
eReadiness 2021

Survey Report

Market perspectives, customer needs
and recommended actions for OEMs

July 2021



This study provides updated perspectives on the short-term development of the e-mobility business in 6 European markets

About the Study









Context

- Over the last few years, OEMs have made significant investments for the electrification of vehicles, which are not yet fully converted into relevant revenue streams despite the significant growth registered in the last months
- OEMs have continued their investment in e-mobility throughout COVID-19 outbreak and have to adopt a tailored market approach to maximize the return on investment during the upcoming EV uptake phase



Survey Goals

- PwC Strategy& has launched the **2nd edition of the eReadiness** pan-European study to capture market perspectives from different angles to help OEMs identify the best viable options to ensure short-term commercial effectiveness
- The study focuses on Battery Electric (BEV) and Plug-in Hybrid Vehicles (PHEV) hereinafter jointly referred as EV
- The study focuses on **6 European markets**:  France,  Germany,  Italy,  Norway,  Spain and  Switzerland



Sample

- **4,000+ consumers surveyed** with a balanced sample among the 6 markets in scope with the study
- **103 mid-large sized corporations** with a vehicle fleet of 100+ units
- **30 dealerships** with an annual turnover of at least 10 M€, **representing 29 brands** in total



Methodology

- **B2C Clients**: online surveys with a representative sample of the driving population of each market in scope
- **B2B Clients**: phone interviews and online surveys with fleet & mobility managers
- **Dealerships**: face-to-face / virtual interviews with Dealership owners/ principals based on a structured questionnaire

Agenda

1. **Executive Summary**
2. EV Market Overview
3. Demand Side - Consumers and Fleets
4. Supply Side - Dealerships
5. Recommendations on the way forward
6. Contacts



Executive summary

EV Market

- The EV market (BEV + PHEV) is expected to reach 23% of total new car sales by 2024 in the EU 6 markets (France, Germany, Italy, Norway, Spain and Switzerland), mainly fueled by BEV
- The fleet (B2B) segment will remain the most attractive ones, with a projected share of approximately 55% of the total EV market in 2024

Demand






- Overall EV interest is high, with 55% of surveyed consumers and 100% of fleet managers declaring an intention to buy an EV in the next 2 years
- Among consumers, EV Owners (4% of the panel) are high-income, middle-aged males living in city centers
- EV prospects (64% of the panel) have ~40% lower income than EV Owners. Among them, *Dreamers*, *Luxurious* and *Tech Enthusiasts* are the 3 personas (out of the 6 identified) with the highest intention to buy and represent 50% of the demand in the next 2 years
- Within the fleet segment, large companies declare the highest EV penetration while mid-sized ones register the highest EV growth rate
- Online sales represent 9% of EV sales, yet 59% of consumers would buy their next vehicle online driven by convenience and price transparency
- 60% of consumers and 70% of fleet customers bought EV and charging solutions in a bundle, with up to 30% purchasing additional EV-related services/ products in the same period (e.g. energy contracts, energy management solutions)

Supply

- B2B is perceived as the most attractive market, both for size and growth by dealers, with a focus on large corporates vs. SMEs
- Dealers envisage a c. 20% EV share in the next 2 years mainly driven by the urban population with a decreasing interest from rural areas
- Dealerships have a partial understanding of consumers' key driving factors, with driving experience and incentives being overrated
- Dealership is the main B2C channel, although 65% of them would require more training support from OEMs
- Similar to last year's results, dealerships question the impact of EVs impact on their margins, in particular for the aftersales business
- Used EV market is still nascent, but it represents a key attention area for OEMs with regard to value proposition, stock rotation and financial impact

Our view on the way forward

Way forward

- To keep up with the e-mobility race, OEMs need to define tailored selling propositions that can be articulated in **5 key improvement actions** to tap the full potential of the EV market demand in the short run
-  **Extended value proposition** – Define an extended offering to address the increasing demand of EV-related products and service, which are currently not part of the OEM and dealership portfolio (e.g. energy contracts, charging solutions, smart-home solutions, ...)
 -  **Omnichannel journey** – Define a customer journey that complements traditional brick-and-mortar sales with a seamless on-line customer experience, by combining the best of both worlds to target digital native prospects and ensure resilience in case of health emergencies
 -  **Customer experience** – Design and deploy EV-specific sales process to make the customer experience more compelling, and to ensure regular monitoring of customer feedback and identification of key pain points throughout the EV journey
 -  **Customer support** – Enhance customer support during the post-purchase phase, by focusing on the installation of private charging solutions as well as the public charging point usage
 -  **Pre-Owned EV business** – Enhance used EV business proposition with dedicated CPO and upskilling programs to help dealerships manage the EV 2nd hand trade in a more effective and profitable way

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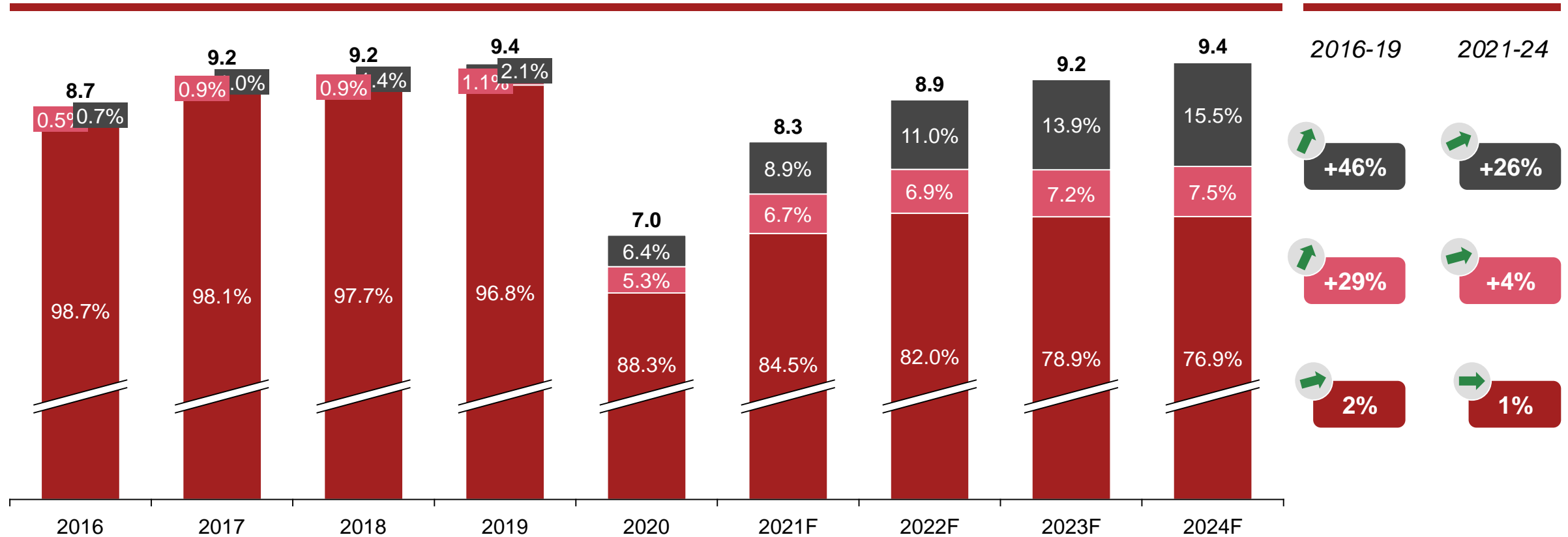


Market recovery from Covid-19 crisis in 2020 is expected to be driven by an increasing adoption of EVs

EU market – New car registrations outlook

New car registrations (m units, %, France, Germany, Italy, Norway, Spain and Switzerland)

CAGR

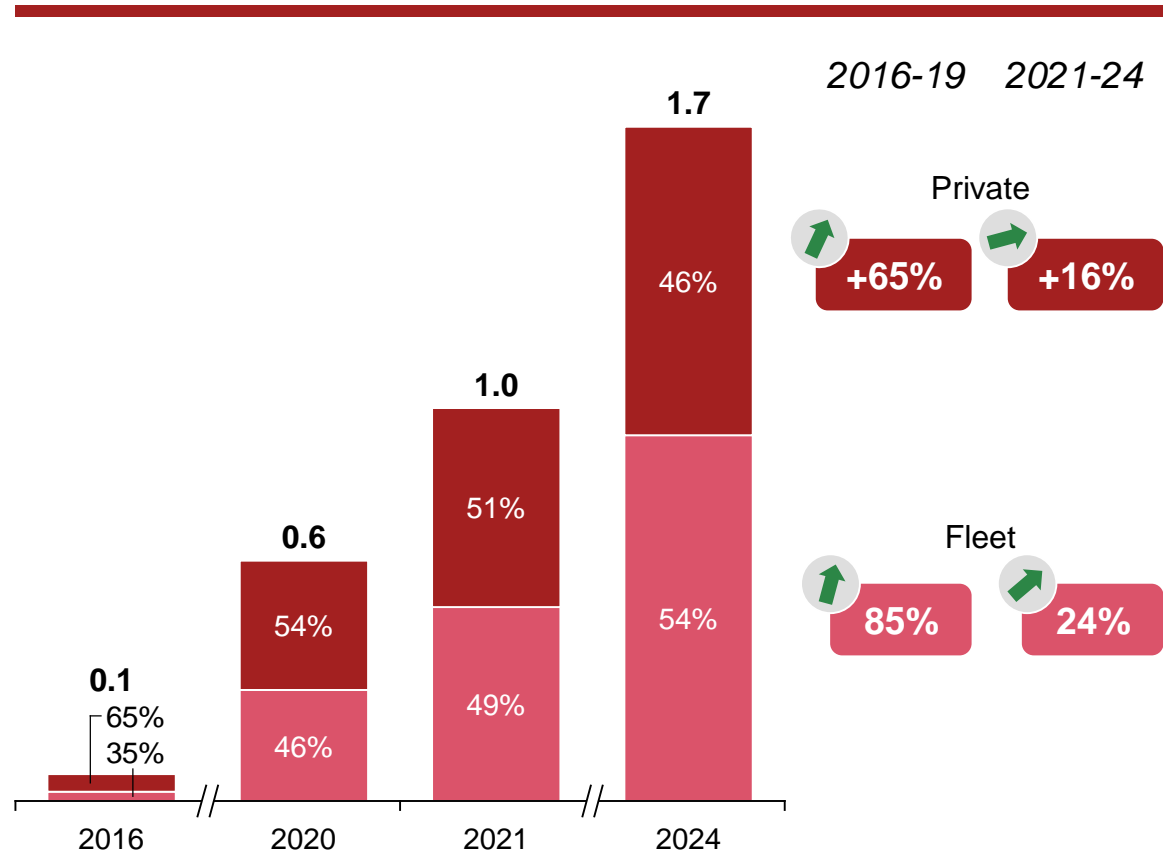


Fleet (B2B) segment is growing faster than the private (B2C) one, with Germany and France representing the most sizable markets

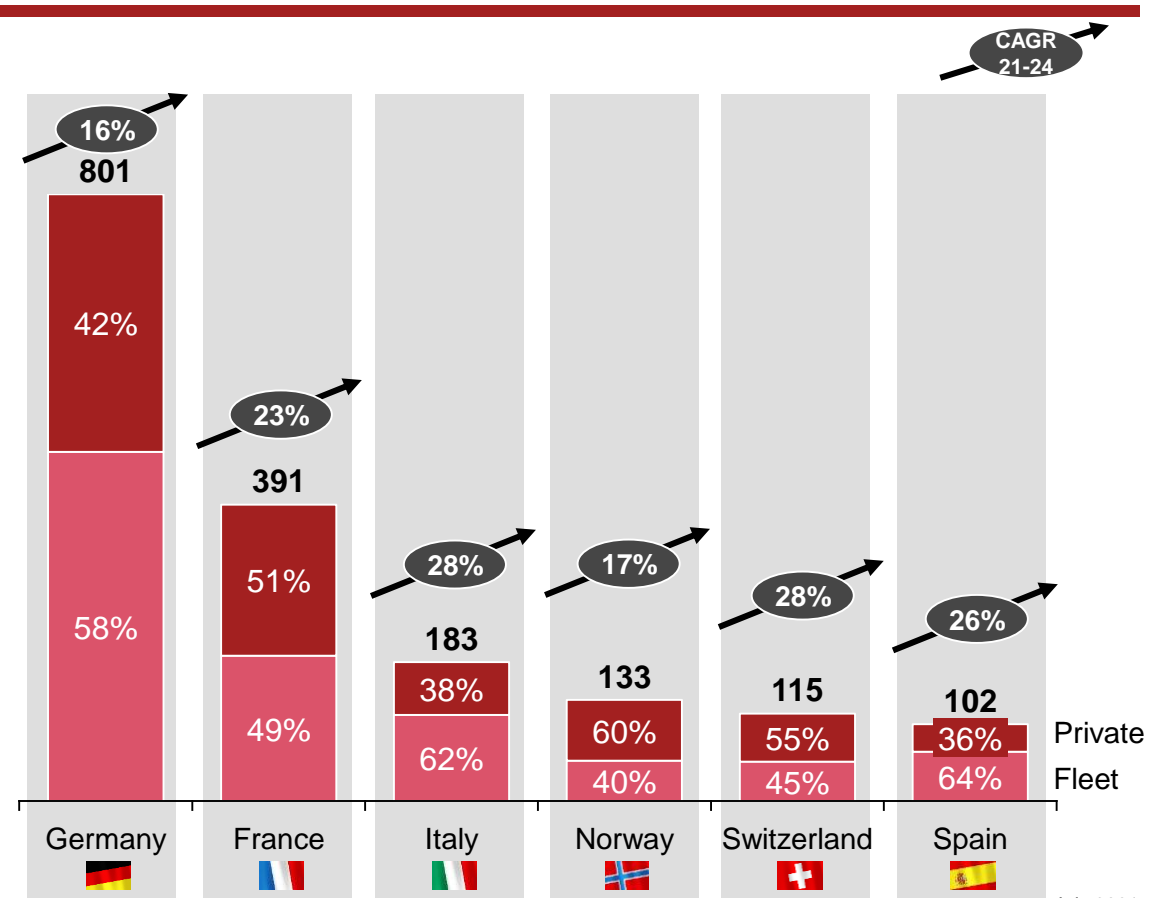
EV sales split by customer segment and market

