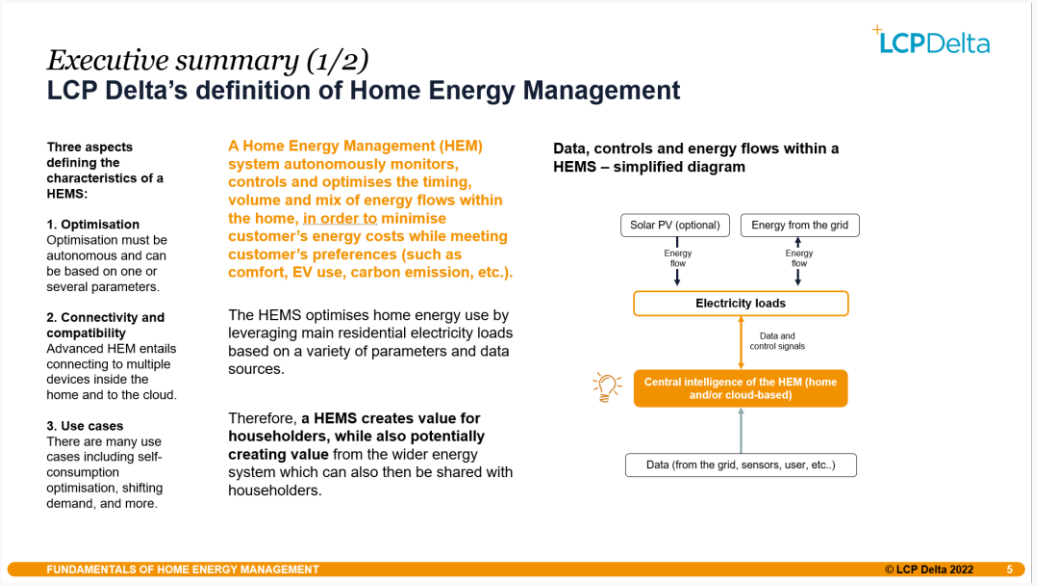
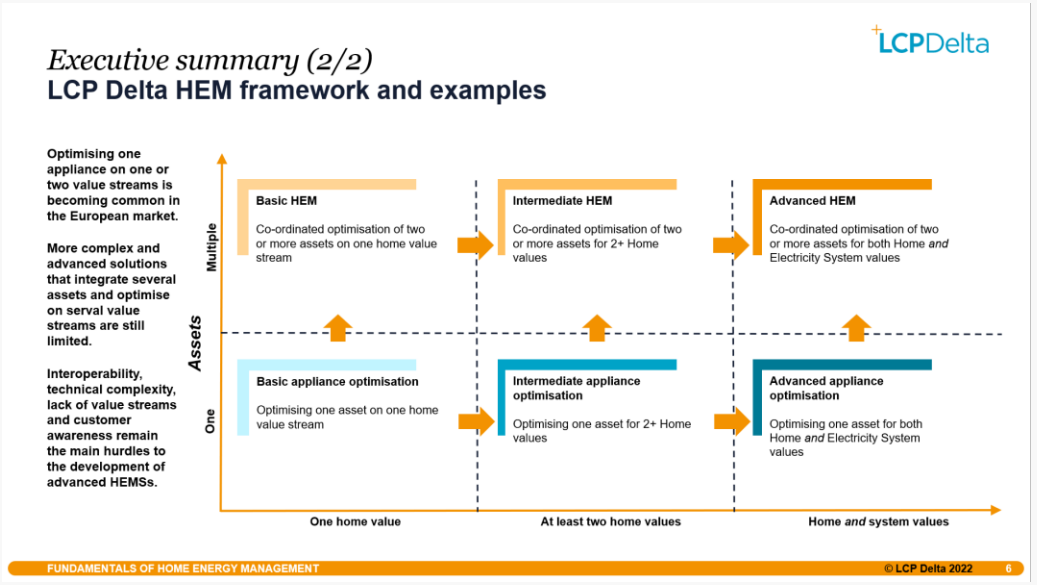


