

USCALE eMobility Focus Studies

Data instead of Opinions

Studies on the entire Ecosystem

USCALE EMOBILITY FOCUS STUDIES

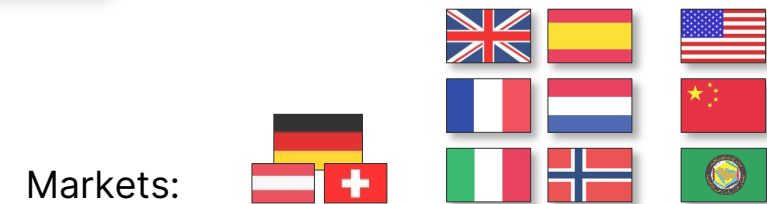
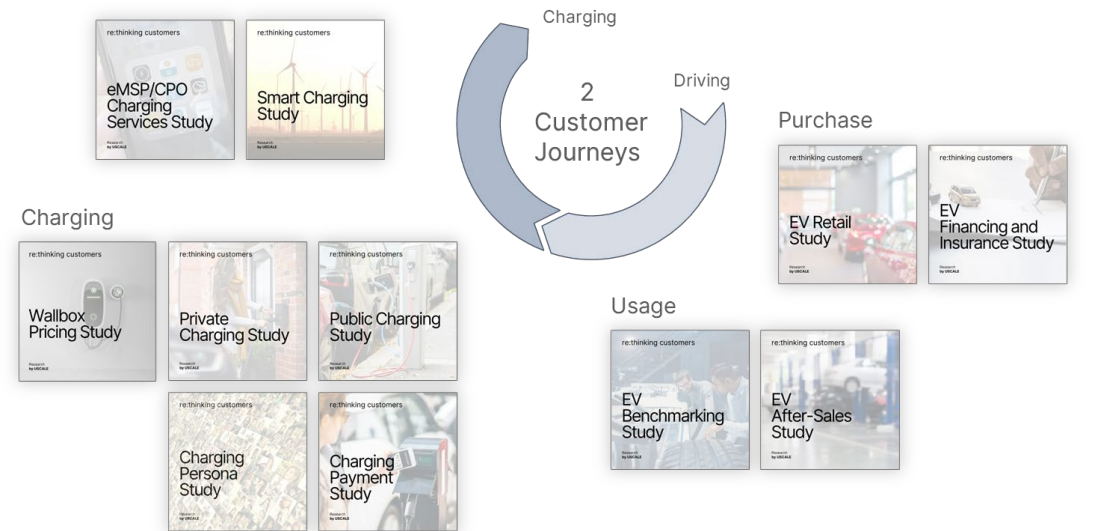
Data on all touchpoints of the customer journey „driving" and "charging".

Charging offers potential for numerous offers and services.

Our study portfolio therefore covers all touchpoints of the e-mobile customer journey and is being successively expanded.

Almost all studies have been conducted for several years. The focus is on the DACH market. Other markets are available for selected studies.

USCALE study portfolio:



Monitoring the Ramp-up

USCALE EMOBILITY FOCUS STUDIES

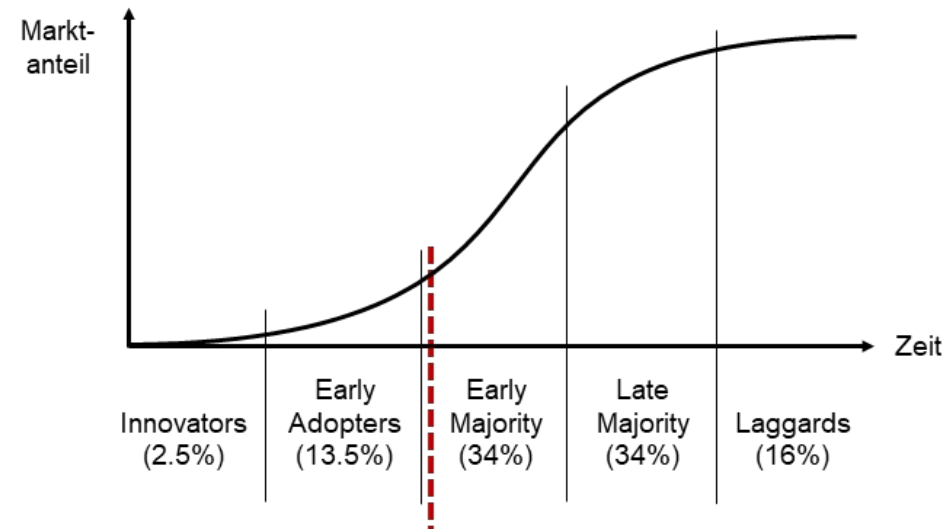
Regular survey of focus studies.

The innovators and early adopters are now followed by the early majority. They have different motives, expectations and problems.

At the same time, the ecosystem is developing rapidly and thus influencing user behavior.

