

# From Early Adopters to Early Majority: Accelerating the Electrification of Cars

**Research Report** 



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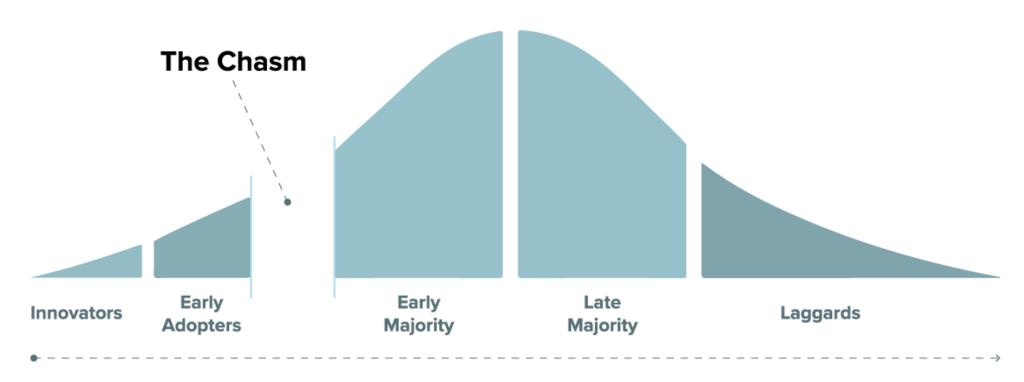




# Electric car adoption in the UK is entering the Early Majority stage, which we know from other technologies is a critical stage of market adoption

This move into the mainstream market is sometimes referred to as the "Chasm" since many businesses have historically failed in this transition

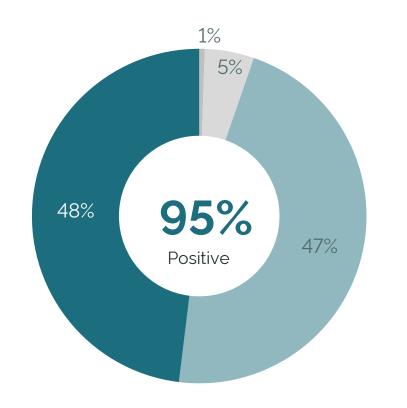
#### **Technology Adoption Curve Market Segments**





# 95% of UK consumers who have driven or ridden in an EV had a good experience and the openness to consider an EV is high

#### **Experience of Driving or Riding in Electric Cars**



■ I didn't like it ■ I neither liked nor disliked it ■ I liked it ■ I loved it

**Openness to Consider an Electric Car** 

74%

Definitely open and actively considering



## However, Early Majority consumers still have significant concerns that hinder adoption, most of which are based on *misconceptions*

#### **Top 5 Early Majority Consumer Concerns**



Public Charging Availability



**31**%

**Charging Time** 



**30%** 

Purchase Price



Higher Electric Bills

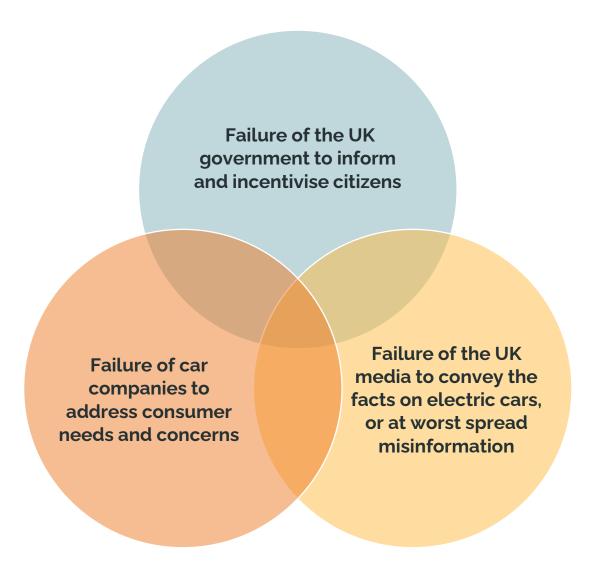


**28%** 

**Batter Longevity** 



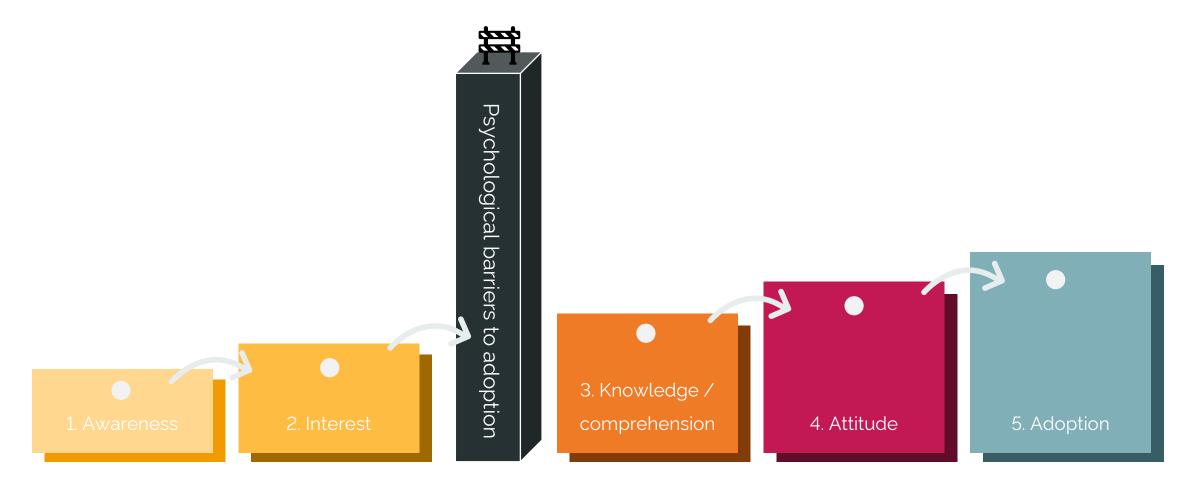
# A tripartite failure has led consumers in the UK to remain sceptical towards electric cars, introducing a risk to achieving the UK's net-zero targets





# The most effective lever of behaviour change is to educate consumers and update their knowledge of electric cars

Misconceptions about electric cars currently make up the most significant psychological barriers





# Stronger awareness and new policy is also needed to remove the most important remaining *physical* barriers: charging and financial risk

Inability to charge at home -

Lack of public chargers -

Reliability of chargers -

Cost of charging -





- High upfront cost
- Lack of affordable financing
- High insurance costs
- Unknown cost of ownership



# Early Majority consumers are unaware that the incentives they find most motivating are often already available in practice

Government thus has a strong opportunity to increase adoption in a cost-effective way

#### **Top 3 Early Majority Consumer Preferred Incentives**





st 8

8-year extended warranty for the car

2<sup>nd</sup>

Charging always at least 50% cheaper than petrol per mile

3<sup>rd</sup>

Free home charger installed

Why?