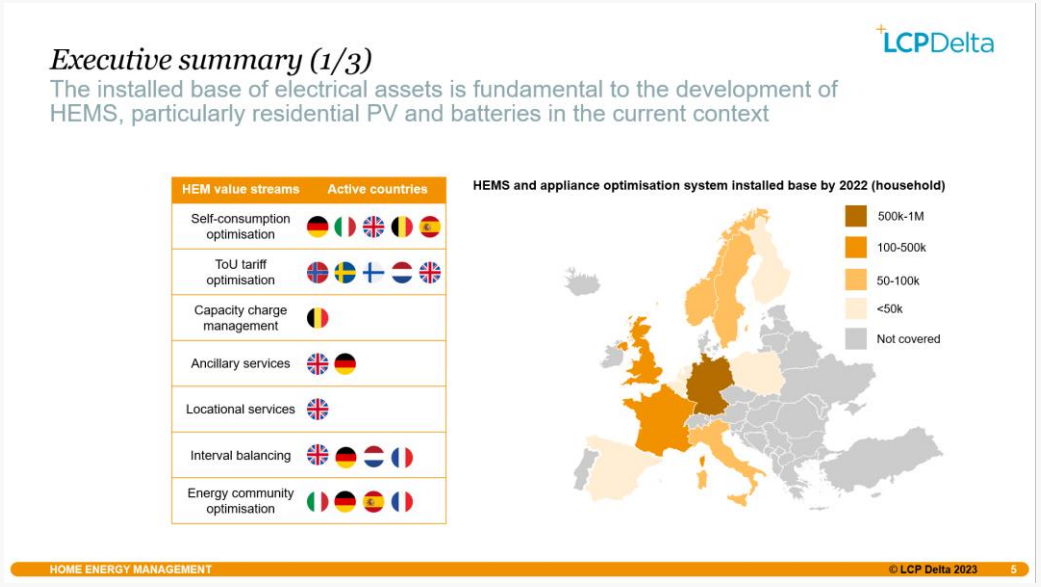


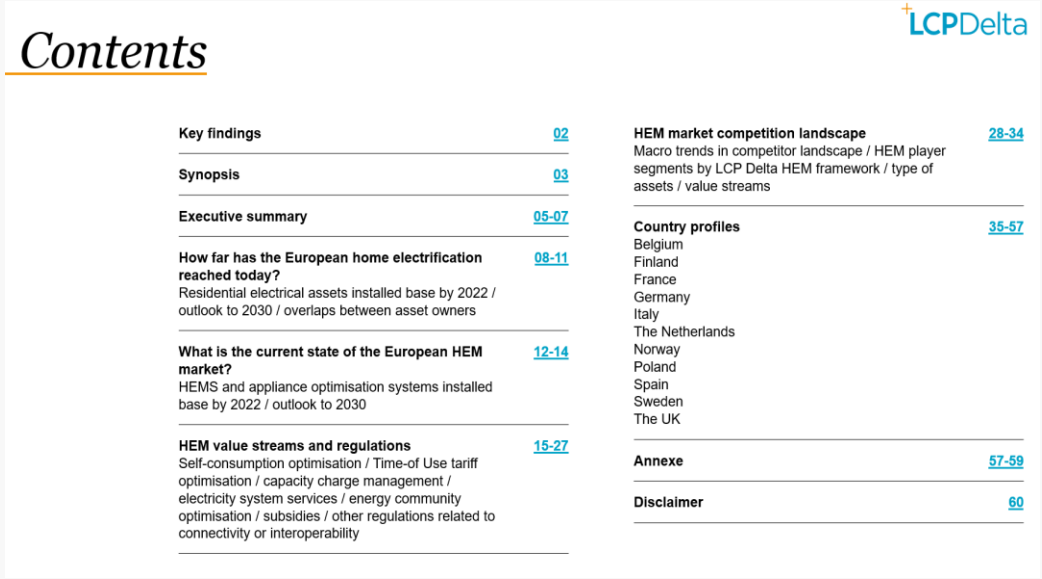
Annual HEM State of the Market

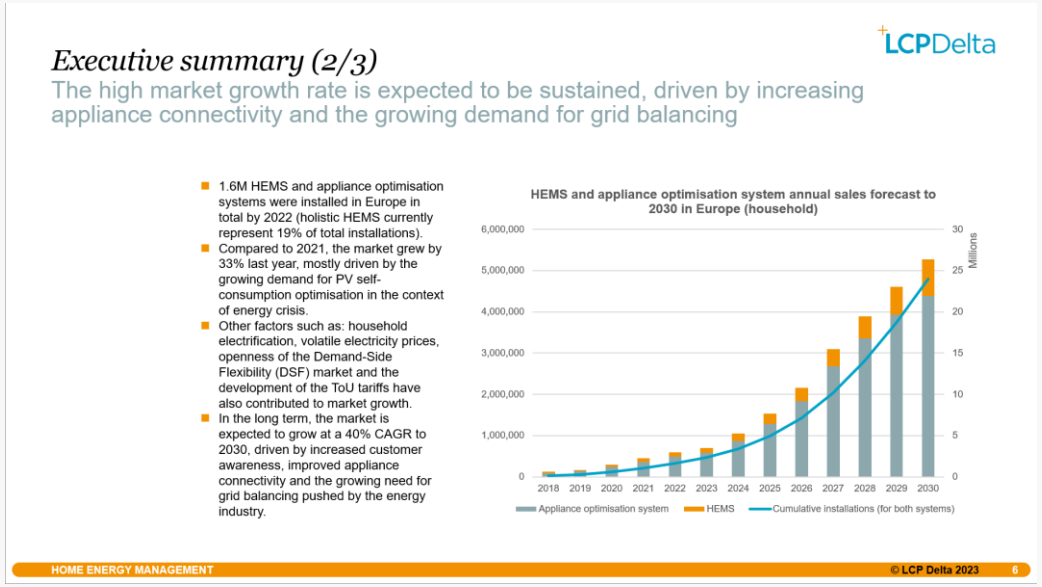
Synopsis

The State of the Home Energy Management Market report (2023) focuses on the current and future development of the HEM market across Europe:

- The report contains an analysis of residential large electrical assets in Europe (including each product's installed base, market trends and a forecast to 2030).
- It summarises the HEM-related use cases, value streams, regulations and provides an assessment of their growth potential over the next five years in each market.
- It also includes a country-by-country (Belgium, Finland, France, Germany, Italy, The Netherlands, Norway, Poland, Spain, Sweden, The UK) analysis highlighting the drivers and barriers to the HEM market and provides HEM solution sales forecasts to 2030.
- Finally, the report includes a competitor landscape based on each HEM company's use cases and covered assets.