This is why we conduct most focus studies annually. In this way, changes become visible quickly.

New user segments in the ramp-up phase:

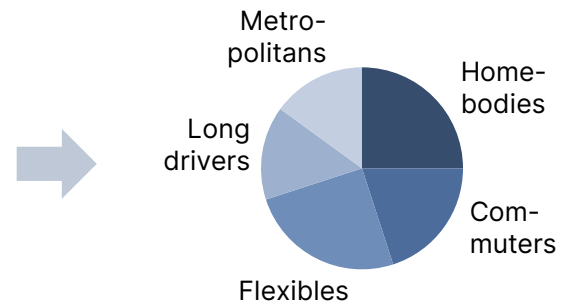
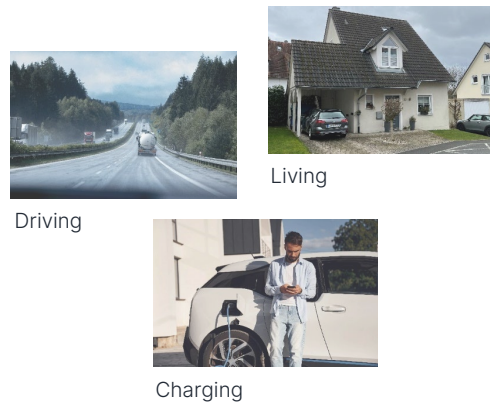


Total market share of BEVs in new registrations in Germany in 2024

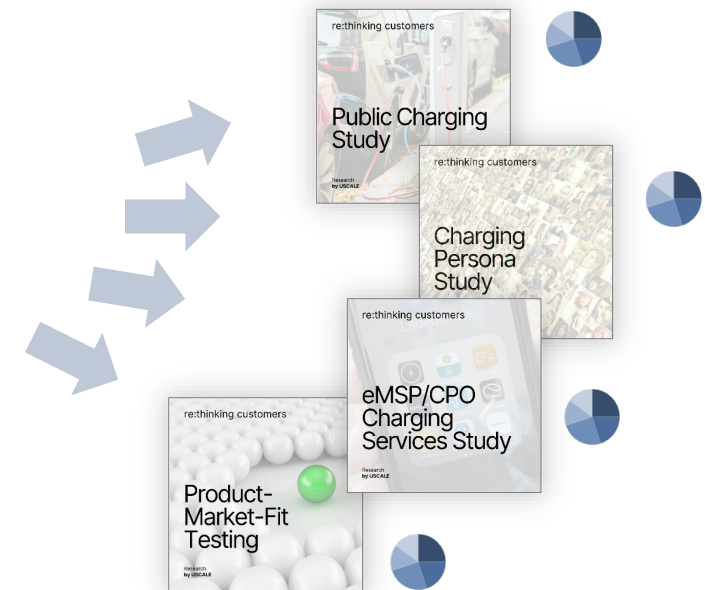
Charge Profiles as a connecting Element

All USCALE charging studies include a segmentation according to so-called charging profiles.

1. Initial segmentation of 5 charging profiles based on 7 questions about driving, living and charging:



2. Transfer of the segmentation to all studies on Golden Questions:



USCALE eMobility Insights Deliverables

USCALE EMOBILITY FOCUS STUDIES

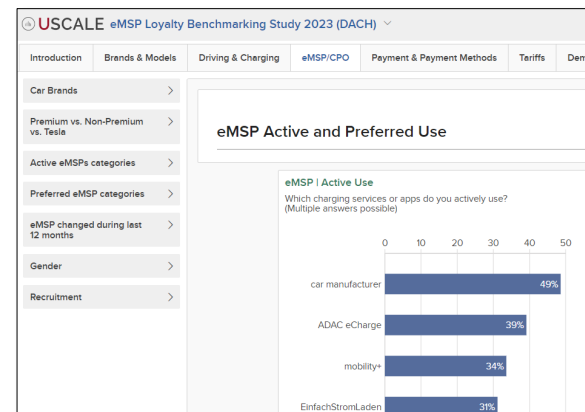
ppt report, dashboard, analysis tool and multi-table

The breadth and depth of the studies are considerable. That is why we offer a dashboard and a tool to analyse and create multi-tables with data splits according to customer requirements in addition to a detailed ppt report.

pdf-Report:



Dashboard: *



* The dashboard can be easily set up for all relevant employees.