EV sales by customer segment

(%, .000 units, France, Germany, Italy, Norway, Spain and Switzerland)



EV sales by country (%, .000 units in 2024)



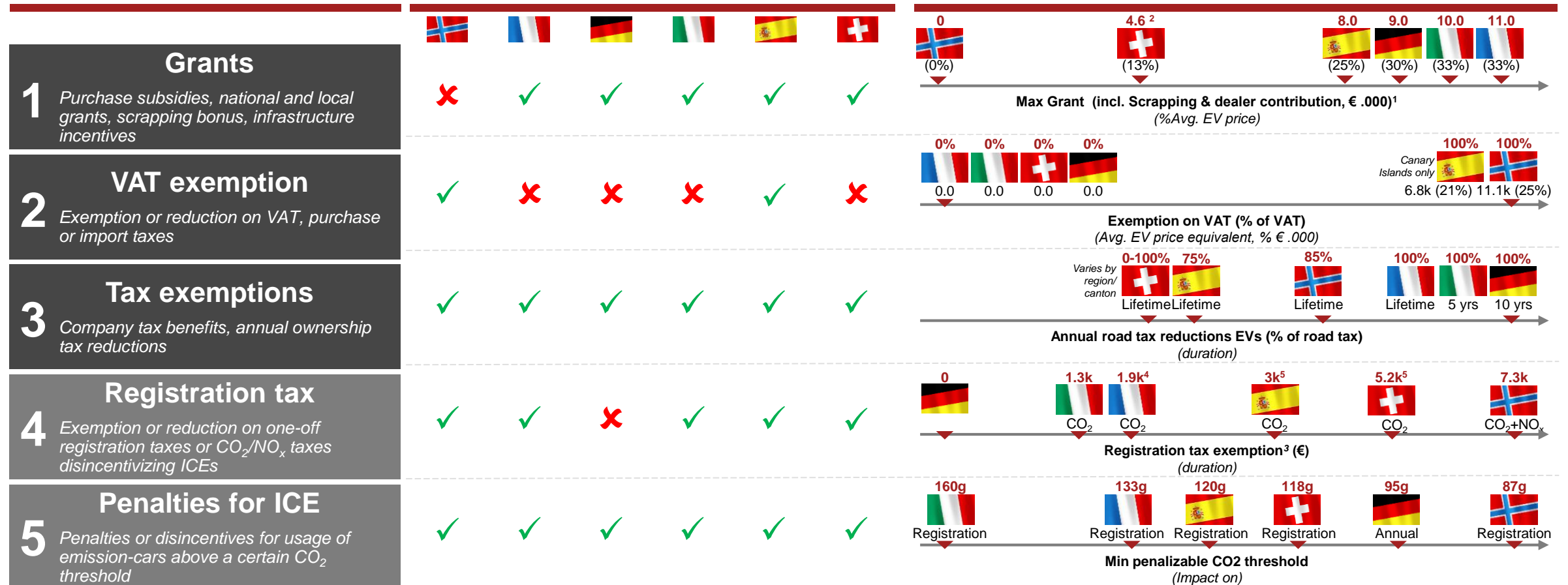
EV market growth is fueled by dedicated state incentives, accounting for up to 33% of the retail sales price in some markets

Benchmark of EV incentives and ICE disincentives

Incentive categories

Application per country

EV incentives



1) Figures vary depending on household/individual. Does not incl. local grants. Max grant yields retail prices: <€45k FR & SP, <€40k GE, <€50k IT; 2) Varies per canton; 3) Incl. only emission-related one-off taxes (e.g., weight tax is excl.) for cars >160gCO₂/km; 4) 85kW HP vehicle from Britany, incl. a lower tax according to horsepower; 5) €30k net value vehicle; Source: ACEA, EZV, EAFO, IEA, PwC Global Automotive Tax Guide, Eurostat, local authorities, Strategy& Analysis

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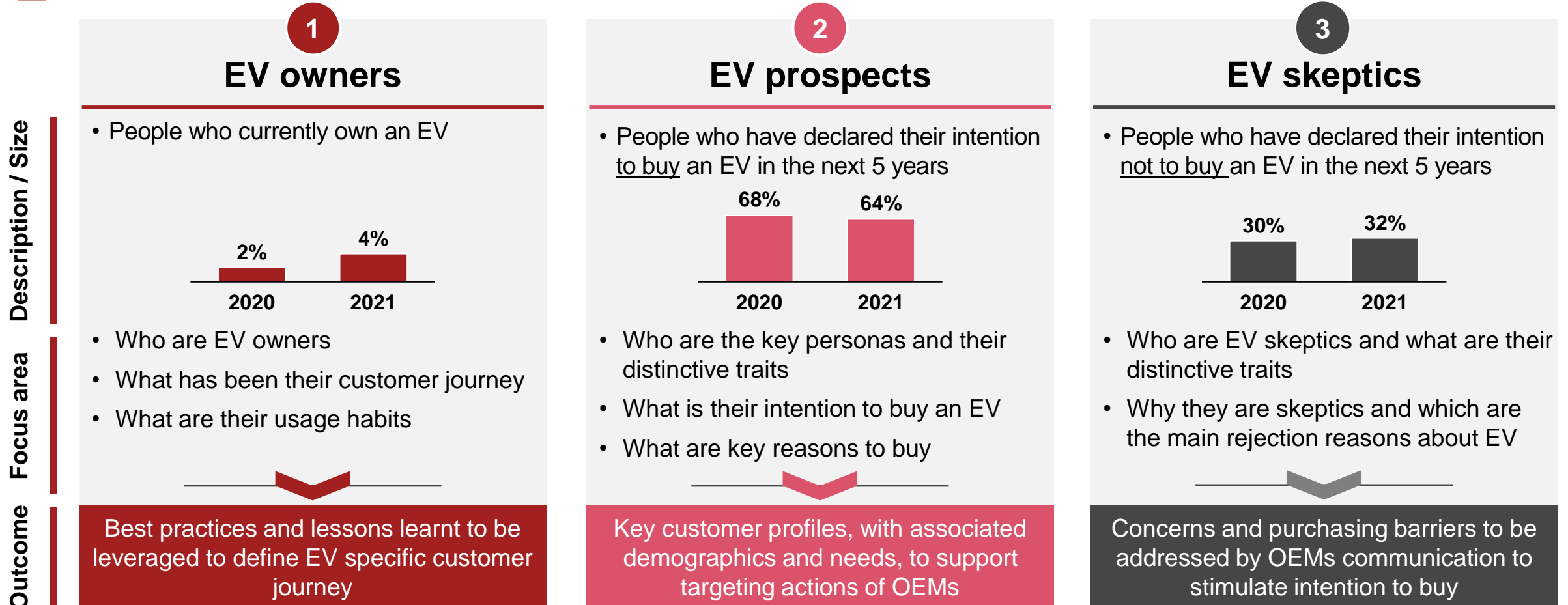
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Consumers have been grouped into 3 main clusters: EV owners, EV prospects and EV skeptics

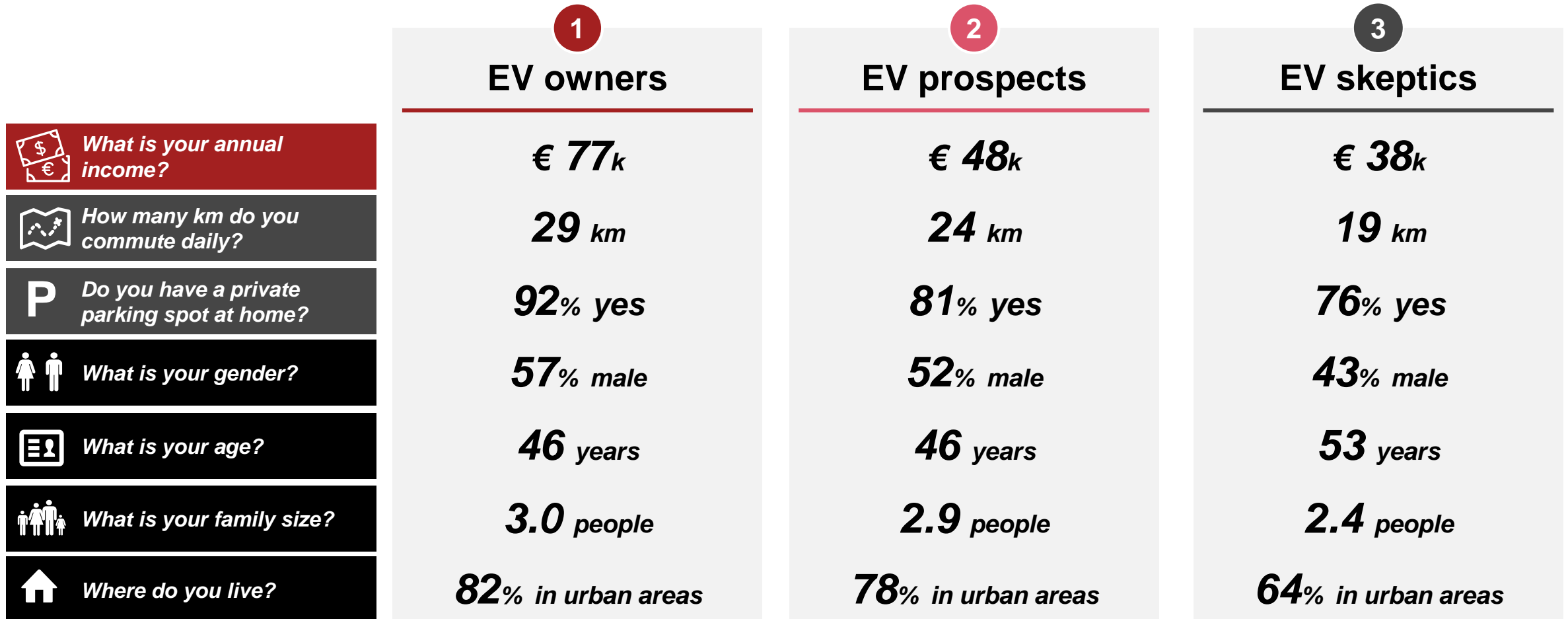
Consumer survey – Clusters and investigation areas

% B2C Customers Sample: #3,571 respondents



EV owners, EV prospects and EV skeptics display some specific traits with regard to income, mobility needs and demographics

Consumer survey – Cluster profiles



1 EV owners

EV owner's profile is in line with 2020 - high-income, middle-aged person, living in urban areas with a private parking spot

Profiling – EV owners vs ICE owners

% B2C Customers Sample: #146 respondents ↓↑↔ Vs. 2020

How many km do you commute daily? **29 km** ↓-6km

EV owners commute on average **+7 km** than ICE owners

What is your annual income? **€ 77k** ↓-13k

The average annual income of EV owners is **1.8x** the average income of ICE owners

Do you have a private parking spot at home? **92% yes** ↑+9p.p.

+13% of EV owners have a **private garage** compared to ICE owners

What is your gender? **57% male** ↑+1p.p.