Alleviates concerns surrounding reliability and battery

New?

Already in place for batteries and many manufacturers offer extended warranties for the car Why?

Alleviates concerns around long-term costs and cost-of-living crisis

New?

In practice this is already the case for a vast majority of use-cases but consumer are unaware and policy is lacking. Why?

Convenient charging at home for electric car owners

New?

Many automotive brands already offer this but consumers are unaware. Government grant now restricted to renters and unavailable to homeowners.



## An Electric Car Communications Primer

#### WHAT TO SAY

Focus on
increasing
electric car
knowledge and
reliability in
messaging

Emphasise

 availability and
 reliability of
 public charging
 network

experience with electric cars is more common-place

#### **HOW TO SAY IT**

Simple, clear and memorable information on the lifetime and reliability of the car Simplify charging routine with ease of access, payment, and wayfinding, through industry partnerships

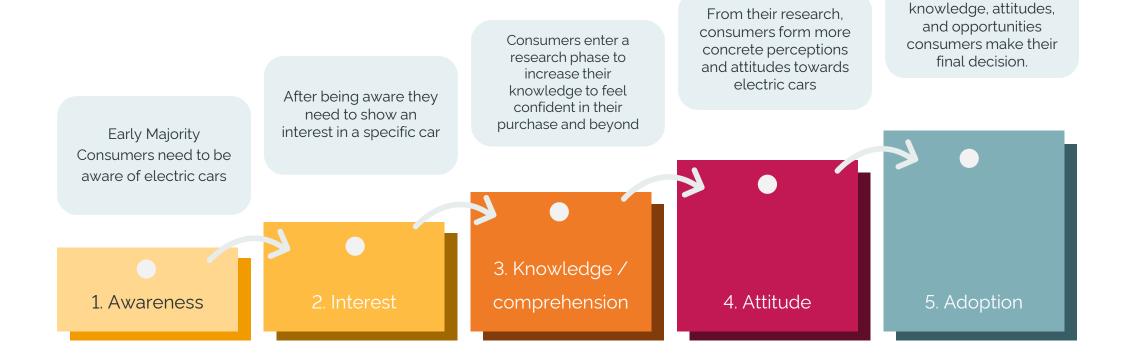
More human, story-driven communication using social proof from trusted public figures, influencers on social media etc.

# Breaking down the problem

What's stopping consumers from buying an electric car?



# The adoption ladder provides an overview of the steps these Early Majority Consumers take in their electric car purchase



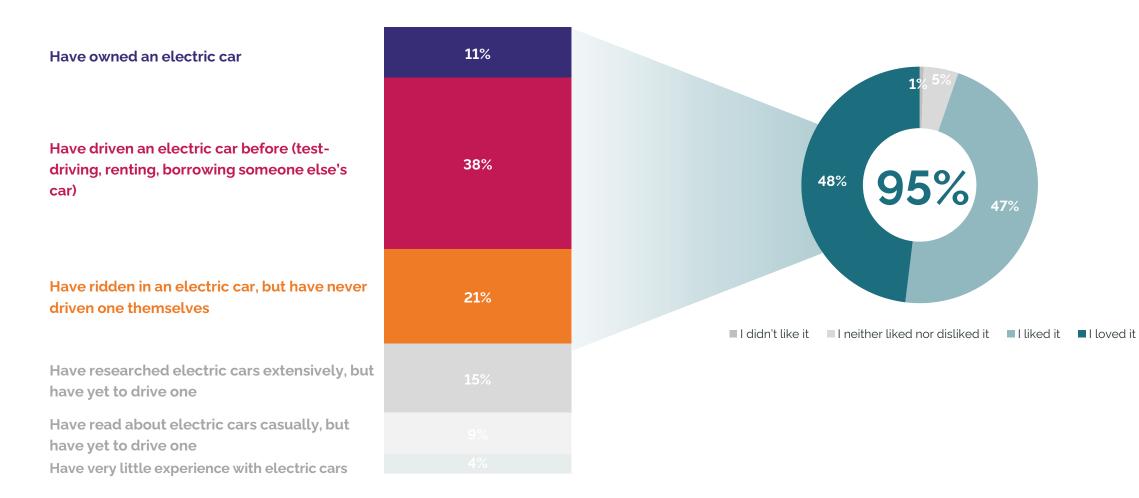


Buy or don't buy? Based on their

## UK consumers are aware of electric cars and have had positive experiences

#### Consumers' experience with electric cars

95% had a positive experience, either liking it or loving it





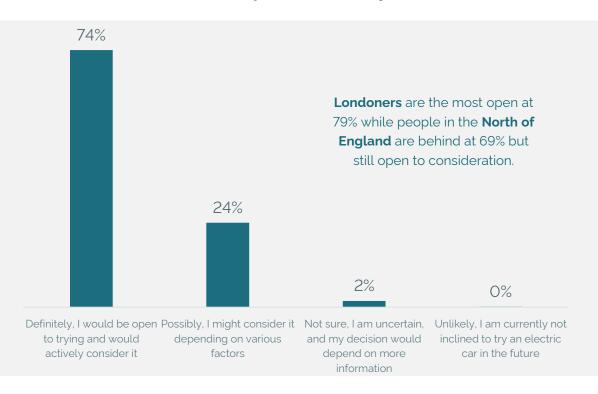
# Experience with electric cars positively influences the likelihood of purchase and openness to trying an electric car

#### Purchase Likelihood

# 91%

More likely to purchase an electric car after the experience (T2B%)

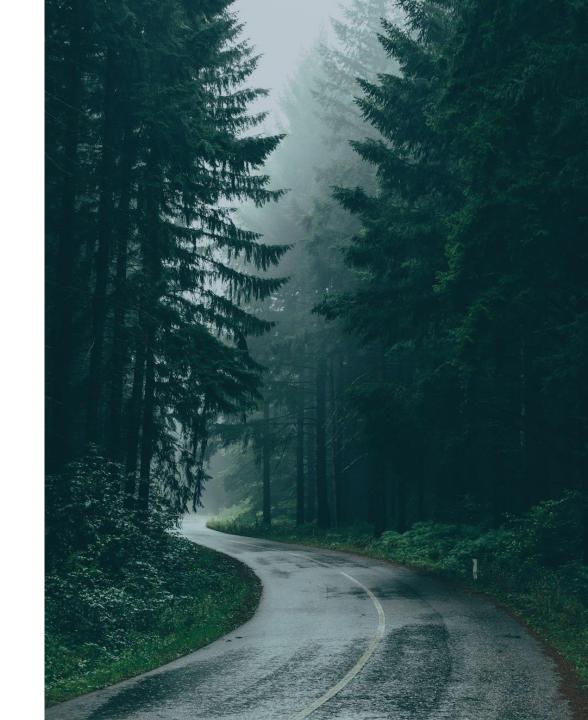
#### Openness to try





However, this positive experience is not always translated to purchase.