Tables:**

Example presentations

List of Tables	
26	Charging location
27	Charging frequency
28	Charging occasion
29	Charging type
30	Charging abroad
31	Foreign country
32	Foreign country ev
33	Active eMSPs
34	Active eMSPs cate
35	Preferred eMSP
36	Preferred eMSP ca
37	Preferred eMSP re

Active eMSPs	Which charging services or apps do you actively use? (Multiple answers possible)	All	Premium		
			Premium	Non-Premium	Tesla
611					
612	ADAC eCharge	39%	37%	41%	36%
613	AirElectric	7%	8%	7%	7%
614	BeCharge	3%	6%	3%	3%
615	ChargEV	4%	7%	4%	4%
616	Chargemap	9%	11%	9%	10%
617	ChargePoint	5%	6%	5%	6%
618	ChargePrice	6%	8%	6%	7%
619	eCharge+ (innogy)	5%	6%	5%	4%
620	Maingau / EinfachStromLaden	31%	21%	34%	31%

** The tables split the results according to any variable.

EV Retail Benchmarking Study

Initial situation:

- After the early adopters, the early majority segment, which has higher expectations, is now switching to EVs.
- The purchasing process for EVs differs from that of a combustion car in many respects. Retailers must therefore adapt to the changed requirements in order to grow with the market.

Questions:

- What information do EV buyers need?
- What expectations do they have of websites, car dealers, test drives, configurators and processes?
- What are the strengths and weaknesses of the different brands?
- What does this mean for the sales organizations of manufacturers and importers and their marketing? How do websites, processes and dealer training need to be adapted?
- What are the differences between target groups?



EV Retail Benchmarking Study



Key data

- Survey: May-June 24, online
- Sample: N = 4,445 BEV, of which:
N = 2,586 BEV shoppers
N = 1,627 +232 BEV owners
- Markets: 

Methodical approach

- BEV buyers and young owners are asked about their experiences throughout the entire purchase funnel (information gathering, purchase process, handover and follow-up).
- Additionally, N = 409 ICE buyers and shoppers are surveyed for reference.

Added value

- KPIs for relevant retail processes
- Own brand performance compared to competitors (benchmarking)
- Requirements for the design and optimization of brand websites, sales processes (consulting, test drive, contracts, etc.)
- Input for dealer training

Study Content

(for the complete list: [HERE](#))

Respondents

- Demographic characteristics (including gender, age, place of residence)
- Vehicle use (e.g. make, model, age, mileage, company car)

Segmentation

- Splits by vehicle brand / premium vs. non-premium, private vs. company cars

Orientation and Information Phase

- Brand loyalty, interest in used and Chinese brands
- Motivation to switch to eMobility, decision criteria for brand and model
- Information and advice needs vs. competence of providers

Purchase and post-purchase Phase (Satisfaction, Needs)

- Purchase funnel: brand-specific interest (cross-shopping, brand loyalty)
- Manufacturer websites (lead management in multi-channel retail)
- Sales advice, test drives, test loading, configuration, etc.
- Financing, insurance, charging contract, subsidy
- Vehicle handover and follow-up
- NPS brand dealers and assessments for all process steps

EV Satisfaction Study

Initial situation:

- Compared to combustion engines, which have been optimized for over 100 years, battery electric vehicles are still in their infancy.
- To survive the tough competition, manufacturers and importers must quickly adapt their vehicle concepts to the new target group.

Questions:

- What new use cases result from the electric drive? What are the resulting requirements?
- Which e-specific features are particularly relevant and how do they need to be designed?
- How do EV drivers rate the concepts? What are the strengths and weaknesses of the various brands?
- What recommendations do they have for the various manufacturers? What can manufacturers learn from their competition?



EV Satisfaction Study



Key data

- Survey: May-July 24, online
- Sample: N = 4.966 (DACH)
N = ca. 2000 (FR)
N = ca. 1600 (UK)
- Markets: 

Methodical approach

- The study asks about the use of EV-specific features.
- EV drivers report on their habits, problems with use, their assessment of the maturity of the concepts and give recommendations for further development.

Added value

- Satisfaction and maturity of current e-vehicle-specific concepts
- Ratings of all competitors' concepts
- Need for action for specifications for future model years and vehicle generations

Study Content

(for the complete list: [HERE](#))

Respondents

- Demographic characteristics (including gender, age, place of residence, income)
- Vehicle use (e.g. make, model, age, mileage, company car)

Segmentation

- Splits by vehicle brand / premium vs. non-premium, private vs. company cars

Driving-related Features (Usage, Problems, Concept Maturity)

- Driving: Range, ECO mode, recuperation, driving and functional noises
- Displays: SoC, remaining range, energy flow, other displays, etc.
- Navigation: features used, route and charge planning, charging station search
- Charging: Charging power, charging settings, charging management (start, monitoring, stop), thermal management, charging problems, charging cable storage, charging port position
- Heating, air conditioning, pre-conditioning

Remote/Connect App (Usage, Problems, Concept Maturity)

- Installation, registration, updates
- Functions used, reasons for non-use, operating and other problems

EV After-Sales Study

Initial situation:

- EVs require fewer workshop services. At the same time, they require software updates, EV drivers have more hotline needs and the cars need to be integrated into a new ecosystem.
- Manufacturers and workshops must therefore not only adapt to new technology, but also to the changing expectations of users.