Only **+6%** of male EV owners vs ICE

What is your age? **46 years** ↑+1year

The average age of EV owners is **+10 years** compared to ICE owners

What is your family size? **3.0 people** ↓-0.5

The EV owner's household is on average **0.3 people larger** than that of ICE owners

Where do you live? **82% in urban areas** ↔

+9% of EV owners live **in urban areas** compared to ICE owners

1 EV owners

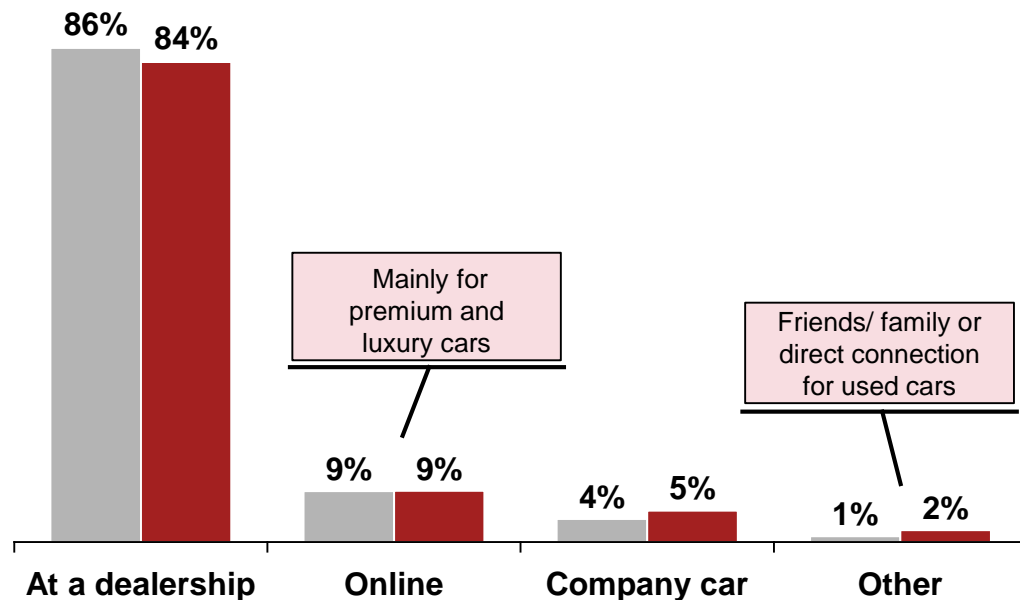
The main purchase channel for EVs is via dealers, although 59% of respondents would consider buying online

EV car type and purchase method

Where did you buy it?

% B2C Customers Sample: #146 respondents

2020 2021



Would you buy your next car online?

% B2C Customers Sample: #146 respondents



Drivers

- 1 Convenience (Opening time/ days, dealership distance, etc.)
- 2 Price advantage (Higher discounts, promotions)
- 3 Product availability (Stock availability with specific accessories)

Barriers

- 1 Need to experience the car (Touch & feel, size, etc.)
- 2 Preference for face-to-face interaction with salesman
- 3 Limited trust in performing large transactions online

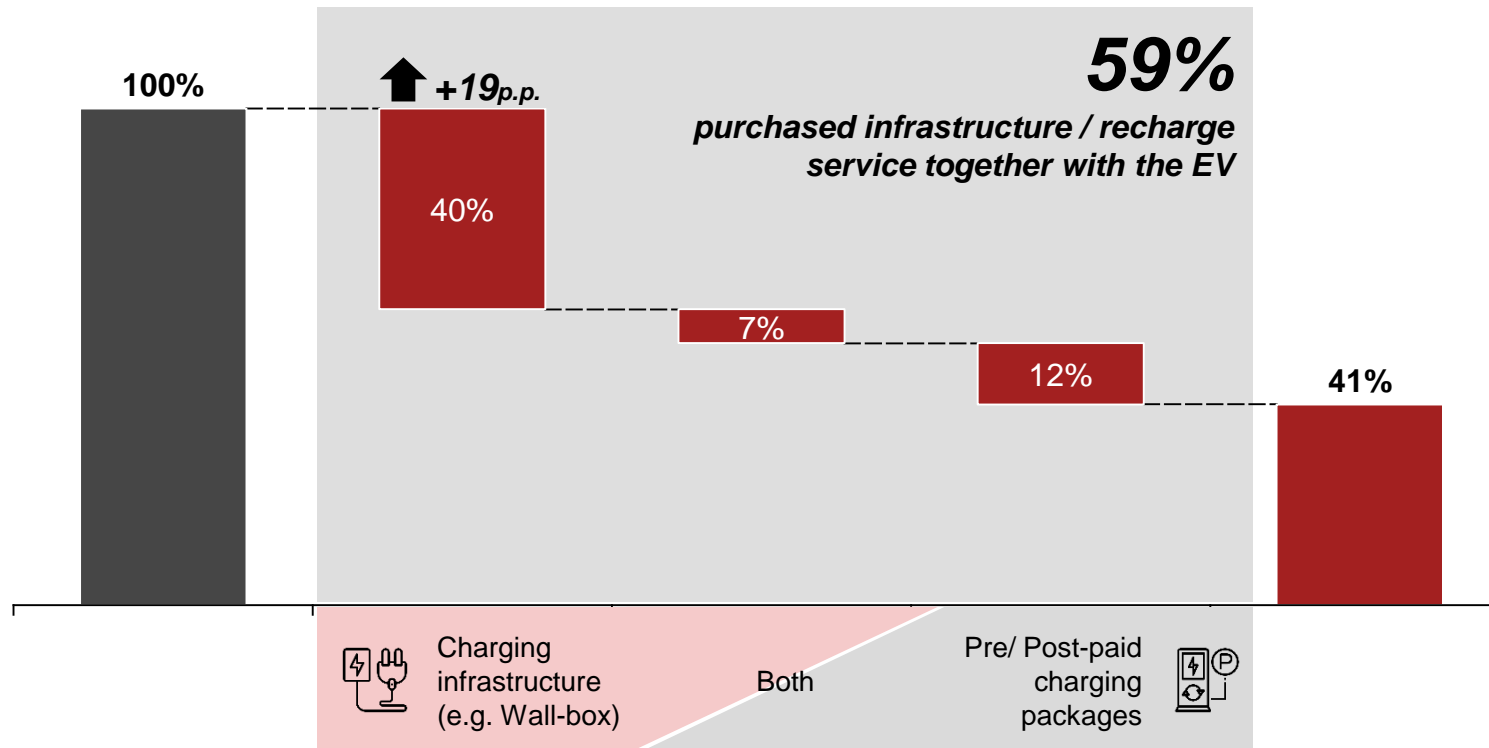
59% of EV owners purchased re-charging solutions with their EV - Managed installation grants higher customer satisfaction

Additional products and services

What additional recharging infrastructure / services did you buy together with your EV?

% B2C Customers Sample: #146 respondents

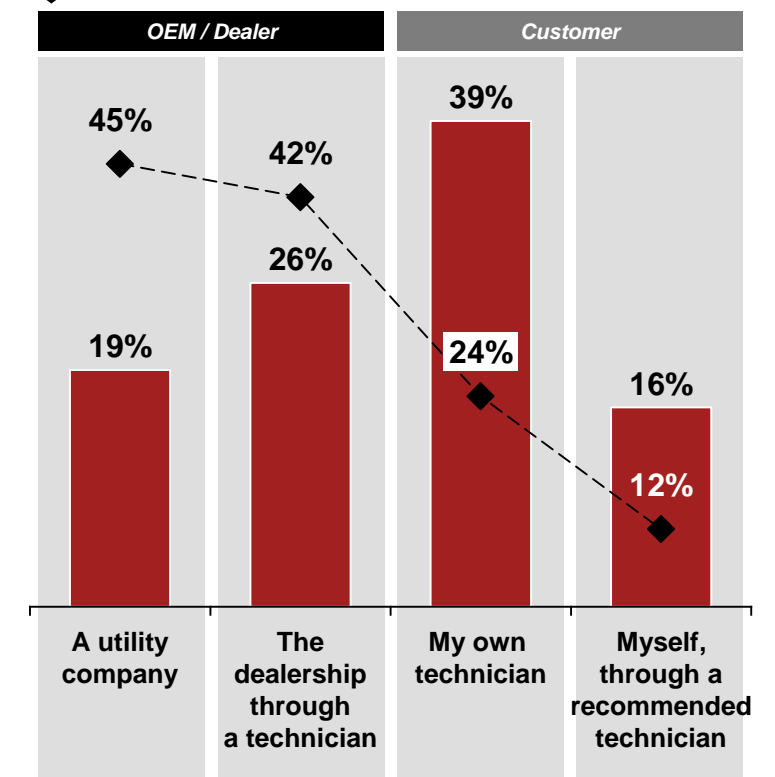
↓ ↑ ⇄ Vs. 2020



Who was in charge of installing the charging infrastructure?

% B2C Customers Sample: #69 respondents

◆ NPS Score



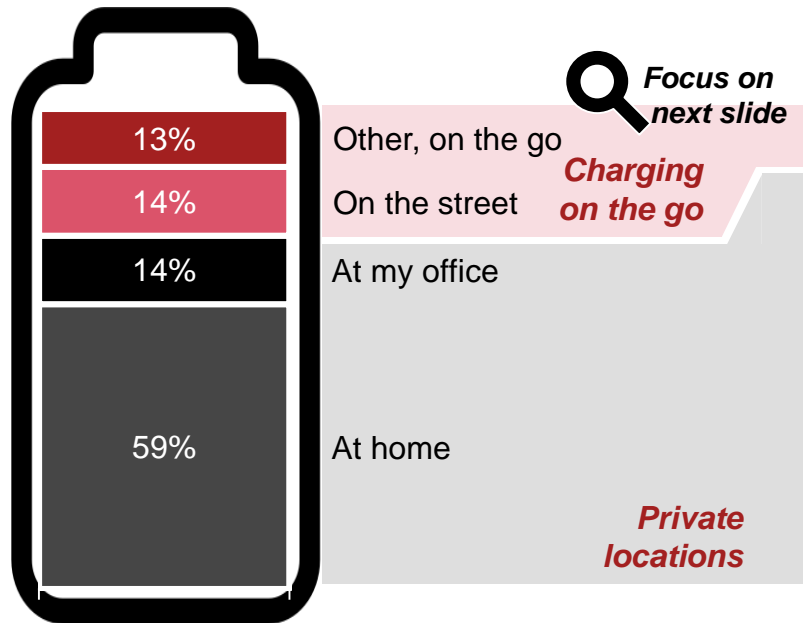
1 EV owners

87% of surveyed EV owners primarily charge their EV at home/ office

Charging habits

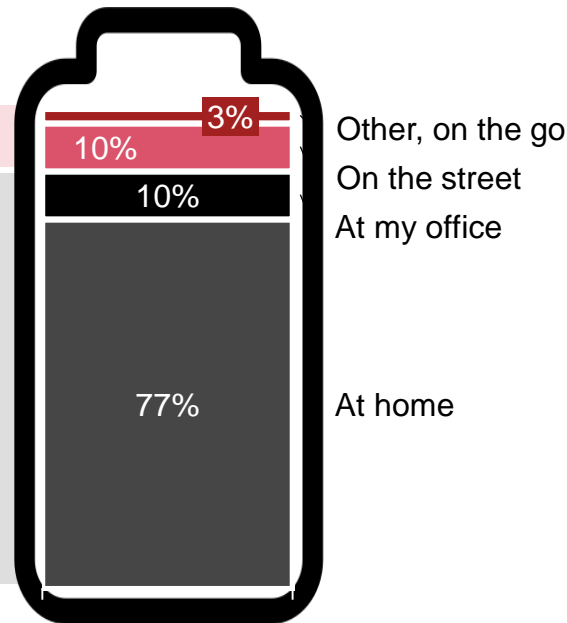
Where do you typically charge your EV?

% B2C Customers Sample: #146 respondents



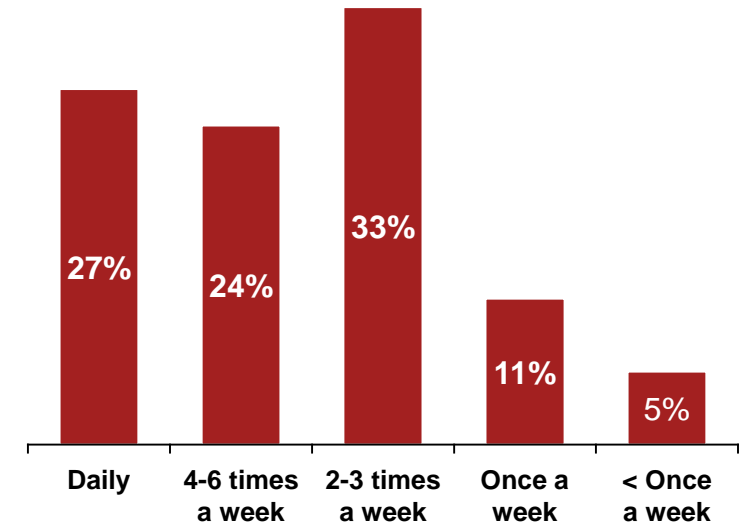
Which is the primary location where you charge your car?

% B2C Customers Sample: #146 respondents



How often do you charge your car?