We can influence that by better understanding electric car purchase behaviour.



## Buying a car can be a big decision

Consumers often conduct a cost benefit analysis to balance their needs and constraints



#### **Needs**

What do consumers use their car for?
 What factors do they consider when choosing a car?
 How do they normally use and maintain their car?

#### VS.

Cost	<ul> <li>How much are they willing to spend on their car? Upfront? Lifetime?</li> </ul>
Infrastructure	<ul> <li>What infrastructure and maintenance facilities are available in their area?</li> </ul>
Alternatives	What other transportation methods are available?

**Constraints** 

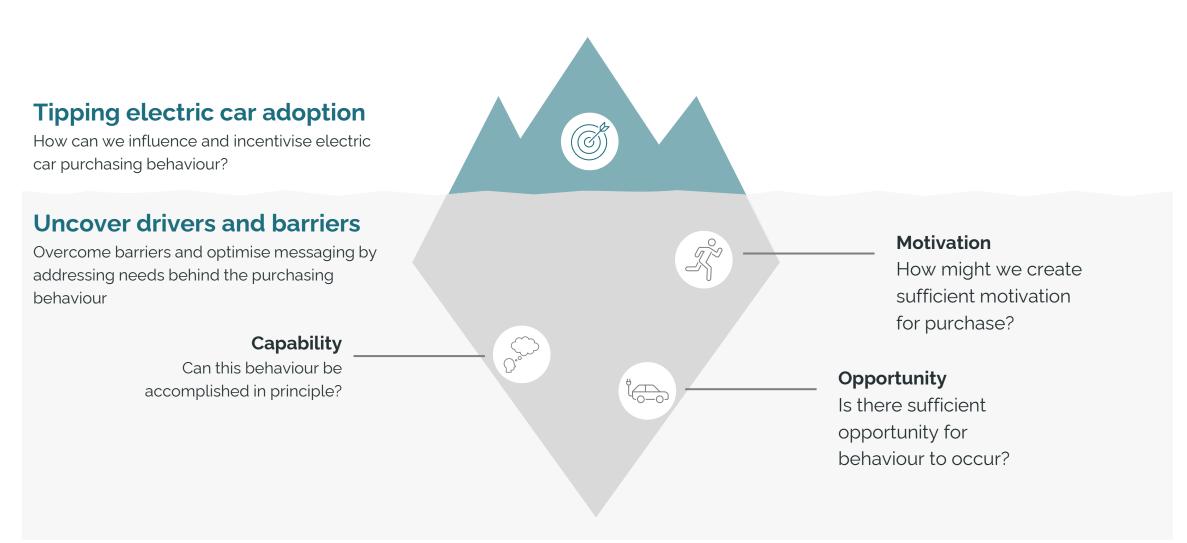






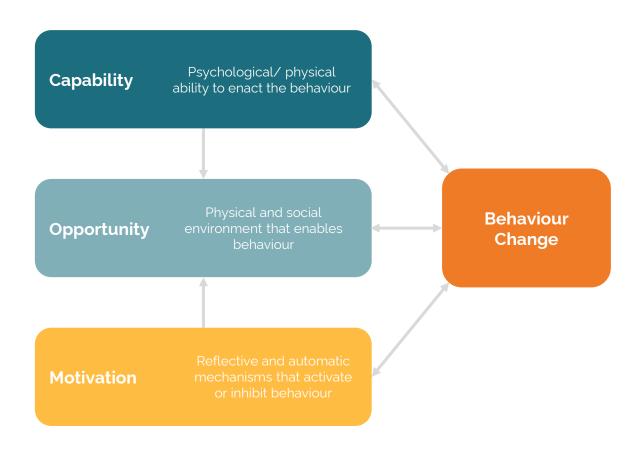
## Big ticket purchases are layered with risks and uncertainties

Looking beyond the tip of the electric car purchase helps us uncover drivers and barriers





# The COM-B model helps us to understand key factors triggering behaviour change



#### The COM-B model

The COM-B model for behaviour change is a framework that creates change by modifying at least one of these 3 key factors:

- 1. Capability: Can this behaviour be accomplished in general?
- **2.** Opportunity: Is there sufficient opportunity for it to occur?
- **3.** Motivation: Is there sufficient motivation?

#### How we can use the COM-B model

Understanding behaviour and preferences of the electric car Early Majority is key. The COM-B model allows us to tangibly identify factors that will and likely will not contribute to behaviour change and why.

This allows us to transform our insights to provide tailored, actionable recommendations.



# The COM-B framework helps us to prioritise the complex, interlinked decision factors and effectively address barriers



**Buying** a

new

electric

car

Opportunity

Automatic motivation

Social opportunity

Reflective motivation

Psychological Psychological

Capa6ji Capa6ji

Opportunity

physical capability

#### Do I know electric cars well-enough?

Do I know enough about electric cars?

Do I know what to expect in the long-run (maintenance and repairs)?

Do I have the time to search for

Do I have the time to search for information?

#### Do I have everything in place?

Do I have enough money?

Am I able to install a home charger?

#### Can I maintain an electric car?

Do I have sufficient public charging infrastructure around me?

Are there garages I can trust for repairs and maintenance?

Do the available car models satisfy my needs?

#### How motivated am I in general to try an electric car?

How much do I lean on my habits and knowledge of petrol cars?

How risk averse am I?

riow risk averse arri

How skeptical am I of new technology?

#### Has the electric car convinced me?

Do I think this electric car is worth it? Is this car better than others / what I usually would do?

Can I achieve my goal with this car?

#### Do my peers have an electric car?

What is the attitude of my peers about electric car?

Can I the use experience of others?