Questions:

- What experiences do EV drivers have with the garage? How do the expectations of EV drivers differ from those of combustion engine drivers?
- How do the after-sales workshops and processes of the various brands perform?
- Where is there a particular need for action for which after-sales organizations of manufacturers and importers and their dealers?



EV After-Sales Study



Key data

- Survey: June / July 24, online
- Sample: N = 1,828 BEV drivers
N = 410 ICE drivers for reference
- Markets: 

Methodical approach

- EV owners are asked about their experiences during the usage phase:
 - Repair requirements and workshop visits
 - Battery checks
 - Service hotline
 - Software updates
 - Use Digital

Added value

- KPIs for after-sales processes
- Benchmarking OEM brand performance against competitors
- Definition of requirements for after-sales processes
- Input for dealer training

Study Content

(for the complete list: [HERE](#))

Respondents

- Demographic characteristics (including gender, age, place of residence)
- Vehicle use (e.g. make, model, age, mileage, company car)

Segmentation

- Vehicle brands
- Service preferences

Utilization phase

- Service and repair requirements, workshop visits
- Service processes: preferred contact and processing
- Experience with software updates (OTA)
- Experience with the service hotline
- Use of digital services, attitude towards data protection
- Relevance of battery checks

After-sales service satisfaction

- NPS brand workshop
- Evaluation of update processes, service hotline

EV Finance Study

Initial situation:

- Electric cars are more than just a new drive system. They are changing user behavior, sales channels, service requirements and much more.
- Providers of car loans, leasing and insurance must also adapt to the special features of electromobility.


Questions:

- What type of financing did EV buyers prefer?
- What experiences do EV buyers have during the process? What expectations do they have and how do they differ from buyers of combustion cars?
- Are there differences between different target groups?



EV Finance Study

Key data

- Survey: Dec 23, online
- Sample: N = 1,699 EV shoppers, EV driver
N = 743 ICE / PHEV for reference
- Market: 

Methodical approach

- Shoppers and travelers are asked about:
 - Information and purchasing process
 - selected financing or insurance
 - Reasons for the decision
 - Satisfaction and interest in further offers

Added value

- Fundamentals of eMobility for captive and non-captive automotive banks, leasing providers and insurance companies
- Basis for the development or revision of own offers & services.

Study Content

(for the complete list: [HERE](#))

Respondents

- Demographic characteristics (including gender, age, place of residence)
- Vehicle (e.g. make, year of purchase, private/company car)

Segmentation

- Type of financing (cash purchase, financing, private leasing, business leasing)
- Drive (ICE vs. PHEV vs. BEV)

Financing / Leasing

- Information needs, information sources, satisfaction with the information process
- Place of purchase eAuto, place of conclusion of financing/leasing, selected bank
- Chosen type of purchase (cash purchase/financing/leasing), reasons for the choice and reasons against other options
- Selected partner, selected service packages, satisfaction with Fin. partner

Insurance

- Information needs, information sources, satisfaction with information sources
- Chosen insurance packages, satisfaction with insurance and chosen partner
- Interest in additional insurance packages



Fleet Charging Study

Initial situation:

- Electrification of fleets offers great potential for the ramp-up of e-mobility on the one hand and for the sustainability strategy of companies on the other.
- However, the electrification of fleets is more complicated.

Questions:


- Where do companies in Germany stand? How do they feel about the electrification of their fleets? What goals are they pursuing?
- Which use cases are relevant? What solutions are they looking for for which use cases?
- Which external partners are they working with?
- Which interfaces do they want in the system?
- Who makes decisions in the company? What criteria do they use to decide which provider to work with?
- What are the differences between the types of fleets?



Fleet Charging Study



Key data

- Survey: Aug 24, online
- Sample: N = 630 Employees of companies that make decisions about the company fleet, either alone or with others
 - thereof: N = 212 w/o intention to electrify
 - N = 418 with intention to electrify
- Market: 

Methodical approach

- In addition to fleet managers, other important players such as managing directors, facility managers, energy managers, HR, etc. were also interviewed.
- 360° view of fleet charging.

Added value

- Suppliers of charging technology and solutions learn about the pains and needs of the target group in various phases of implementation.
- On this basis, they can optimise their own quotations and increase sales.