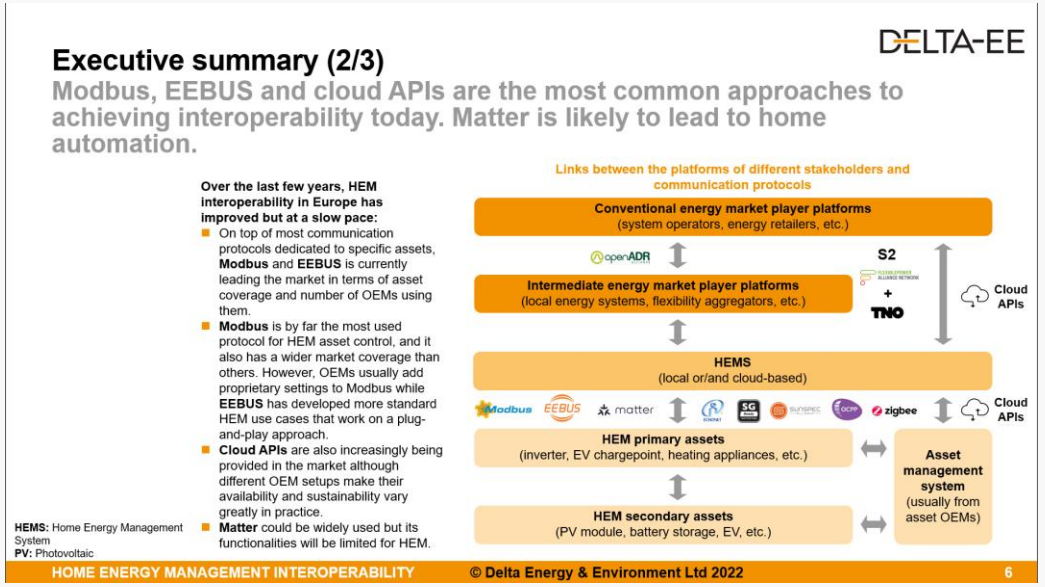


State of HEM interoperability

Synopsis

This report is an update on the state of interoperability of home energy management (HEM) in Europe. It provides a summary of current communication protocols & standards adopted by major HEM assets (HVAC appliances, EV chargepoints, inverters, battery storage, etc.), cloud API development for each asset, interoperability strategies of asset manufacturers, and integration approaches of HEM solution providers.

The report also analyses the benefits that stakeholders across the HEM value chain can gain from interoperability and discusses the possible impact of other important factors (IT giants, regulation, alliances, etc.) on the future HEM interoperability development.



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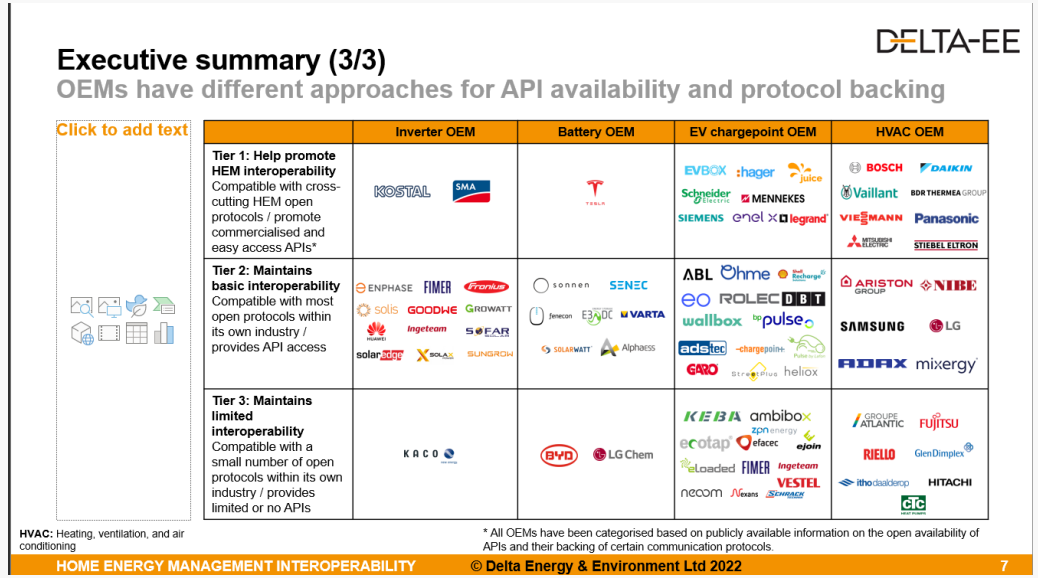


HEM loads competitor landscape

Synopsis

This report summarises the competitor landscape in the European markets for Home Energy Management (HEM) and wider HEM loads (inverters, batteries, EV chargepoints, heat pumps, air conditioners, etc.).

It also covers the installed base and sales forecasts for HEM loads in five key countries (including Germany, France, Italy, the Netherlands and the UK), as well as the main activities of different players in these markets regarding HEM.