## External motivators





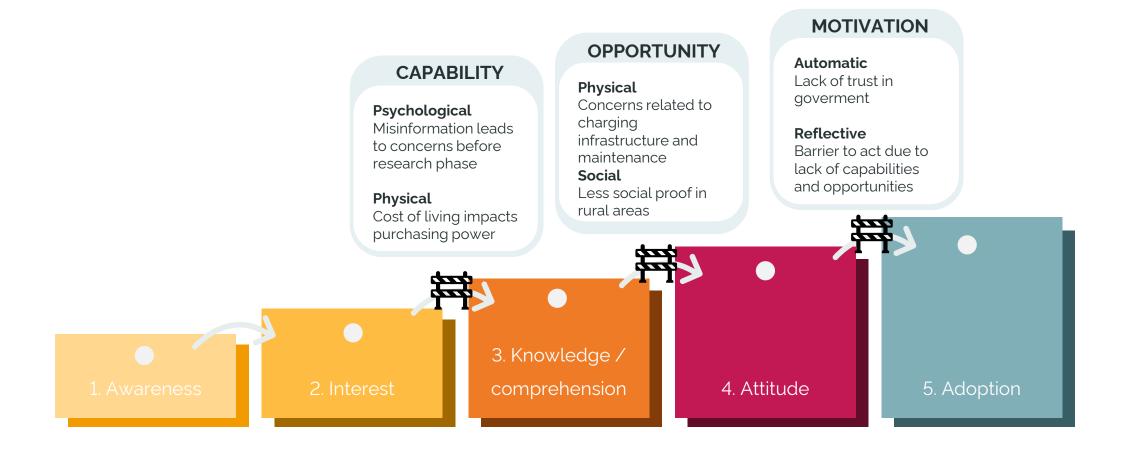


**Practical** 

factors

## The complexity of the decision leads to barriers appearing

Barriers due to communication failures and misconceptions actively harm consumer confidence





## While there is significant motivation for adopting electric cars, ensuring that people have both the capability and opportunity to embrace electric cars will be crucial



- People are relatively experienced with electric cars, yet the overall knowledge is still low.
- The scarcity of charging infrastructure is particularly concerning for long journeys, as individuals want to avoid the stress of searching for available stations.
- The overall cost of living is a source of worry, with a focus on the initial cost of acquiring an electric car and the potential impact on household electricity bills.

#### Conclusion:

Although people have had a **positive experience** with electric cars, there are still significant concerns related to the **need for safety and reassurance**. The high **initial and insurance costs** create more risk and uncertainty in these times of a **high cost of living**, hindering motivation towards adoption.



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- Limited access to public charging stations raises concerns about extended wait times, especially in rural areas.
- Concerns about maintenance, such as the availability of garages to repair electric cars, need to be addressed for widespread adoption.
- Opportunities exist in enhancing education and awareness about the benefits and features of electric cars to address misconceptions and encourage adoption.
- While people may think there are enough electric car models in the market, it's crucial to ensure inclusivity, catering to diverse needs, including those of disabled individuals.

#### Conclusion:

Although there is an interest in the adoption of electric cars, the primary challenges lie in the **limited availability of repair facilities for electric cars in garages** and **the insufficient infrastructure of public charging stations**. Addressing these issues, along with dispelling misconceptions, is crucial to fostering widespread acceptance and usage of electric cars.



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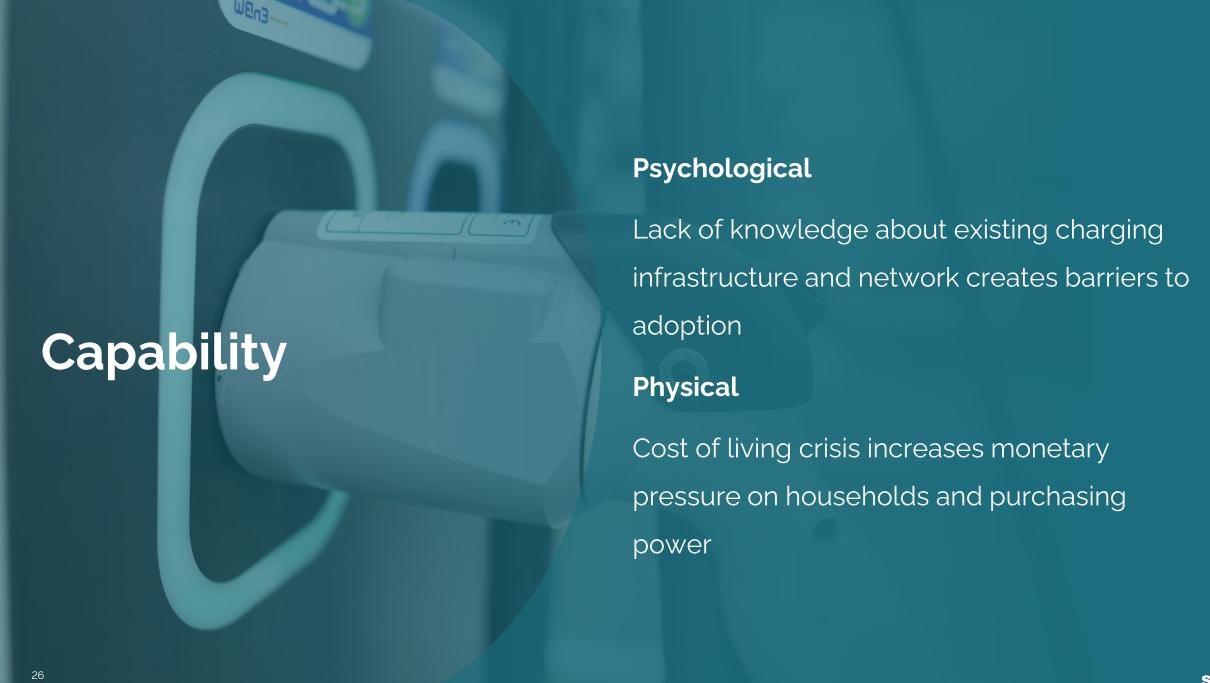


- While individuals express an openness to explore electric cars, the primary concern centers around the perceived high costs, portraying electric cars as a potentially risky investment.
- As a result, doubts linger about whether the upfront financial investment will translate into long-term advantages and whether it justifies the shift from conventional petrol cars electric cars.
- A crucial factor contributing to this hesitancy is the lack of trust in governmental initiatives to facilitate electric car purchases.

#### Conclusion:

While there is a general willingness to consider electric cars, lingering concerns about **perceived high costs** and **skepticism about the long-term benefits** of this investment persist. A major contributing factor is the **lack of trust in government** initiatives aimed at facilitating electric car purchases, which may **hinder individuals from making the switch**.





#### **PSYCHOLOGICAL**

#### What is it?

 Our knowledge and our psychological and information processing skills (e.g. attention, memory, mental models...)