Study Content

(for the complete list: [HERE](#))

About the company / Segmentation Characteristics

- Industry, number of employees, situation at the location, role of the respondents
- fleet management: Objectives, software, size of the fleet, types of vehicles and purposes, acceptance networks

Status of Electrification

- (w/o intention to electrify: Reasons for non-electrification)
- electrification status, challenges, electrification goals
- within the company: Project participants, decision-makers-involving external partners: Cooperation with several partners or one-stop shop, reasons

Solutions for various Use-Cases

- On the company premises: Planned solution, criteria for selection of a solution, criteria for selecting the solution partner, purchase locations, operation/charging management, data exchange between CPMS and fleet management system, selected providers
- Employee charging, guest charging: Requirements
- At public: eMSPs/CPOs used, charging at client premises
- At home: Requirements, responsibility for procurement, billing
- Satisfaction with all use-cases, reasons for dissatisfaction

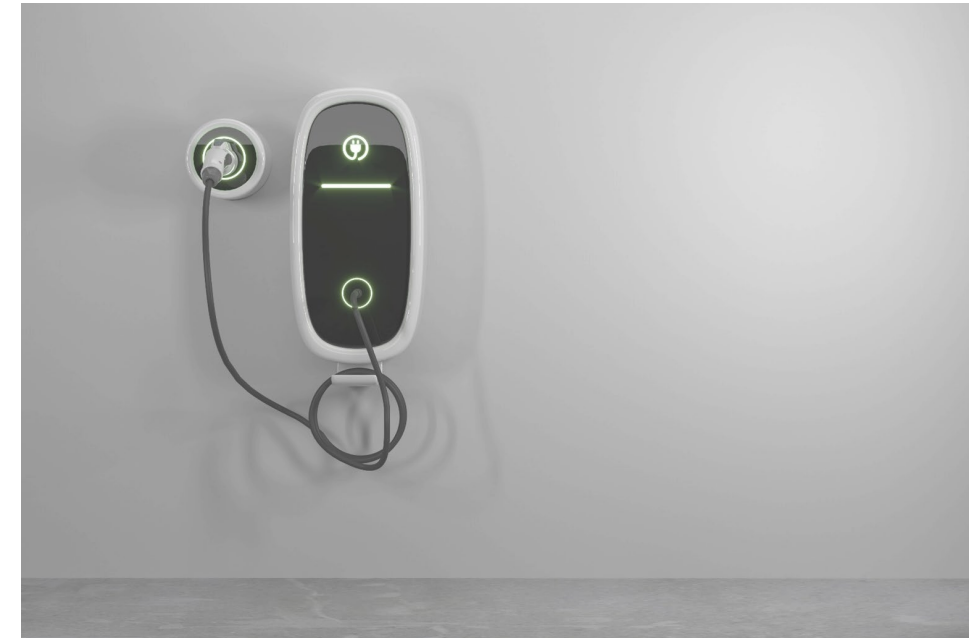
Wallbox Pricing Study

Initial situation:

- Competition in the wallbox market is fierce. Price pressure is high and will continue to rise. This is turning wall chargers into something of a commodity.
- To be able to compete, providers need detailed information on which features are important, how important these features are and how they contribute to the purchase decision.


Questions:

- How important are various wall charger features for the overall attractiveness of an offer?
- What are the relative preferences of the different feature types?
- How does the inclusion or omission of a feature affect the take rate?
- What differences are there between different target groups?



Wallbox Pricing Study

Key data

- Survey: April 24, online
- Sample: N = 1,011 BEV home chargers
- Market: 

Methodical approach

- The study uses the Adaptive Choice Based Conjoint method (ACBC).
- A large number of different configurations are presented to the interviewees. The selection is narrowed down step by step in several phases.
- The result is individual utility values for all equipment features.

Added value

- The presentation of the results shows the importance and relative preference of all the characteristics surveyed.
- A simulation tool enables subscribers to the study to determine market shares for their "own" wallbox configurations.

Study Content

(complete list available as of 06/24)

Respondents / Segmentation

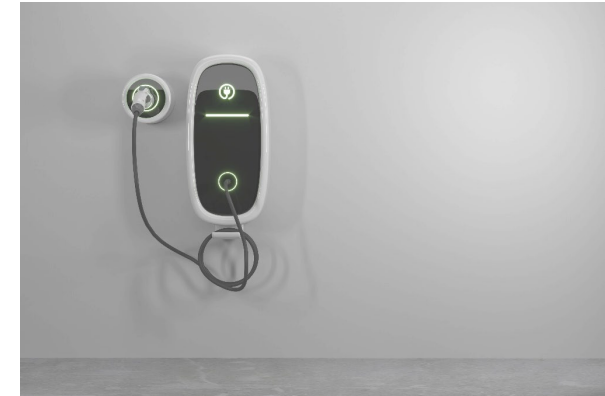
- Demographic characteristics (e.g. age, gender, income)
- Housing situation (size of residence, EFH/MFH) and vehicle brand
- Segment: Innovators (surveyed via social media) vs. early adopters (access panel)

Charging and Charge Technology at Home

- Charging locations, charging frequency, charging occasions
- Charging technology used (wallbox manufacturer, PV system, battery storage, energy management)
- Purchase location for wall charger, preference
- Decisive buying aspects for wall chargers beyond the wall charger equipment (quality, test reports, service hotline, everything from a single source, etc.)