% B2C Customers Sample: #146 respondents



1 EV owners

Used EV penetration is still limited (15% of EV owners) mostly driven by younger customers with a lower income

Used EV Deep-Dive

Used EV Sample

15% *of EV Owners bought a Used Car*

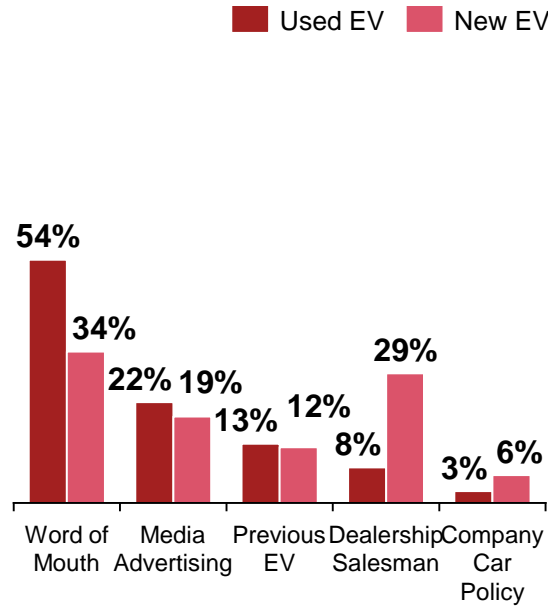
Daily Commuting distance
18 Km -11 km *than New EVs Owners*

Age
38 Yrs -6 yrs *than New EVs Owners*

Income
€71k -€ 5k *than New EVs Owners*

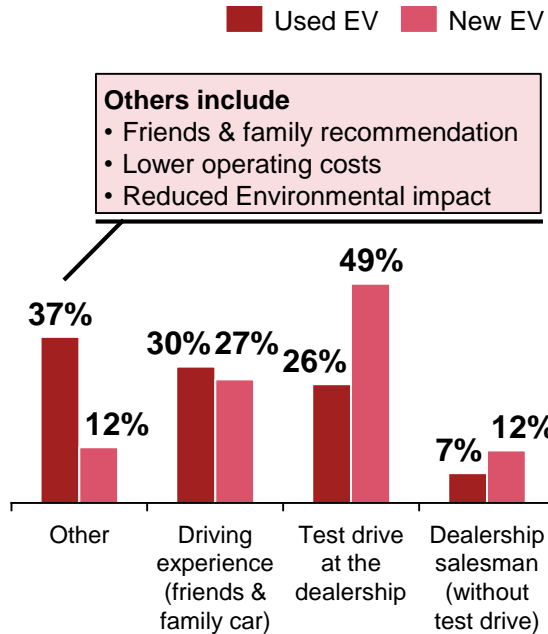
What led you to consider buying an EV?

% B2C Customers Sample: #146 resp.



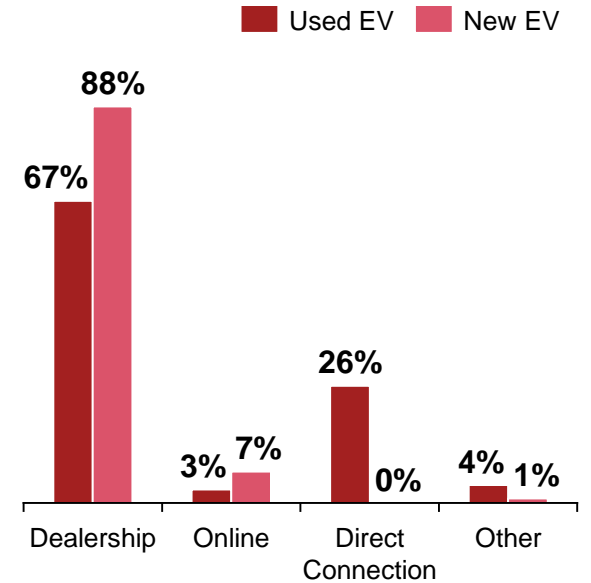
What was the convincing element?

% B2C Customers Sample: #146 resp.



Where did you buy the car?

% B2C Customers Sample: #146 resp.



• 67% of EV Prospects may consider buying a Used EV car in the next 36 months

2 EV prospects

EV prospects are similar age of EV owners, but have of a ~40% lower income

Profiling – EV prospects vs EV owners

% B2C Customers Sample: #2,244 respondents ↓↑↔ Vs. 2020

How many km do you commute daily? **24 km** ↓ -2km

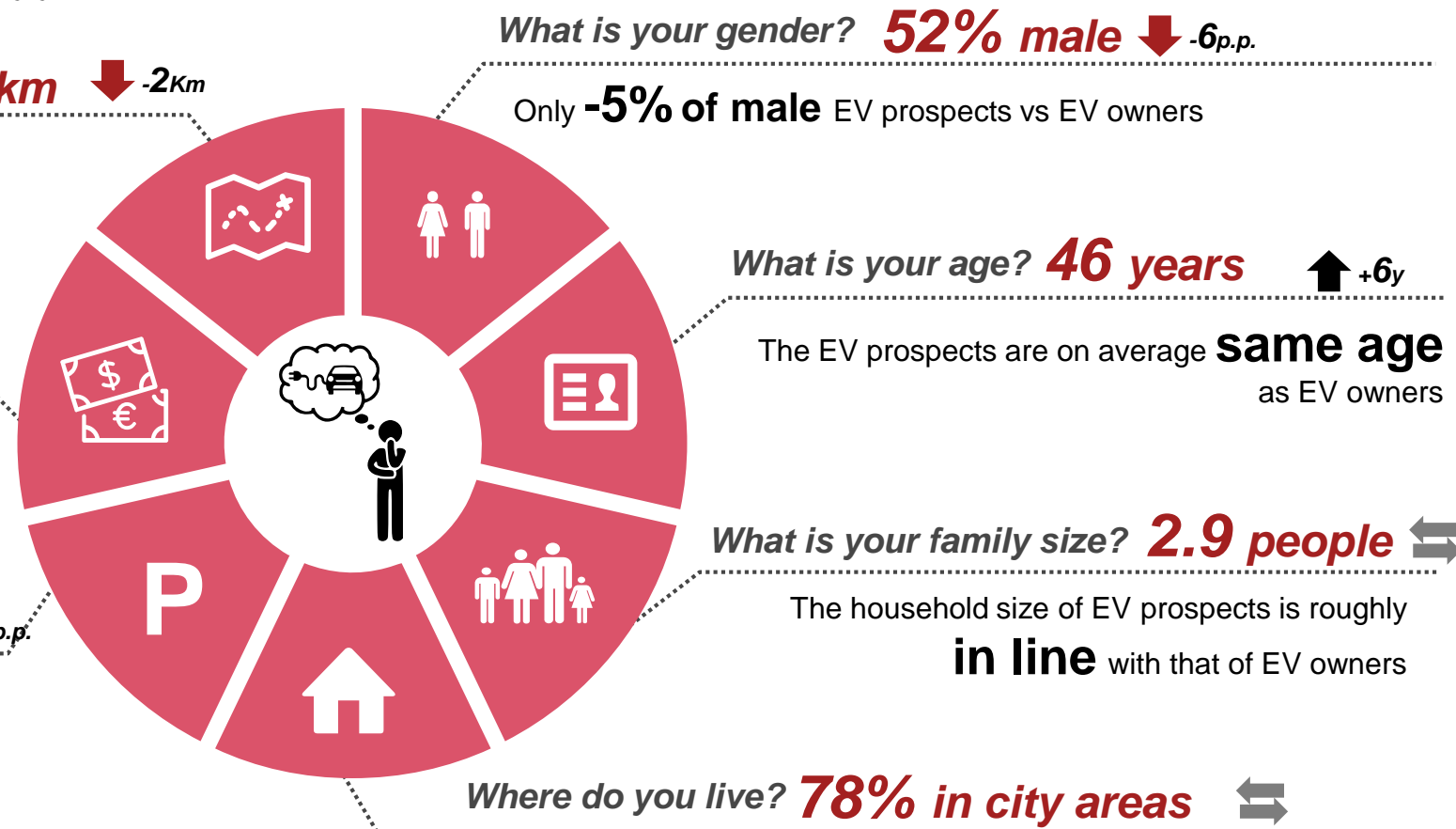
EV prospects commute on average **-4 km** than EV owners

What is your annual income? **€ 48k** ↔

The average annual income of EV prospects is about **-40%** of EV owners' income

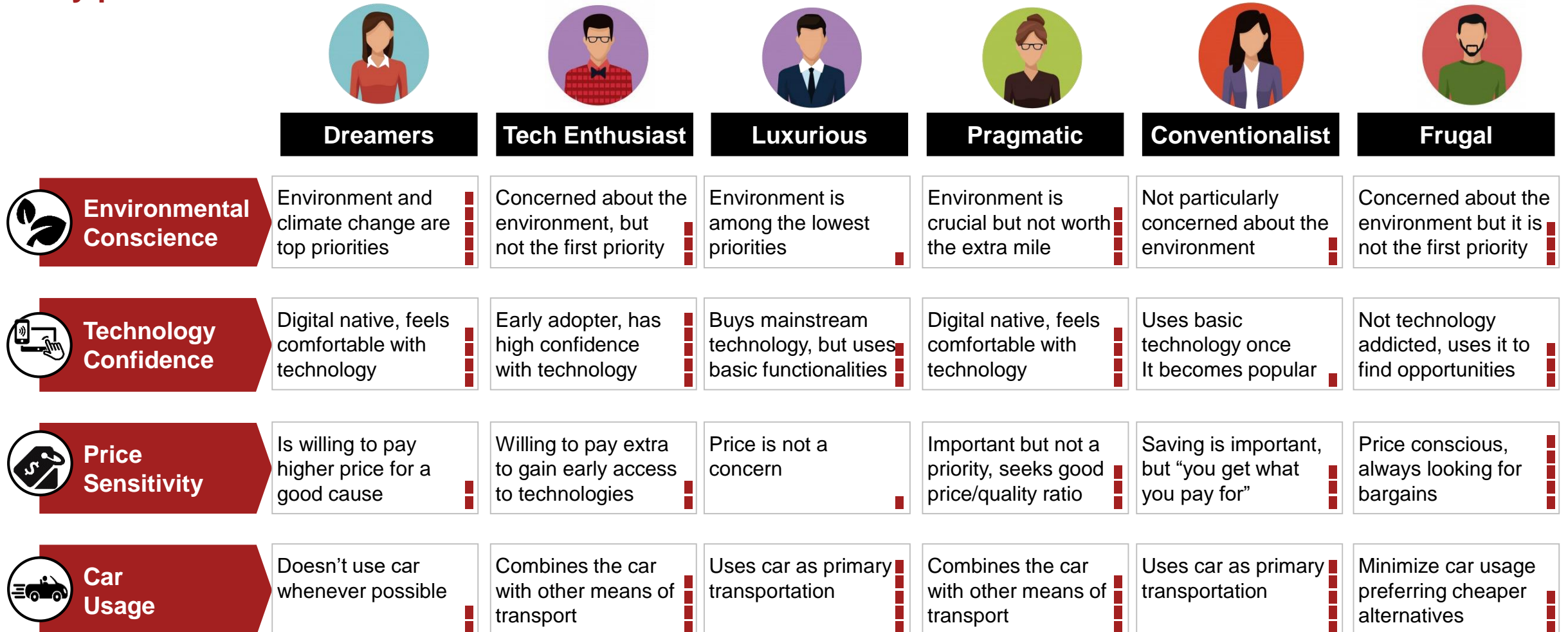
Do you have a private parking spot at home? **81% yes** ↑ +11p.p.