#### **Example considerations**

- Do I know enough about electric cars to purchase them?
- Do I know what to expect in the long-run (maintenance and repairs)?
- Do I know any reasons to buy an electric car over ICE?
- Do I have the time to search for information?

### **CAPABILITY**

Can this behaviour be accomplished in principle?

#### What is it?

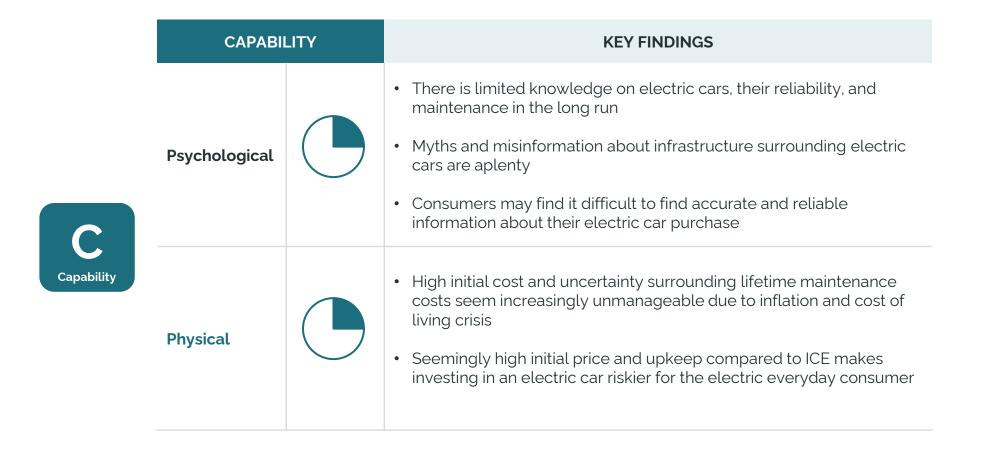
 Physical strength and skills (e.g., money, control over our direct environment, etc., )

#### **Example considerations**

- Do I have enough money?
- Am I able to install a home charger?

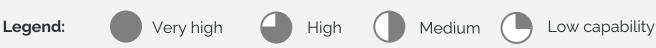


## The high barriers for Early Majority consumers to adopt an electric car stem from the need to increase psychological and physical capabilities



#### **KEY TAKEAWAY**

- Focus on building consumer knowledge of electric cars
- Create digestible, easy to find and relevant information on reliability, charging, and warranties
- Make long-term ROI of electric cars more attractive compared to petrol





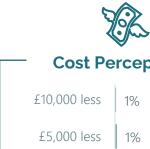


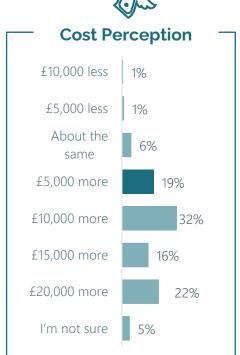
## Few consumers are currently aware of the facts related to electric cars, highlighting the importance of better communication and education

This also underscores the prevalence of misinformation as many of these misconceptions continue to be reported in UK media today.

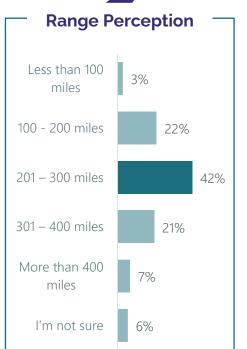
#### **Perceptions of Electric Car Facts**

Bars in dark blue denote the factually correct answer.

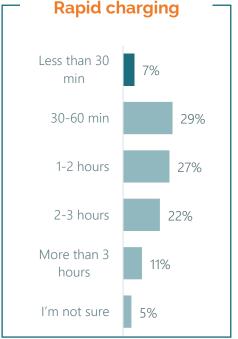




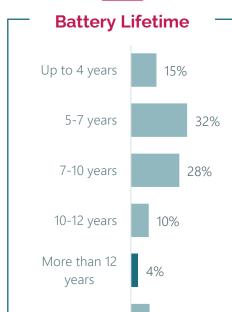






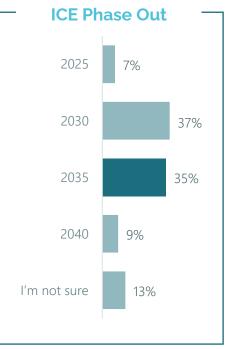






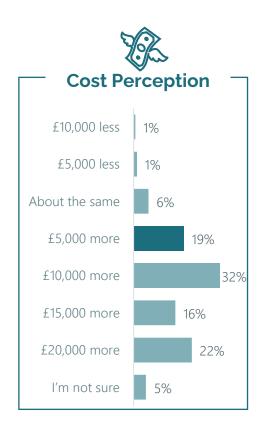
I'm not sure







# Many assume electric cars are pricier upfront than petrol ones. Yet, it's crucial to convey that despite the initial cost, going electric pays off in the long term



People earning over £100,000 think it will cost £20,000 more compared to petrol, while lower earners believe it will be £5,000 to £10,000 more.

People who live **in London** think that a new electric car will cost **£20,000 more** compared to the same model with petrol.

"electric cars are significantly more expensive right now and it's hard to find the extra cash" "I believe they're at least 5k-10k more expensive and in this economy that isn't viable for myself."

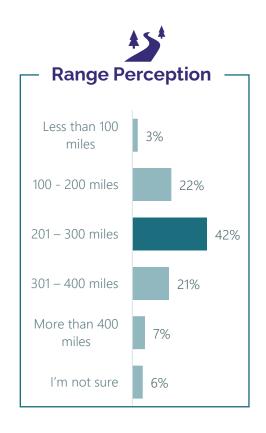
"Expensive to buy and then to charge. I think they are at least £10k more."



No significant differences across different ages, gender



# Although most people have a good understanding of average range, some still feel like it is not enough



An average new electric car sold in 2022 can travel around **200-300 miles** in the real world on a full charge with many longer-range models available at a slight price premium.

People earning over £100,000 see the range as over 301 miles, while those with lower incomes perceive it as less than 300 miles.

People over 50 estimate it around 200-300 miles, while those aged 30-39 think it's over 300 miles. Females tend to believe it's under 200 miles, while males think it falls between 200-400 miles.

"On a full tank of petrol I currently get about 450 miles which puts most of the UK within reach. An electric car is half of that range"

"I love to explore and drive to Wales often, it's nearly 200 miles there and back and the cars I've looked at have no way near that that range."