Requested Attributes


- Wallbox charging power, PV surplus charging, app control, manufacturer's brand, time-controlled charging, type/design, energy management system, bidirectional charging capability, cable attached, electricity meter, authorization/blocking, multi-user setup/management, load management, selectable wallbox color, number of charging points
- Price



Charging Cable Study



Key data

- Survey: April 23, online
- Sample: N = 516, of which:
N = 260 BEV drivers
N = 256 PHEV drivers
- Market: 

Methodical approach

- The focus is on the use of charging cables and satisfaction with the products and brands used.
- A second focus is on the purchasing process, online and print media used, social media channels subscribed to and the relevance of third-party recommendations such as bloggers and influencers.

Added value

- Target group: Product management, marketing of manufacturers and suppliers of charging cables, sales partners.
- Input for addressing target groups in marketing and sales

Study Content

(for the complete list: [HERE](#))

Respondents / Segmentation

- Demographic characteristics (including gender, age, number and age of children, place of residence, housing conditions, net household income)
- Vehicle (make, model, mileage), company car, etc. PHEV: Proportion of electric journeys

Charging and Usage of Charging Cable

- Charging behavior: Charging locations, occasions, frequencies, AC charging power, battery capacity, charging technology at home, reasons for 220V charging at home, charging at vacation destination.
- Charging cables used, reasons for using multiple charging cables, own cable brand
- Brand awareness, carrying the cables in the car
- Worries and "annoying factors" when using cable
- Overall satisfaction, Net Promotor Scores (NPS)

Purchase Process and Media Use

- Purchase situation (with or w/o car), purchase locations, relevance of recommendations
- Decisive purchasing aspects, desired functionality, preferred cable type/length
- Social media channels used, channels subscribed to,
- Online magazines read, print magazines, EV newsletters read, EV communities used/followed, bloggers and influencers, preferred social media content

Private Charging Study

Initial situation:

- While charging at home is and is likely to remain the most important charging location for EV drivers, the number of providers on the market is increasing.
- This increases the pressure on manufacturers and importers to stand out from the competition with attractive and tailored offers and to withstand the pressure to consolidate.
- For private charging, there is a lot of potential for providers to offer new products and services beyond a wall charger.

Questions:

- How do EV drivers charge today?
- What information are buyers of private charging solutions looking for? Where do they buy or want to buy?
- Are there differences between the target groups?

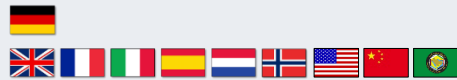


Private Charging Study

Key data

- Survey: Aug 24, online
- Sample: N = 1,223, of which:
(DACH) N = 1,002 EFH residents
N = 221 MFH residents

– Markets:



Methodical approach

- The study provides a detailed survey of the target group's driving and charging habits.
- The focus is on what charging technology EV drivers have at home and what they - now with experience - recommend to others.

Added value

- Providers learn which information they use to reach which target group.
- The results show which criteria are decisive for purchasing & which offers provide the greatest sales opportunity.

Study Content

(for the complete list: [HERE](#))

Respondents / Segmentation

- Demographic characteristics (e.g. age, gender, income)
- Housing situation (size of residence, EFH/MFH, ownership structure, parking space)
- Vehicle usage (e.g. make, model, mileage, company car, range, AC/DC charging capacity)

Charging Technology at Home

- Purchase process: information sources, purchase locations, satisfaction with information, purchase, implementation and operation phases
- Decisive purchasing criteria
- Charging technology used (wall charger / type, wall charger manufacturer, PV system, battery storage, energy management, etc.)

Charging Behavior at Home

- Charging frequency, charged energy shares, attractiveness, relevance of charging locations, charging occasions, charging types
- Charging problems, satisfaction with private charging solution (NPS, problem types), recommendation to manufacturer, change requests in retrospect
- Charging contracts at home (change as part of e-car purchase)
- Product-Market-Fit Bidirectional charging



Public Charging Study

Initial situation:

- The growing market share of EVs is increasing the demand for public charging infrastructure and the expectations placed on providers.
- To develop and set up the right charging offers, providers in the market need to know the charging behavior and wishes of users.
- An important role is played by employers and retailers who are not yet exploiting their full potential.

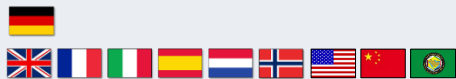
Questions:

- How and where do EV drivers charge today? What criteria do EV drivers use to decide where to charge?
- Which use cases for (semi-)public charging are particularly relevant and what is important?
- What problems do charging customers have today? What needs do they see?
- Are there differences between the target groups?



Public Charging Study

Key data

- Survey: Aug 24, online
- Sample: N = 1.756 charge@public (DE)
N = 1.033 charge@retail
N = 1.050 charge@work
- Markets: 

Methodical approach

- Development of user stories for the 5 most relevant (semi-)public charging use cases (roadside, in-town at the charging hub, on route, employer, retail)
- Goal: Who is charging where and why?