-11% of EV prospects have a **private garage** compared to EV owners



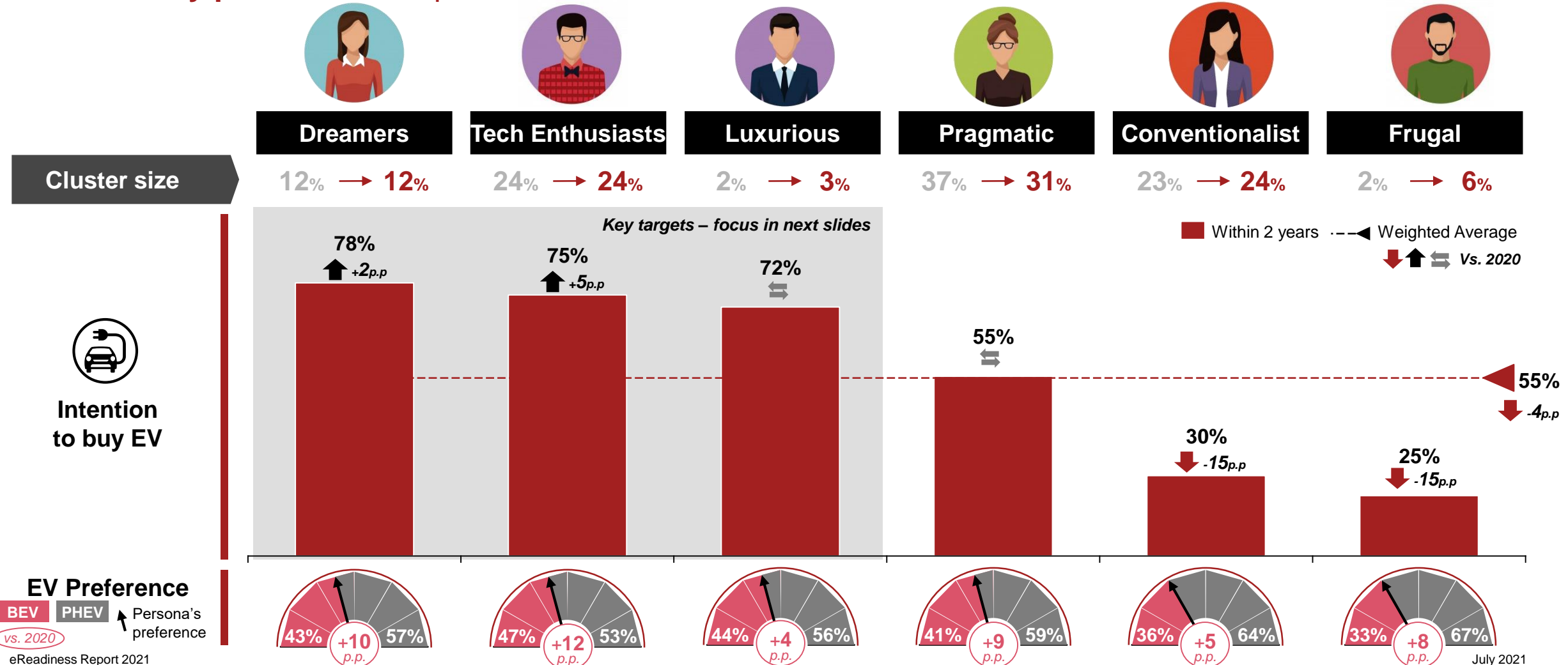
We have identified six personas amongst future EV customers based on four behavioral dimensions

Key personas



Dreamer, Luxurious and Tech Enthusiasts consistently show the highest intention to buy in the near future

Focus on key personas – EV purchase intention



EV Preference
 BEV PHEV Persona's preference
 vs. 2020
 eReadiness Report 2021
 PwC Strategy&

Source: Strategy& analysis on feedback from B2C survey

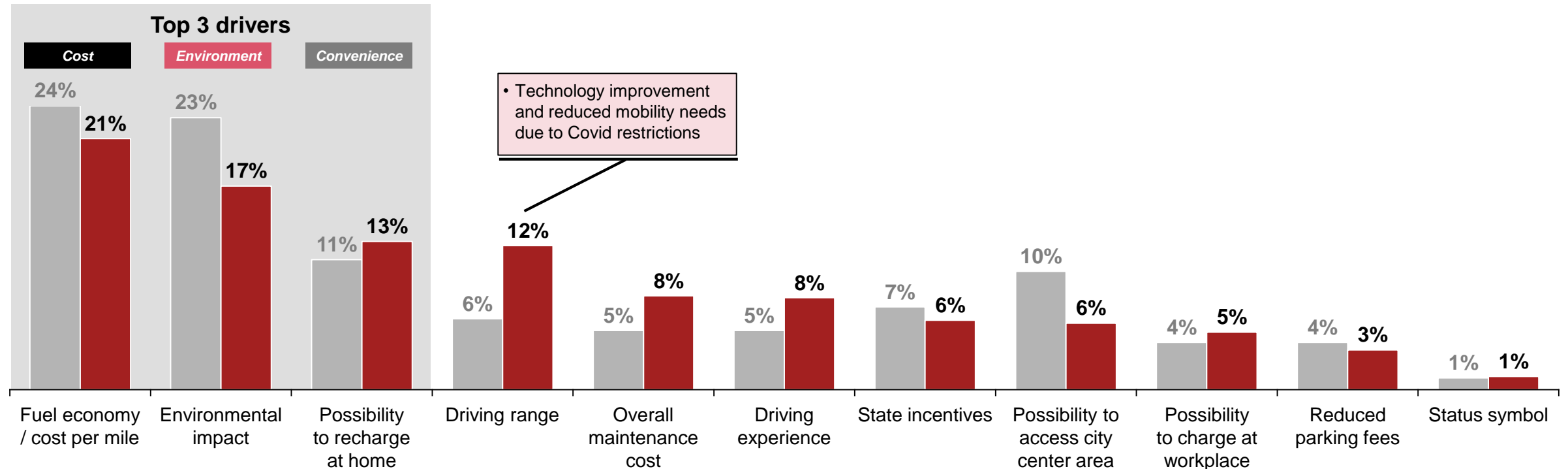
Key purchasing drivers are in line with last year: fuel economy, environmental impact and possibility to charge at home

Purchasing drivers

What are main reasons that drive you to buy an EV?

% B2C Customers Sample: #2,244 respondents

2020 2021

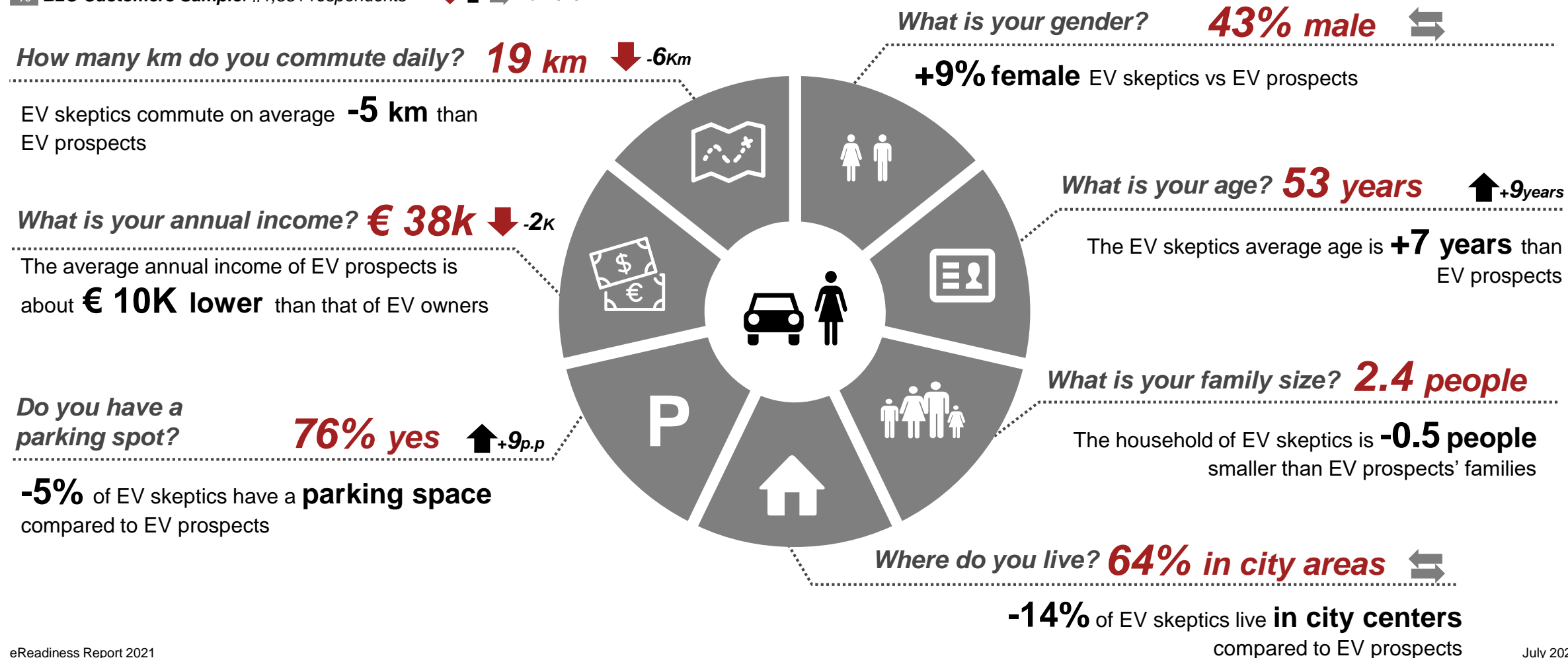


3 EV skeptics

EV skeptics are older than EV prospects and with a ~25% lower annual income

Profiling – EV skeptics vs EV prospects

% B2C Customers Sample: #1,881 respondents ↓↑ ↔ Vs. 2020



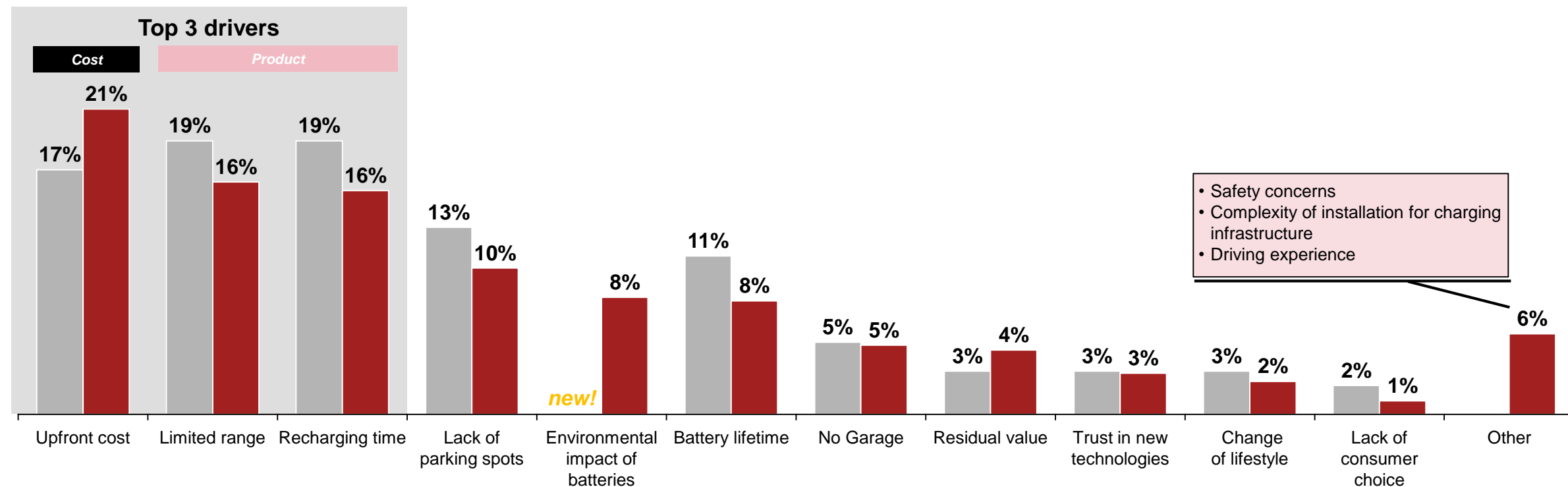
Key inhibitors to buy an EV are upfront cost, limited range and charging time

Main reasons for rejection

What are main reasons that discourage you from buying an EV?