We plan to expand the list of countries in future research.

Contents

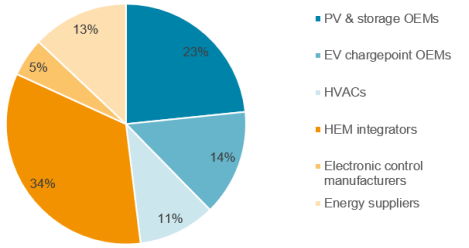
Executive summary (2/3)

Who is innovating in the HEM market?

The types of competitors in the European HEM market are becoming increasingly diverse as more opportunities open up.

- One third of the players offering appliance optimisation or HEM solutions in the market today are HEM integrators. They often offer customers, either directly or through partners, a HEM service package compatible with different types and brands of HEM loads.
- An increasing number of HEM loads OEMs are also developing HEM platforms around their legacy products. However, due to challenges such as interoperability, only a few solutions are currently available to optimise multiple loads.
- Energy suppliers are also active in this market through partnerships with OEMs and HEM integrators.

Proportion of different types of players offering appliance optimisation or HEM in Europe*



*Including 77 appliance optimisation or HEM companies in Europe (find definitions of appliance optimisation and HEM here).

HEM MARKET COMPETITOR LANDSCAPE © Delta Energy & Environment Ltd 2022 6

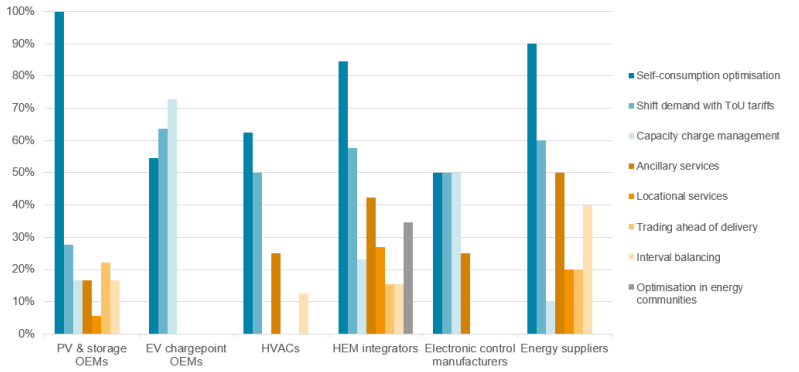
Executive summary (3/3)

Which HEM value streams are being created by these players?

Integrators and energy suppliers are generally involved in broader value streams, covering both home and system use cases.

The availability of HEM value streams is determined by the readiness and openness of different markets.

Proportion of HEM value streams available across all players in the HEM market*



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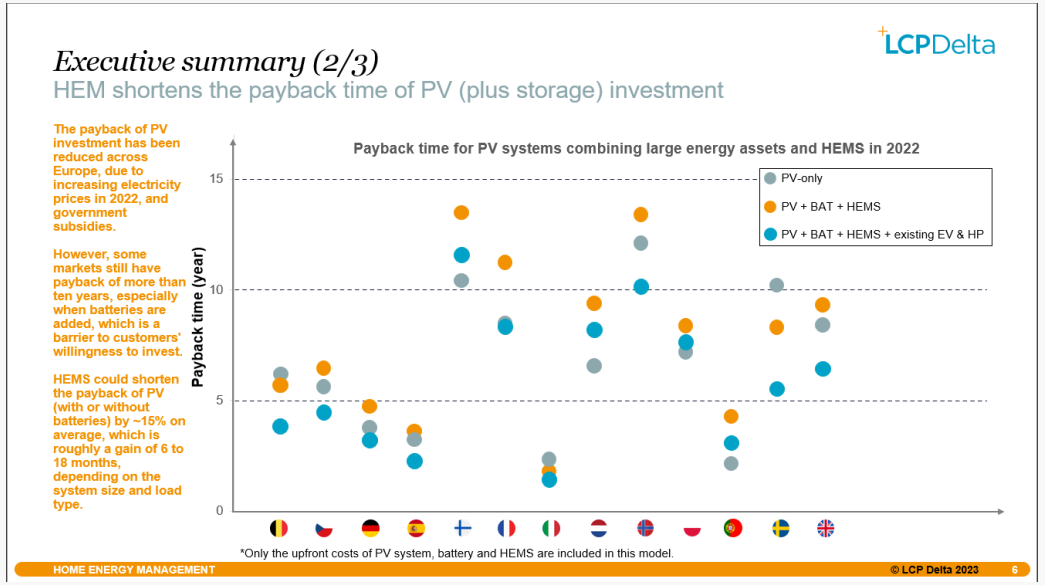
PV self-consumption optimisation