Added value

- In-depth understanding of the charging behavior of different user groups
- Improvement of charging offers in product management

Study Content

(for the complete list: [HERE](#))

Respondents / Segmentation

- Demographic characteristics (e.g. age, place of residence, income)
- Vehicle use (e.g. make, model, mileage, company car, range)

Charging Behavior in Public Spaces

- Charging frequency, charged energy shares, attractiveness, relevance of charging locations: AC in urban areas, charging hubs in urban areas, on the road, work, retail
- Charging occasions, charging types, occupancy experience, acceptable waiting times, willingness to make detours, payment media (actual/wanted)
- Load planning / route planning: systems used, most important functions
- Criteria for charging decisions on the move, in the city and in residential areas
- Charging fears, charging problems, improvement in the last 12 months
- Satisfaction with charge at public, expansion needs
- Authorization and payment methods: Actual, request
- eMSP: active / preferred use, reasons for use
- CPOs: Relevance and criteria for charging decision, satisfaction

Store in semi-public Spaces: Charge at Work, Charge at Retail

- Charge at work: Criteria for loading decision, satisfaction, recommendations...
- Charging in retail: Criteria for charging decisions, satisfaction, recommendations...



eMSP Loyalty Benchmarking Study

Initial situation:

- Charging services not only offer service providers sources of revenue, but also an important tool for customer loyalty. The prerequisite is that EV drivers actively and - more importantly - preferentially use the services.
- The high number of eMSP and CPO offerings is leading to fierce competition in a rapidly growing market.

Questions:

- Which eMSP or CPO offers are EV drivers using actively and which one are they preferring? How high are the market shares of the most important providers (groups)? Which trends arise over time?
- What are the drivers and barriers for the preferences? Which role do tariff models play? How can providers position themselves successfully?
- Which influence do payment methods have on the selection decision?
- What differences are there between different target groups?



eMSP Loyalty Benchmarking Study



Key data

- Survey: Sept 24, online
- Sample: N = 2,688
- Market:  from 11/24

Methodical approach

- Survey of EV drivers that regularly charge in public and have experience with one or more eMSPs or CPOs
- Complete illumination of usage behavior
- Correlation with media usage and segmentation characteristics, such as driving and charging behavior

Added value

- Benchmarking of the most important eMSP providers (groups) and CPOs
- Reasons for loyalty and migration
- Basis for differentiating eMSP offerings for product managers
- Basis for addressing target groups in marketing

Study Content

(for the complete list: [HERE](#))

Respondents / Segmentation Characteristics

- Demographic characteristics (including gender, age, place of residence)
- Vehicle brand
- Charging profiles (depending on vehicle use, living situation and charging behaviour)

Use of eMSP or CPO Services

- Market shares: actively used vs. preferred charging services
- Reasons for preferred use (loyalty) per provider group
- Root causes for switching / migration per provider group
- Preferences of CPOs, assessment of important CPOs, usage drivers and barriers
- Important charging app features, expected information and filter options

Payment and Tariff Models

- Used vs. desired authorization and payment options, satisfaction
- Evaluation (usage drivers and barriers of the payment methods Plug&Charge, charging card/RFID, charging app, Girocard/CC, smartphone wallet)
- Preferences for ad-hoc payment options (Girocard/CC + PIN, Girocard/CC contactless, smartphone "wallet", QR code, via cell phone bill)
- Pricing models: selected tariffs, variable tariffs, blocking fees, willingness to pay

Public Charging Payment Study

Initial situation:

- There are over 1,000 eMSP and CPO offerings in Germany. This leads to fierce competition in a rapidly growing market.
- Providers can only prevail if they offer attractive services that suit their target group with the right features, such as authorization and payment options at the charging point.

Questions:

- What authorization and payment methods do EV drivers use today?
- What usage drivers and barriers do EV drivers see in the currently most important payment methods?
- What does this mean for the acceptance and likely future use of the methods?
- What differences are there between different target groups?



Public Charging Payment Study



Key data

- Survey: Sept 24, online
- Sample: N = 2,688
- Markets: 

Methodical approach

- Survey of eMobilists, usually with a lot of experience with several eMSPs or CPOs
- Complete illumination of usage behavior with a focus on tariff models and payment
- Correlation with segmentation features, such as driving and charging behavior

Added value

- Benchmarking of the most important eMSP providers (groups) and CPOs
- Reasons for loyalty and migration
- Product market fit for different authorization and payment methods at the charging point

Study Content

(for the complete list: [HERE](#))

Respondents / Segmentation

- Demographic characteristics (including gender, age, place of residence)
- Vehicle brand, vehicle use, charging behavior and preferences

Use of eMSP or CPO Services

- Market shares: actively used vs. preferred charging services
- Reasons for preferred use (loyalty) per provider group
- Causes for switching / migration per provider group
- Preferences of CPOs, evaluation of important CPOs
- Regularly used app features
- Charging experience in key EU countries

Payment and Tariff Models

- Used vs. desired authorization and payment options, satisfaction
- Evaluation (usage drivers and barriers of the payment methods Plug&Charge, charging card/RFID, charging app, Girocard/CC, smartphone wallet)
- Preferences for ad-hoc payment options (Girocard/CC + PIN, Girocard/CC contactless, smartphone "wallet", QR code, via cell phone bill)
- Tariff models, variable tariffs, blocking fees, home tariff model

Authorization and payment excerpt

Smart Charging Study

Initial situation:

- Smart charging comprises technical solutions for grid-supportive and bidirectional charging. Grid-supportive charging is realized through variable tariffs, among other things.
- Above all, smart charging offers advantages for energy suppliers and grid operators.
- It is unclear under what conditions EV drivers will use the technologies.