% B2C Customers Sample: #1,881 respondents

2020 2021



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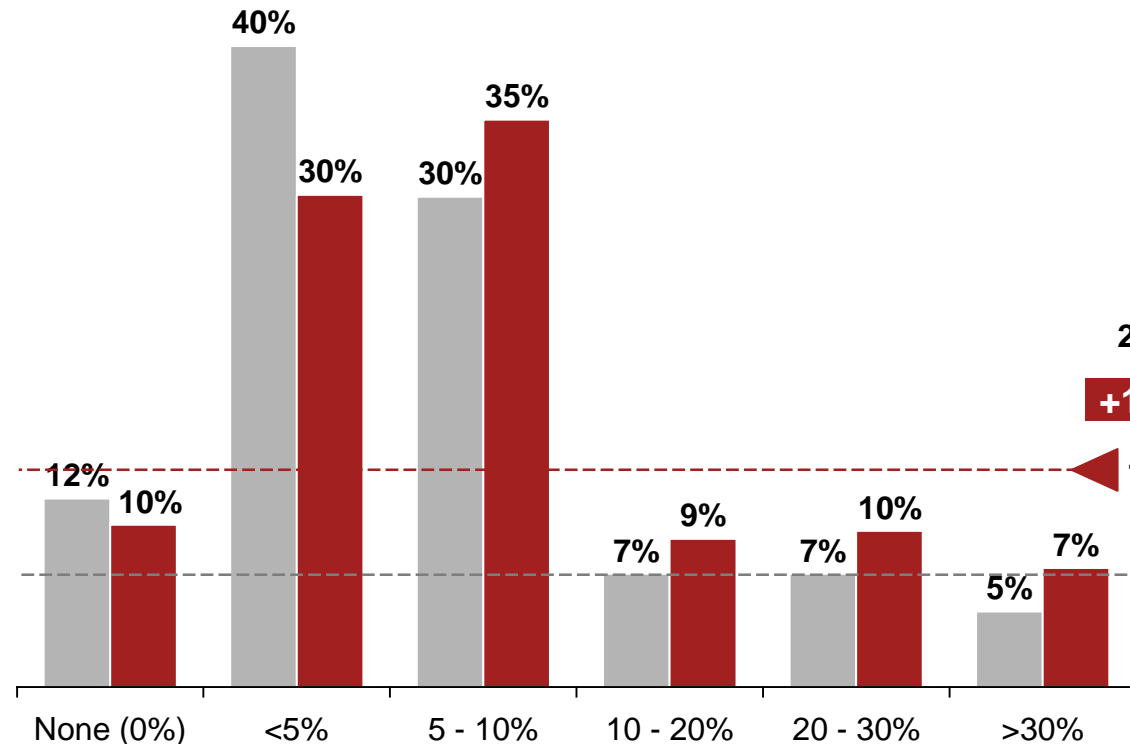


Increasing EV penetration in surveyed companies' fleets vs. 2020, with 10% additional growth expected in the next 2 years

Share of EV in companies' fleet

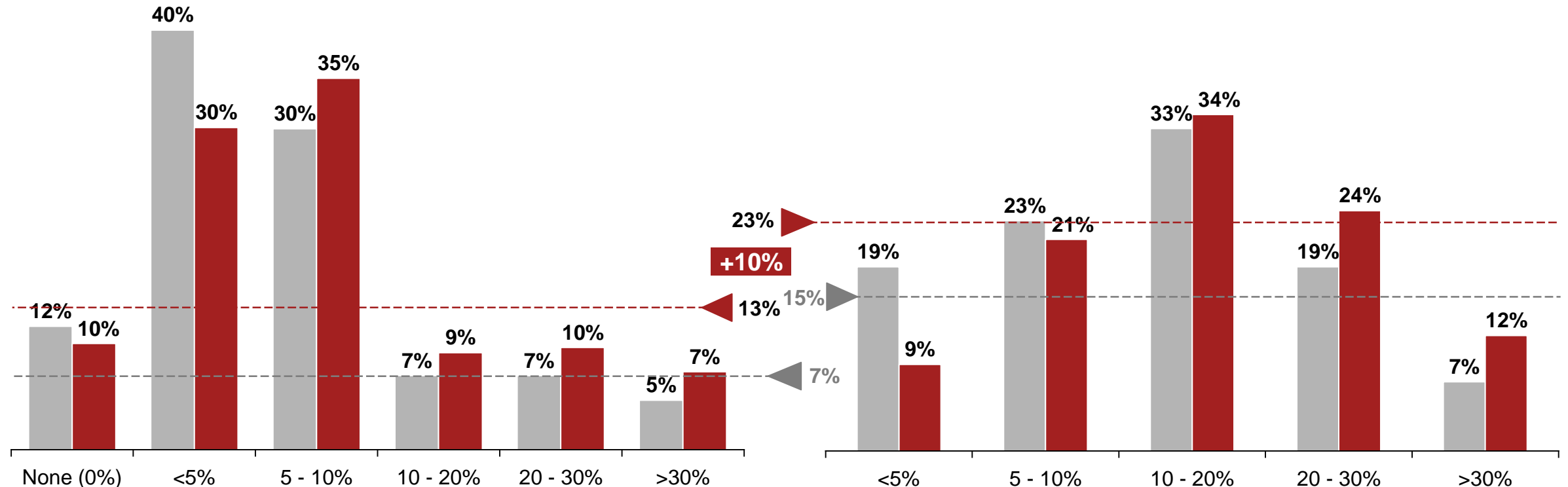
What is the EV share in your current company's fleet?

% B2B Customers Sample: #103 respondents --◀ Average¹ 2020 2021



Which EV share do you expect to reach in the next 2 years?

% B2B Customers Sample: #103 respondents ▶-- Average¹ 2020 2021

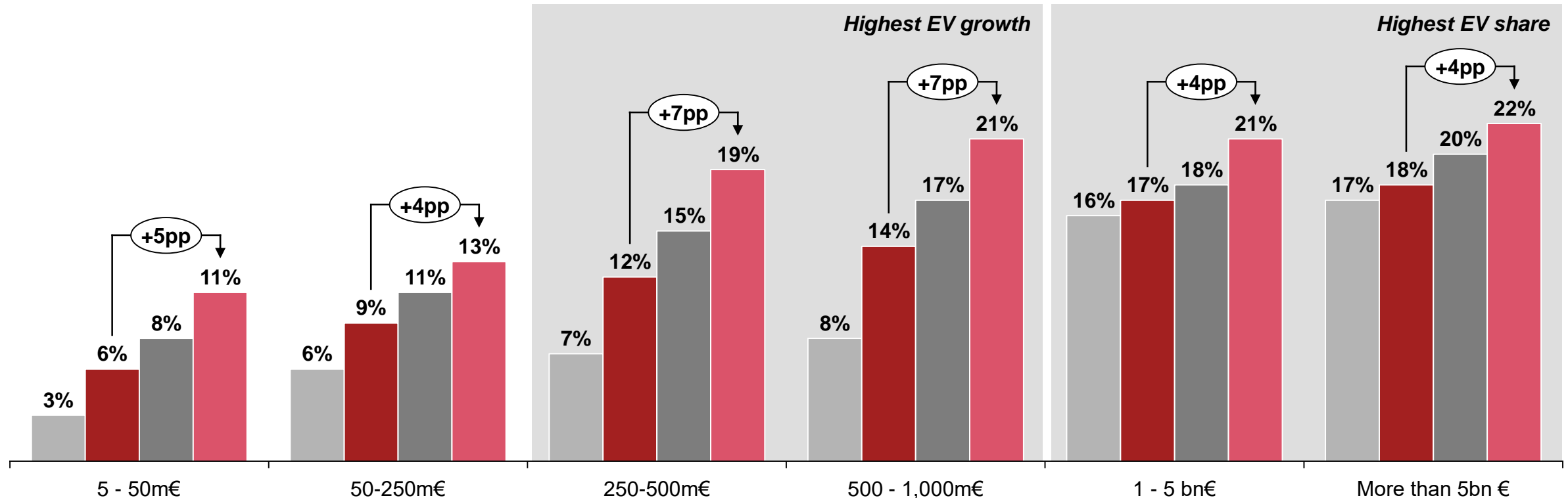


Large companies show the highest EV penetration, whilst mid-sized ones will register the highest growth in the next 2 years

EV penetration increase by company size (annual turnover)

How much do you expect to increase the EV share of your company's fleet in the next 2 years?

% B2B Customers Sample: #103 respondents 2020 Share 2021 Share 2022 Exp. Share (in 2020) 2023 Exp. Share (in 2021)



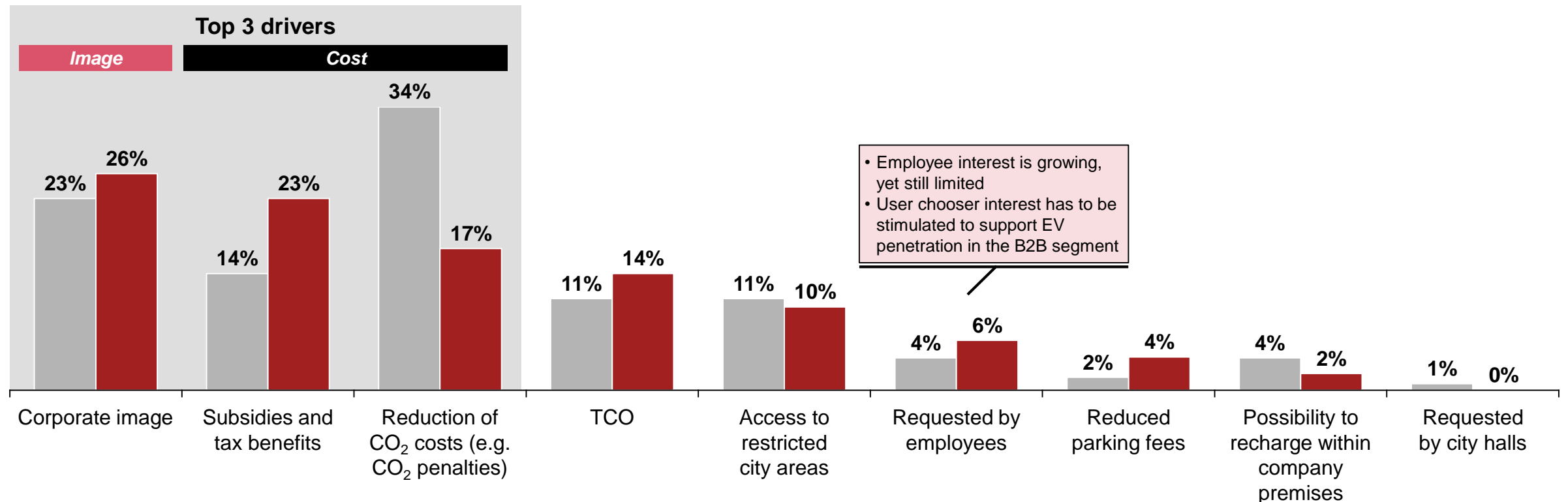
Key purchasing drivers are related to corporate image and EV cost – employees’ request is growing but still limited

Buying drivers

What are main reasons that drive you to select EV in the company fleet?

% B2B Customers Sample: #103 respondents

2020 2021



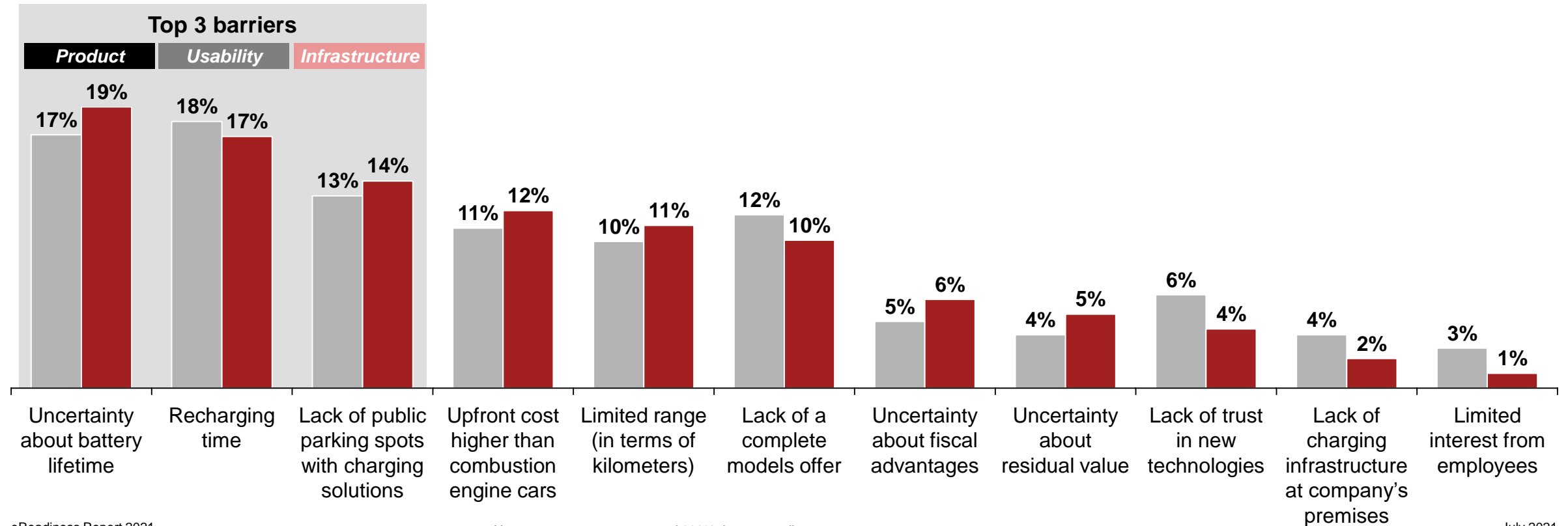
Main purchasing concerns are EV batteries, charging time and lack of public charging infrastructure

Reasons for rejection

What are the main factors that discourage you from selecting EV in the company fleet?