Synopsis

This report provides a summary of the 2022 residential solar PV (<10 kW) and self-consumption market in Europe (including 13 countries: Belgium, Czech Republic, Germany, Spain, Finland, France, Italy, the Netherlands, Norway, Poland, Portugal, Sweden and the United Kingdom).

- The report provides statistics on residential PV annual installations, installed base and projections up to 2030 in the countries covered.
- It also analyses the key trends within the residential PV market and calculates the payback times for PV investments in different countries.
- Finally, the report analyses how HEMS can optimise the use of different household energy assets in order to improve PV self-consumption.



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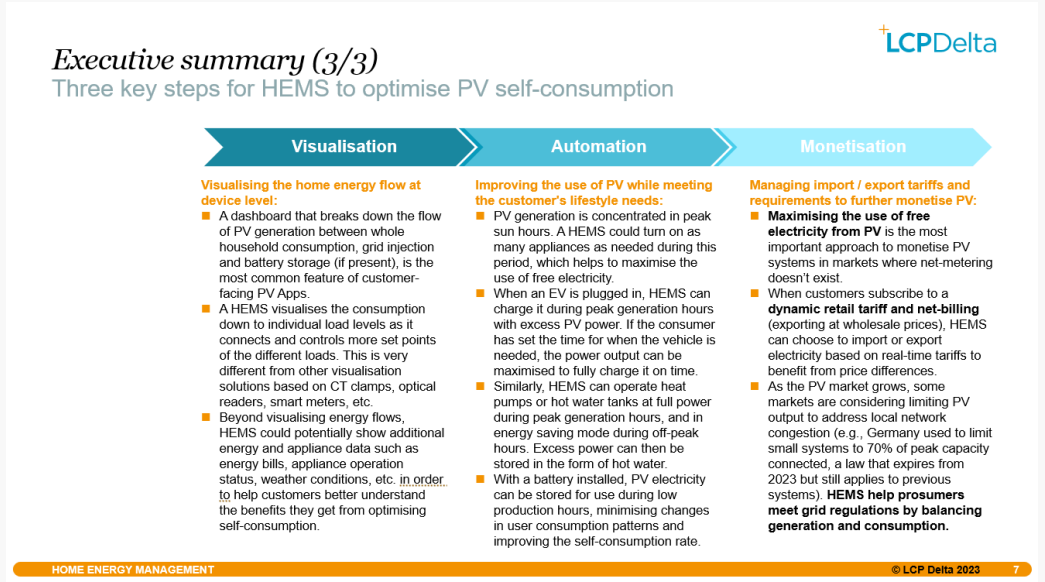

Contact us

Leon Gielen
Head of Business Development Asia
+31 (0) 617935006
leon.gielen@lcp.com

About LCP Delta

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Where this report contains projections, these are based on assumptions that are subject to uncertainties and contingencies. Because of the subjective judgements and inherent uncertainties of projections, and because events frequently do not occur as expected, there can be no assurance that the projections contained in this report will be realised and actual events may be difference from projected results. The projections supplied are not to be regarded as firm predictions of the future, but rather as illustrations of what might happen. Parties are advised to base their actions on an awareness of the range of such projections, and to note that the range necessarily broadens in the latter years of the projections.