Questions:

- Which variable tariff systems are convincing?
- Which use cases for bidirectional charging are convincing? What are the usage drivers and barriers from the customer's perspective?
- Who integrates whom at V2x? Who do the clients trust?
- How big is the successfully addressable market?
- What are the prioritized levers for successful marketing?



Smart Charging Study

Key data

- Survey: Nov 23, online
- Sample: N = 2,001, of which:
N = approx. 800 per use case
- Markets:   

Methodical approach

- Evaluation of the product-market fit using the pain-gain test method.
- Determination of the acceptance drivers and -barriers for each use case.

Added value

- Input for product owners, developers, IT and marketing on the design of products and services.
- Readiness to use the use cases.
- Prioritized levers for overcoming barriers to use.
- USPs for successful marketing of smart charging offers.

Study Content

(for the complete list: [HERE](#))

Respondents

- Demographic characteristics (including gender, age, income)
- Housing situation (EFH/MFH, places of residence), parking situation
- Driving and charging behavior, charging technology used

Variable Tariffs

- Use cases: Variable tariffs @public, Variable tariffs @home
- Net value added, relevance, product-market fit (per use case)
- Prioritized drivers and biggest barriers (per use case)

Bidirectional Charging

- Use cases: V2G, V2H, V2L, V2V
- Net value added, relevance, product-market fit (for V2G, V2H)
- Prioritized drivers and biggest barriers (for V2G, V2H)
- Implementation variants
- Necessary incentives
- Integration and control of services
- Preferred providers for smart charging technology
- Mental accounting: motivation for investing in smart charging technology
- Special: DC @home



Charging Persona Study

Initial situation:

- Driving behavior, living situation and individual preferences influence the charging and purchasing behavior of EV drivers. As the market share of EVs increases, the circle of users will also become increasingly diverse. New market segments are emerging.
- In addition, competition for charging technology is increasing. Suppliers must therefore know their target groups precisely and address them in a targeted manner in order to be successful against the competition.


Questions:

- How can charging behavior be segmented in view of the large number of individual use cases?
- What attitudes towards mobility, social issues, brands, etc. do EV drivers have?
- What charging personas are emerging for the German market? Who do providers of charging solutions and charging services need to focus on?
- How and with which messages can the target groups be reached?



Charging Persona Study

Key data

- Survey: April 2024, online
- Sample: N = 1,223 EV drivers
- Markets: 

Methodical approach

- Creation of charging profiles based on living, driving and charging behavior based on the USCALE Charging Studies 2023 (N = 3,075)
- Creation of EV personas and matching with charging profiles to create charging personas.
- Focus on mapping values and attitudes towards EV and social issues and media use

Added value

- Detailed description of the target group segments for the product management and marketing of charging technology providers.
- **Personas can be mapped to many current and all future USCALE studies via "Golden Questions".**

Study Content

(for the complete list: [HERE](#))

Respondents

- Demographic characteristics (including gender, age, place of residence)
- Media use, sources of information, general payment preference

Segmentation Features

- Vehicle brand, vehicle use
- Charging behavior

Values, Beliefs and Attitudes

- Fundamental values, attitude towards eMobility and EV policy
- Importance and status of your own car
- Importance of brands
- Affinity for technology and dealing with technical innovations
- Preferences when purchasing charging technology and electric vehicles

Charging and Driving Behavior

- Reasons for buying and using the EV, factors in the choice of vehicle
- Financing, possible insurance and maintenance contracts
- Charging options and components at home, place of purchase and important factors when buying a wallbox and advice on this, electricity provider at home, switching intentions



About UScale

- UScale advises car manufacturers, energy suppliers and service providers on the customer-oriented design of offers and the development of KPI systems for customer perception.
- UScale's work is based on a development framework for the product-market fit for digital and innovative products and customer insights studies on all touchpoints of the e-mobile customer journey.



- UScale is the only provider of a panel specialised in eMobility with over 9,000 panelists in German-speaking countries.
- UScale makes the customer perspective tangible for managers, engineers and IT specialists.
- UScale has extensive industry knowledge of the eMobility ecosystem.
- UScale combines extensive experience with the challenges of corporates with the agility of a start-up.

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