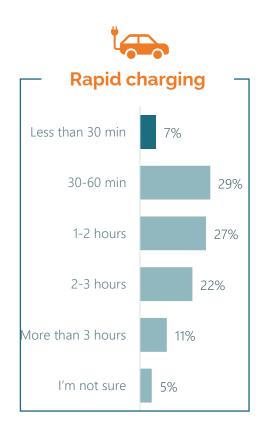
"The maintenance of electric cars can really cost a lot. Also, the range at which the electric car can go as the max is just 100-200 miles."







# Many believe care that charging the battery from 20-80% using a rapid charger take over an hour



It typically takes **20-30 mins** to charge the battery from 20-80% full using a rapid charger.

Females expect over 2 hours for rapid charging from 20-80%, males anticipate under an hour.

Those above 50 estimate less than an hour, while under 40s think it takes over 2 hours.

People who earn £100,000 or more are more likely to think that it takes more than 3 hours.

"I thought it was an hour or more, not even a phone charges that quick"

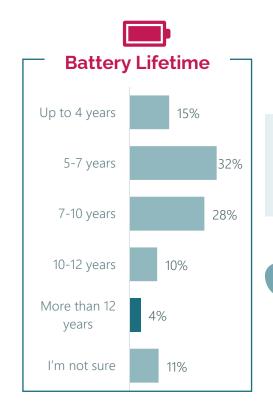
"I didn't know it was that quick - I thought it would be longer than that"





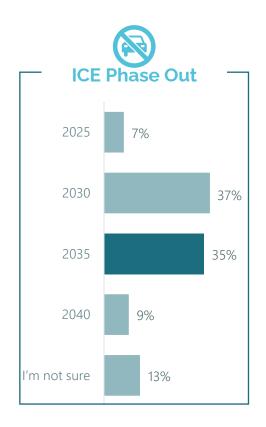


## Only 4% of consumers understand that batteries last as long as they do, with many thinking that they will have to be replaced within 7 years.



The battery of an electric car will last somewhere between **15-20 years** before it loses significant capacity.

"I thought batteries get weaker and weaker like a mobile phone and hearing this makes me more confident to buy one"



The set target is that all new cars sold will be fully electric by 2035.

People over 40 are more aware of the forthcoming petrol car ban scheduled for 2035.

No significant differences across different age groups, gender, region Source:1electric carBox. 2UK Government



## Consumers tend to buy cars suitable for their edge cases

Rather than for day-to-day use, consumers seek bigger cars for longer journeys with more what-ifs

Consumers want bigger cars for longer journeys...







...suitable for both their everyday and electric every-now-andthen travels



"I have a large family so need a bigger car. Also, we holiday regularly in the UK and thus need a bigger car for everything"

"Lots of room for travelling with family on journeys"

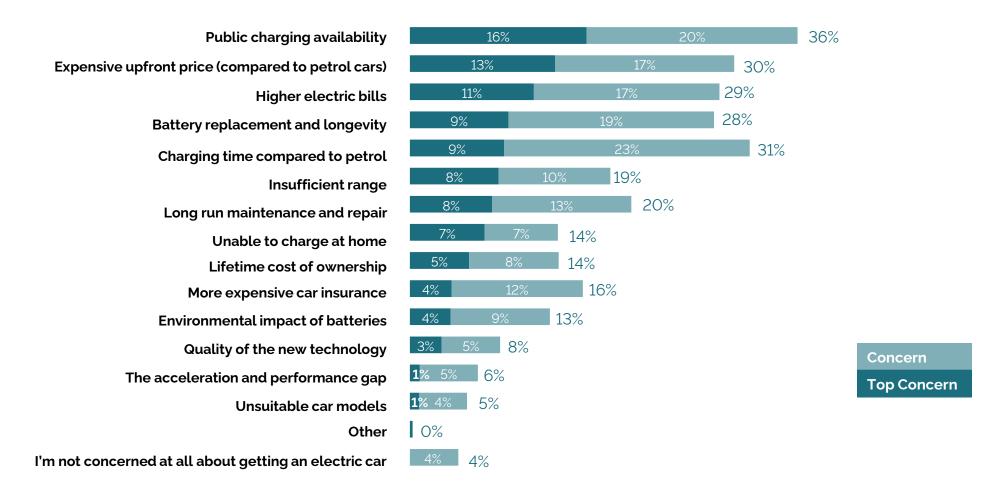
"Most of my driving is long distance motorway driving and needing a one hour pitstop every leg of the journey is going to be difficult."

"I may have to queue to charge. I plan to do most charging at home, but do travel far with electric every now and then."



## This results in lasting concerns around charging and cost

#### **Top Concerns Among Early Majority Consumers**





### These functional concerns often have emotional foundations

# Top concerns in electric car purchase

%

	Public charging availability	16%
	Expensive upfront price (compared to petrol cars)	13%
• • •	Higher electric bills	11%
	Battery replacement and longevity	9%
	Charging time compared to petrol	9%
<b>9</b> ::	Insufficient range	8%
	Long run maintenance and repair	8%
	Unable to charge at home	<b>7</b> %
(V)	Lifetime cost of ownership	5%
\$ € £	More expensive car insurance	4%

# Uncertainties around charging and costs create anxiety

#### Access to public charging

- "Because there has been a distinct lack of investment, particularly by the Government in providing these facilities. You constantly hear stories in the media of people being stranded or waiting for a long time to charge their car or find it virtually impossible to actually find a charging station, especially in more rural areas."
- "Difficulty **finding public chargers and then securing a slot.** In Glasgow cars are left plugged in at 8.30 and not rescued till lunch time and often the car isn't moved so takes up the charging space"