% B2B Customers Sample: #103 respondents

2020 2021



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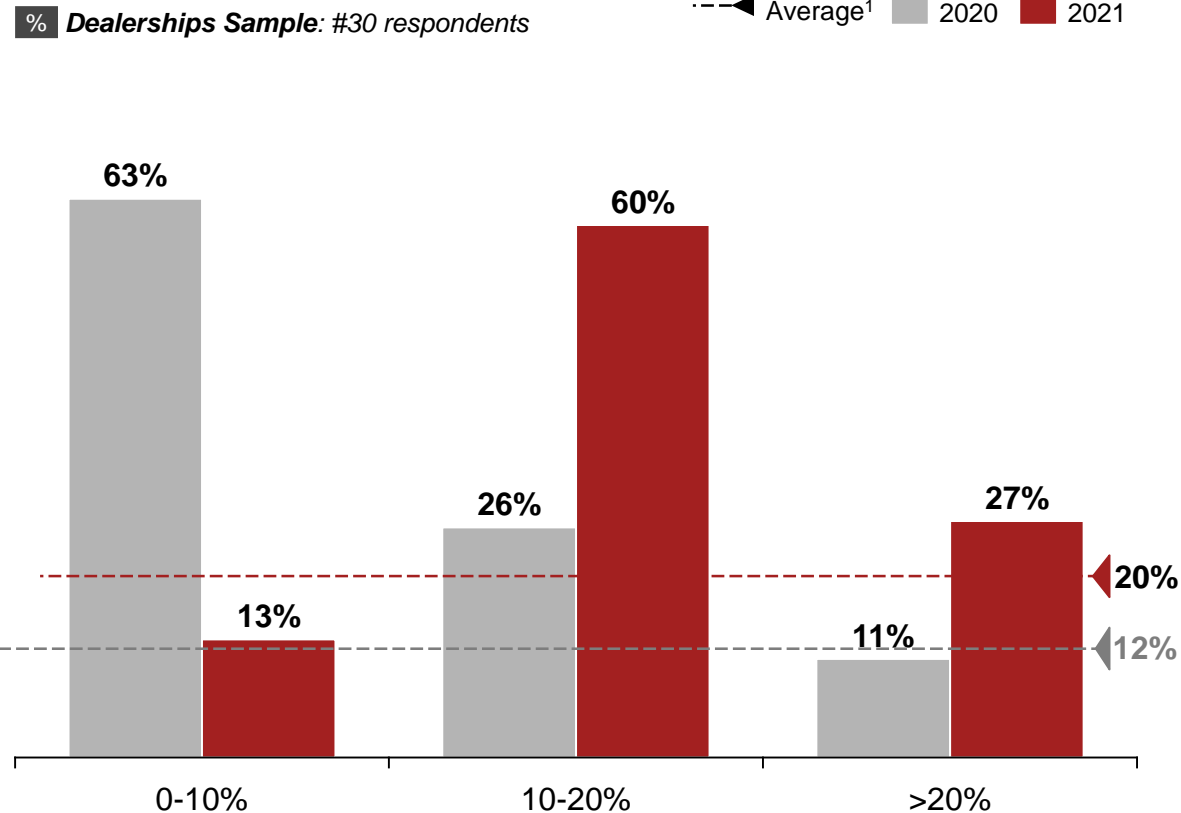
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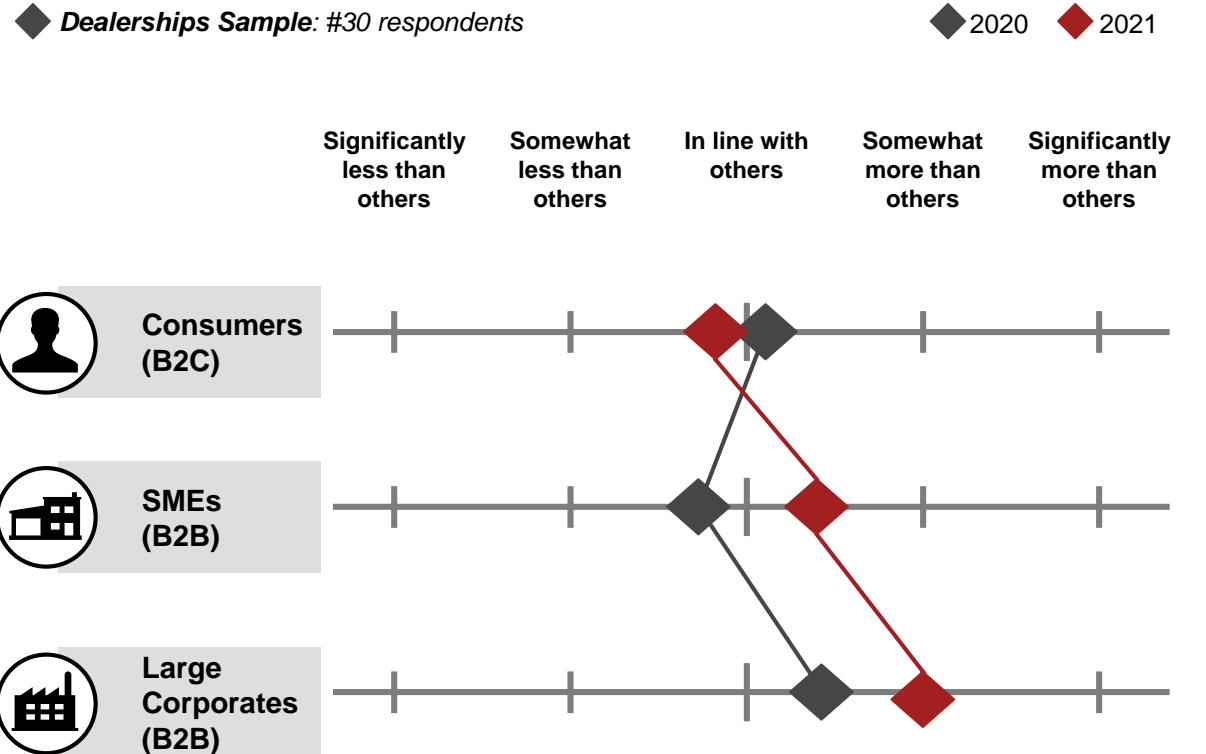
Majority of dealers envisage a 10-20% share of EVs in 2 years, considering the B2B segment to be the most attractive

Market view – EV sales forecasts

What EV volume share do you expect to achieve within 2 years as % of total sales?



What EV volume share do you expect to achieve within 2 years as % of total sales?



Urban population is considered as high-potential market; rural areas are seen less attractive compared to last year

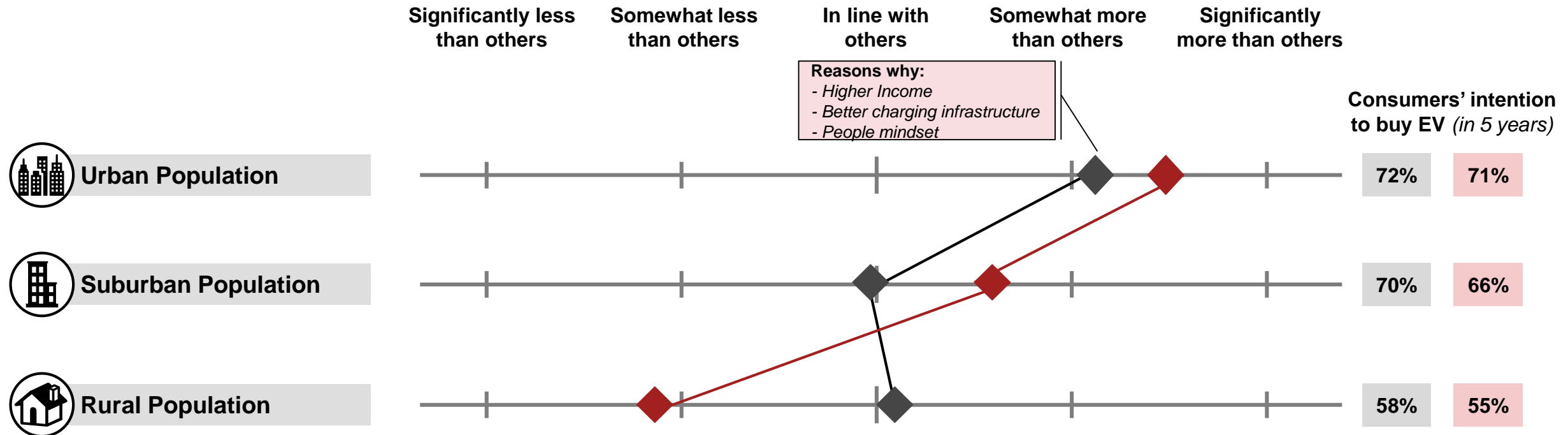
Market view – Segmentation & Targeting

Do you expect any difference in the EV take up rate across urban, suburban and rural population?

◆ Dealerships Sample: #30 respondents

■ B2C Sample: #2,244 respondents

◆ 2020 ◆ 2021



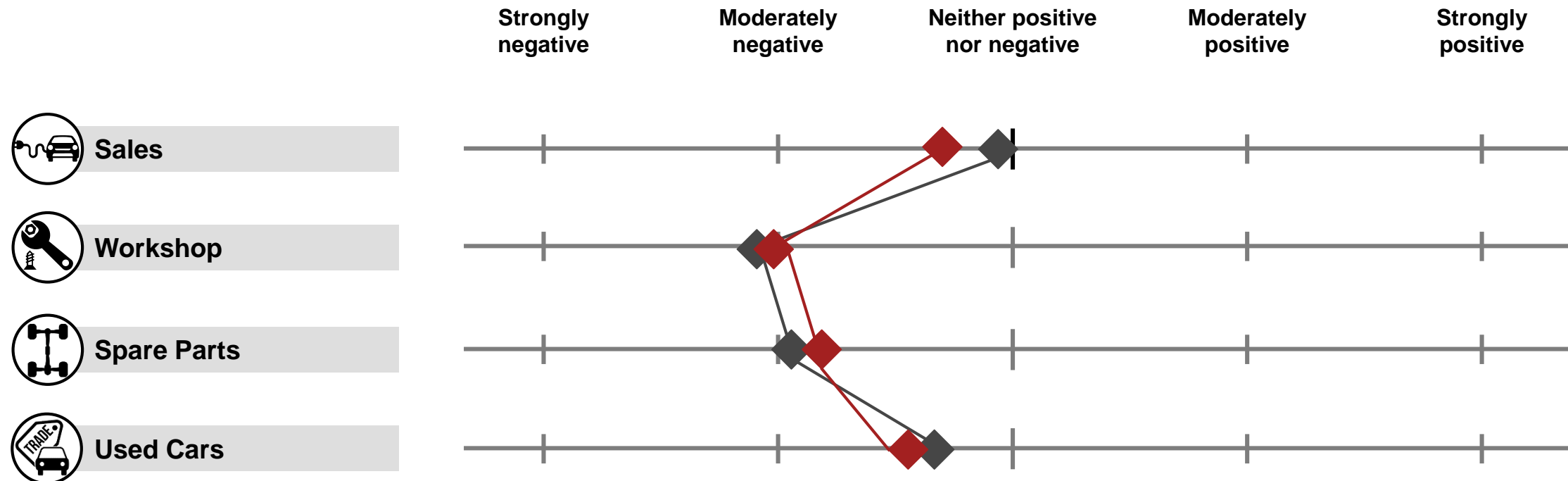
EV business is still expected to impact the profitability of dealerships, in particular with regard to workshop and spare parts

Sales channel – Dealership business impact

What is the expected EV sales impact on Dealerships' margins for each line of business?

◆ Dealerships Sample: #30 respondents

◆ 2020 ◆ 2021



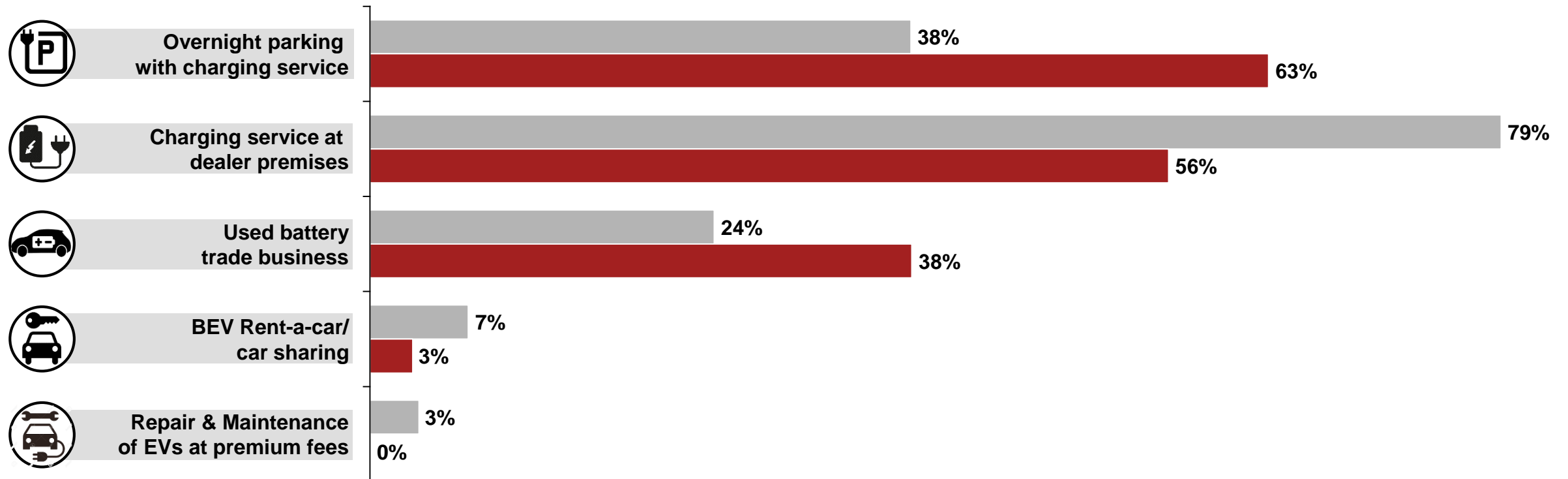
Charging services and used battery trade are seen by dealerships as alternative revenues streams connected to the EV business

Sales channel – Dealership alternative revenues pools

Which new revenue streams linked to EV business will Dealerships be able to exploit?