#### **Expensive upfront price**

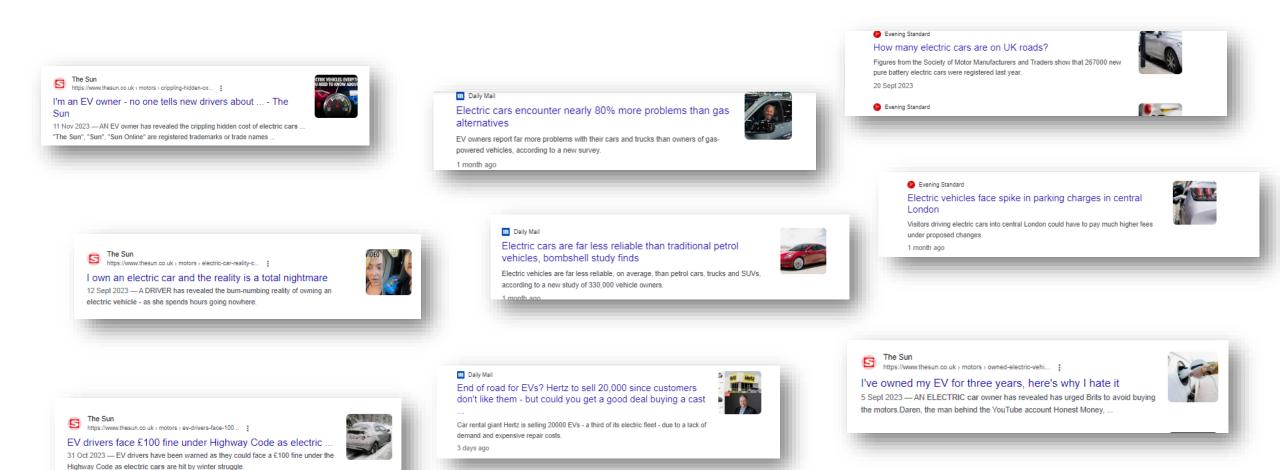
- "The initial outlay to buy the car will be higher and I am not sure about spending so much more. I appreciate the environmental impact and am keen to get an electric, but the costs currently are way too expensive and the charging station availability isn't good enough yet."
- "I can buy a **petrol version of the Volvo I am considering for £15000 less** than the electric. That's a great deal extra money just to drive fewer miles "

#### Higher electric bills

- "It is **scary how much they are charging us for a normal necessity** in life. People cannot afford to put their heating on in their own homes."
- "The cost of electricity is extremely high at the moment and rising. I'm **not sure I can afford an extra high cost item**. At least with a petrol car I **know roughly how much my weekly petrol will cost me."**



### Mainstream UK media is often the source of these concerns





# Charging is a greater concern for those who live in rural areas

More limited access to public charging induces range anxiety for those living in Yorkshire

### In London, charging points are commonplace



- It's becoming more the norm to see them dotted around everywhere, and even with the lamp posts, they've combined them with that now. So, I mean I'm pretty confident I wouldn't get stranded if I was driving
- Yeah, I mean, I've got quite a few charging pods on my road.
   There's loads so it doesn't really concern me, even when shopping, the supermarkets, they've all got them as well.
- They're everywhere in East London, I believe, like all the and the rural parts as well, because I'm like in the green part of East London and I'm not far from one. They're everywhere, literally.



### Whilst in Yorkshire, finding one can be stressful

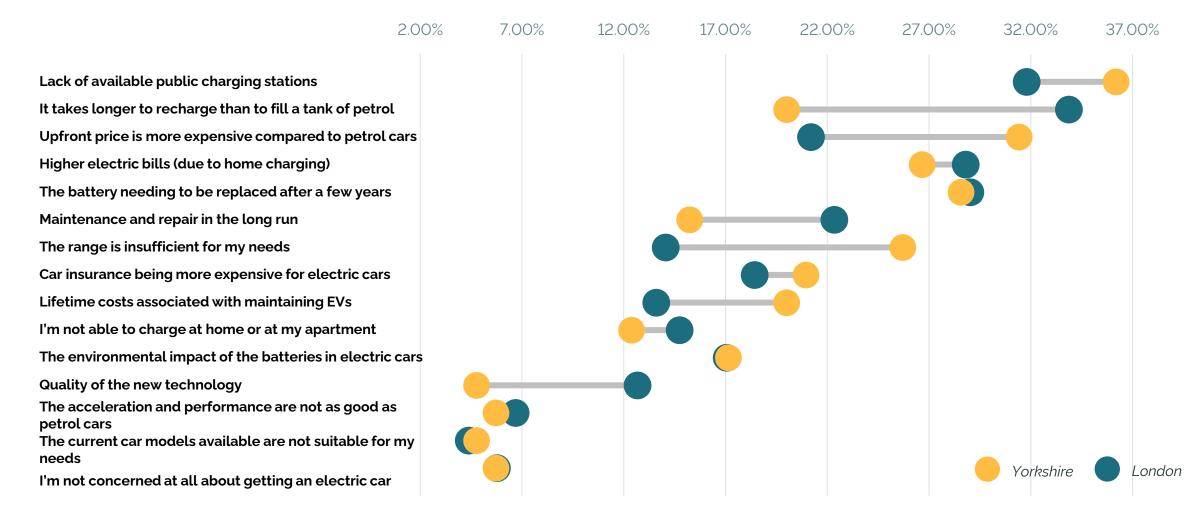


- Finding charging points it's just a bit stressful, I don't want to plan I don't need that in my life.
- o I'm sorry, one of the things that I think I'd be thinking about was if all the charging points were accessible. Is it you know, for me, somebody with disability? Is it going to be too difficult to manoeuvre? And stuff like that. Where am I going to go if I've got to kill two hours, have I got an accessible place around me to go and wait and all that?
- It took us 8 hours to do a 3-hour journey because the charging points were broken and we had to take detours
- My friends that have full electric cars have all had horror stories and that's why I want to stay clear of them till their more reliablechargers not being working order, not being in range, not putting on the heating or radio on because of battery drain.





# The most significant gap between Yorkshire and London lies in recharge time, range, and upfront price.



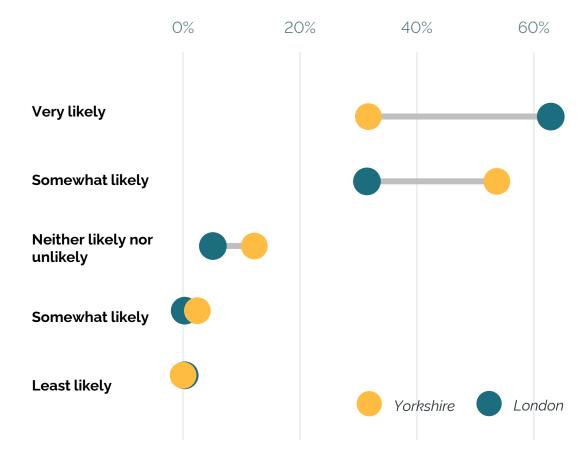


# Londoners are more likely to have enjoyed a positive previous experience with electric cars and are more likely to purchase

### **Experience with electric cars**

# 0% 20% 40% 60% I loved it I liked it I neither liked nor disliked it I didn't like it I hated it

### Likelihood to purchase electric cars





SKIM

# Capability of consumers is diminished by their lack of knowledge of electric cars, especially in the long run



# Limited public charging stations for electric cars

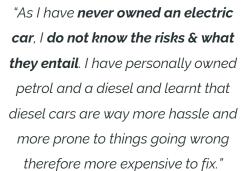


"I live in **Northern Ireland and our infrastructure is way behind** the rest
of the UK adapting to electric."