% Dealerships Sample: #30 respondents

2020 2021



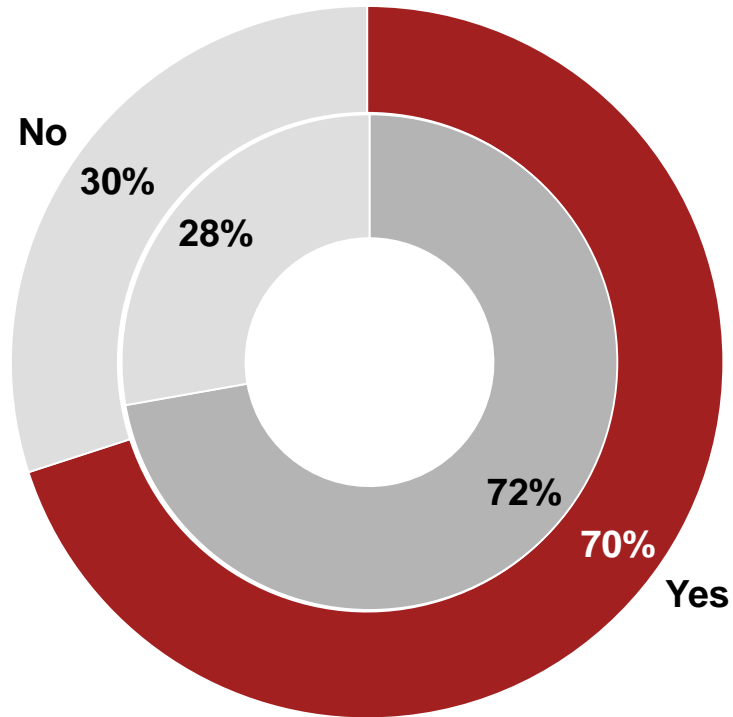
Dealerships feel their salesforce still needs support on EV-specific topics through training/ coaching activities

Sales channel – Sales skills & Capabilities (1/2)

Do you (as a dealership) think your salesforce has the right skills and capabilities to sell EVs?

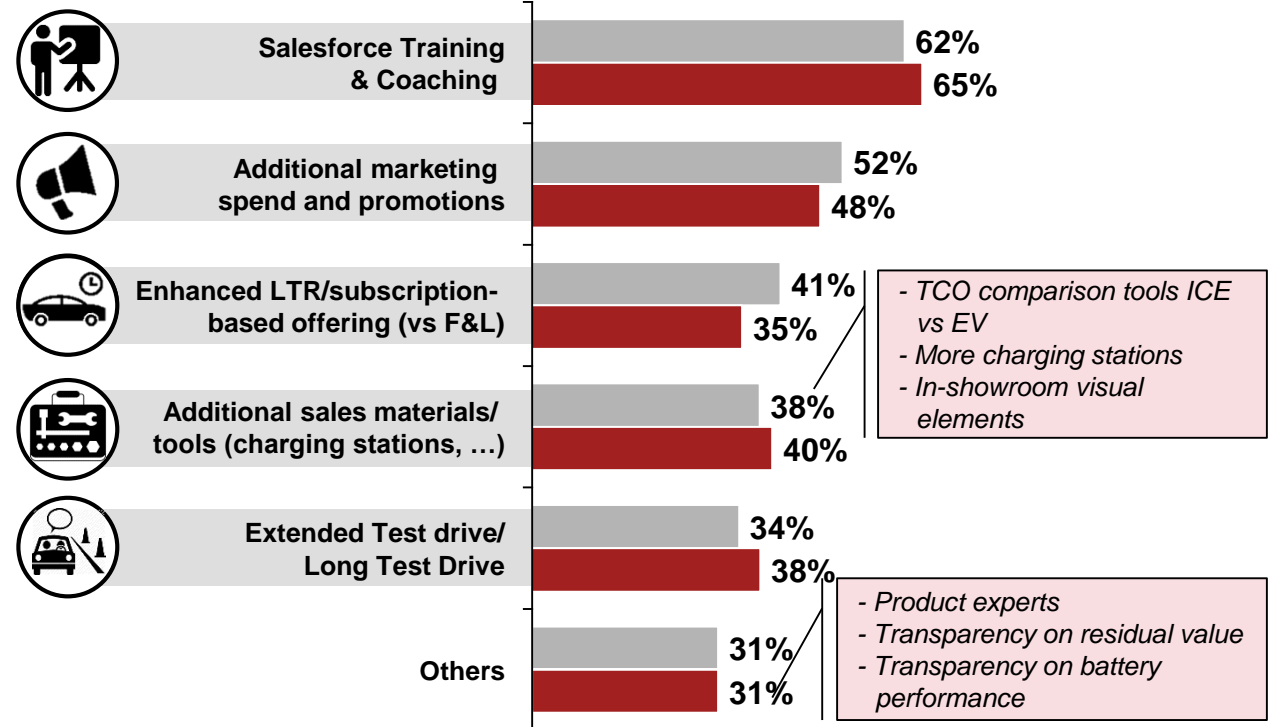
% Dealerships Sample: #30 respondents

◆ 2020 ◆ 2021



What support from the OEM would be needed to better drive EV sales?

% Dealerships Sample: #30 respondents

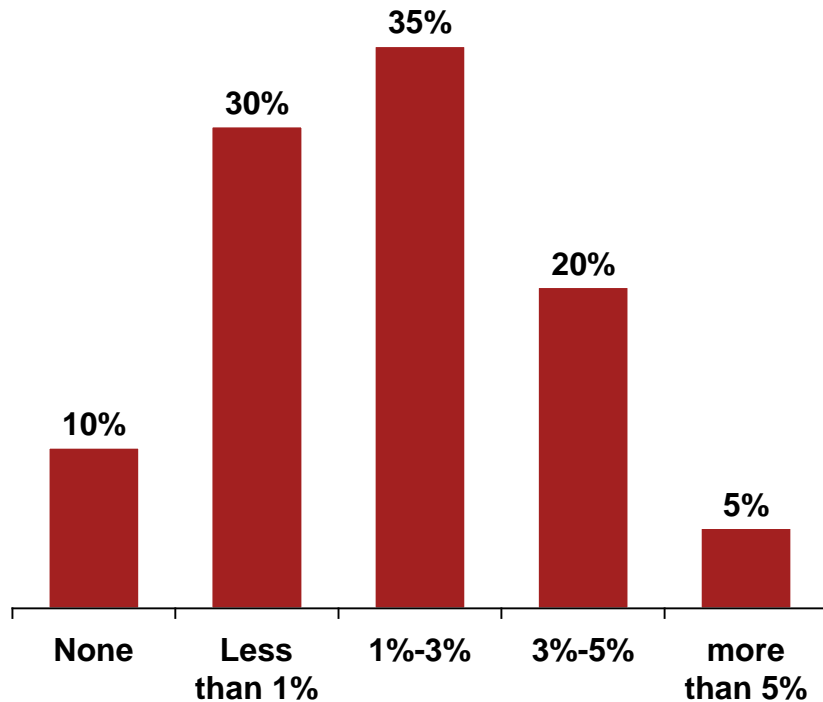


Used EV sales are negligible, yet stock rotation is lower than ICE vehicles and represents a primary concern

Used EV Deep-Dive *new!*

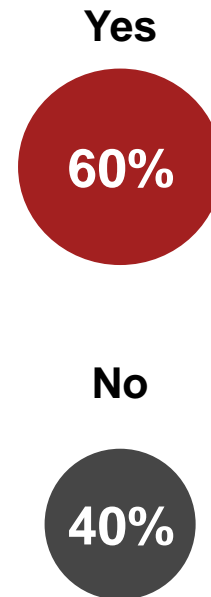
What percentage of EV sales is related to Used Cars?

% Dealerships Sample: #30 respondents



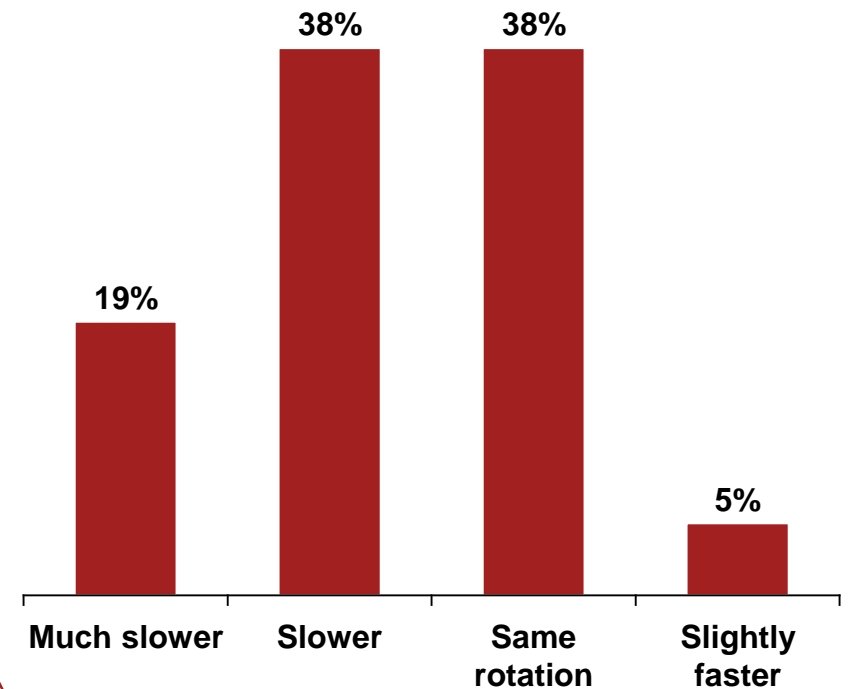
Do you monitor stock rotation for Used EVs?

% Dealerships Sample: #30 respondents



How do you perceive stock rotation of Used EVs compared to ICE?

% Dealerships Sample: #18 respondents



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We have shortlisted 5 improvement actions to help OEMs tap the full potential of the EV market demand in the short-run

Recommendations for OEMs

Proposed actions

Reasons why



Extended value proposition

Define an extended offering to address the increasing demand of EV-related products and services that are currently not part of the OEM & dealership portfolio (e.g. energy contracts, smart-home solutions, ...)



- 10-30% consumers purchased additional EV-related products and services within a short time frame after purchasing their EV
- Few OEMs have already defined an extended value proposition including energy bundles, home solutions and additional services



Omnichannel journey

Define a customer journey that complements traditional brick-and-mortar sales with a seamless on-line customer experience to target digital native prospects and ensure resilience in case of health emergencies



- ~10% of customers already bought their EV online, with ~60% willing to buy their next car remotely, mainly driven by convenience and cost advantage drivers
- 50% of the demand in the next two years is made up of digital natives living a relevant share of their life online



Customer experience

Design and deploy EV-specific sales process to make EV customer experience more compelling and to ensure constant monitoring of customer feedback to identify key pain points throughout the EV journey



- Word of mouth was the main consideration factor for EV owners, with returning customers beginning to represent a sizeable share (12%)
- EV owners' satisfaction declined 8% in the last year, with few OEMs having defined EV-specific sales process guidelines focusing on the entire journey



Customer Support

Enhance customer support during the post-purchase phase, by focusing on the installation of private charging solutions as well as public charging point usage



- ~60% of B2C and 70% of B2B customers procured EV charging solutions
- OEMs/ Dealerships managing the installation of charging infrastructure achieve higher NPS, improving brand advocacy and word of mouth which represent the main consideration factor for new EV purchase



Pre-Owned EV business

Enhance used EV business proposition with dedicated CPO and upskilling programs to help dealerships manage the EV 2nd hand trade in a more effective and profitable way



- 40% of dealers do not / have a limited experience in used EV sales
- Used stock rotation is slower than traditional ICE vehicles, putting additional pressure on the profitability of dealerships and working capital requirements

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