"I have several holidays in the UK every year when I travel 200+ miles each way and would love to think I could get there on one charge, but at motorway speeds I am not convinced that most cars I could afford would have this range comfortably."

"Because it worries me that I may not be able to charge my car when I need it. What if I am doing a long journey and my battery runs out?"



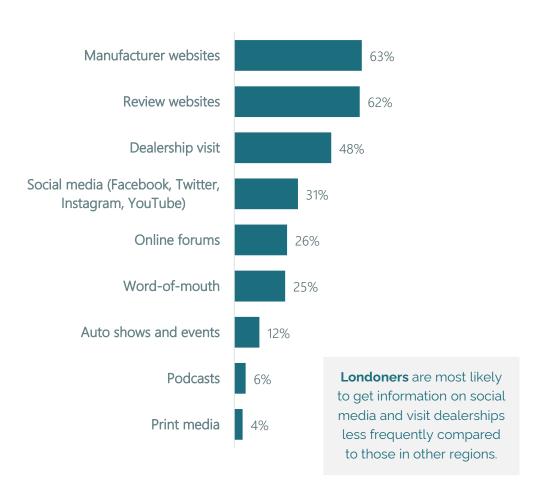


"Because I am unsure of what maintenance this type of car entails"

"I have heard that electric cars are way more susceptible to break downs than conventional petrol, diesel and hybrid cars." "I don't know if it will end up
costing me more than a petrol
car in the long run, due to
potential issues with the battery"



# Prioritise improving electric car knowledge and reliability across top touchpoints to enhance communication and drive adoption





Provide information to companies on key consumer concerns and which messages work to alleviate these.

Ensure a user-friendly website with transparent, detailed information. And encourage satisfied customers to leave reviews for credibility.



Dealership visits, at 48%, play a significant role Train dealership staff to be knowledgeable about electric cars and educate consumers.

Address common concerns during inperson interactions and convey benefits.

Reverse incentives to promote ICE models with higher margins and life-time revenue



Social Media and online forums

Actively engage with the online community.

Share shareable content, including success stories and infographics, to amplify positive aspects of electric car ownership.

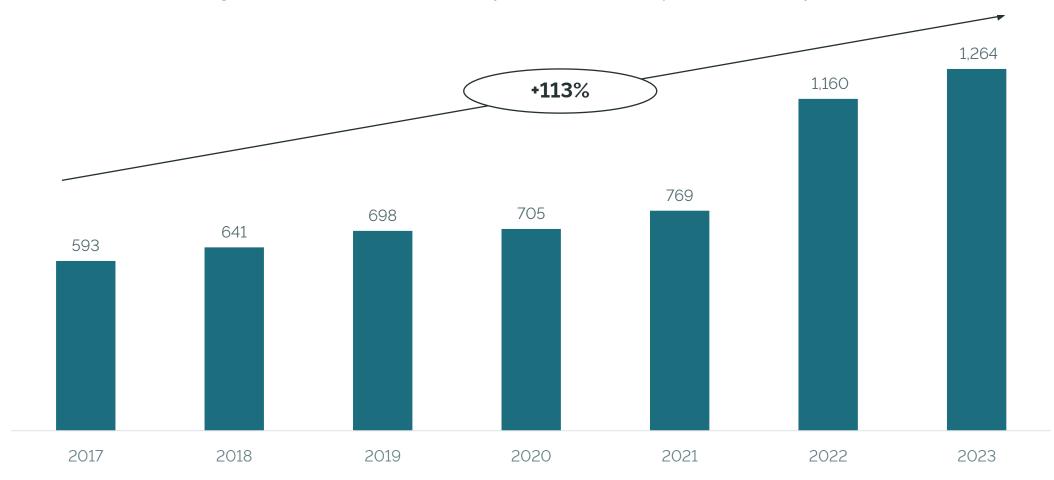




# Cost of living crisis is top of mind as electric bills continue to rise

In the past six years the average energy bill in the UK has more than doubled

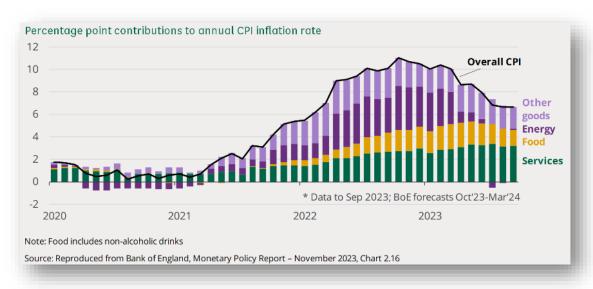
Average annual domestic Standard Electricity bills based on consumption of 3,600kWh/year, in £





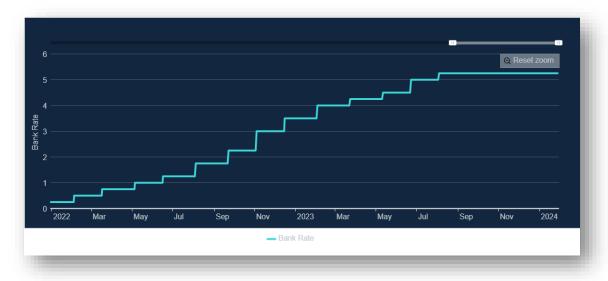
# Persistent inflation and rising interest rates affect consumer spending power

# Although inflation has slowed down, its effects are still persistent



Annual CPI Inflation rate from 2020-20241

# High interest rates continue to put pressure on household finances



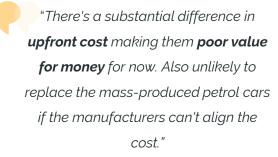
Bank of England interest rates 2022-2024<sup>2</sup>



# Making the purchase of an electric car out of reach for most



#### **High Initial Costs**



"It might be **not a good investmen**t as the technology is devaluing very fast."

"I've read a lot of stories in the newspapers and online on news websites that some people who have bought electric cars are unable to afford the inflated insurance costs."

"More money than I can afford plus the cost of having a charger fitted at home."

"Electric cars are significantly more expensive right now and it's hard to find the extra cash."

"I"feel like the price of electric cars has gone through the roof recently. It almost feels like I'll be priced out of the market – even smaller. traditionally 'run-around' cars are very very expensive."



### **Rising Costs of Electricity and Living**

"I know the **electricity** would be higher due to rising cost of living Electricity bill is still high without charging car at home yet. I'm just imagining how much it would cost me (electricity)."

"I haven't got much money to **spend on nonessentials** so I could do with a cheaper car

"This is a concern as the cost of living crisis is making bills rise and this would add more costs to my monthly bills."

"I already started cutting down most of my electronics usage just to **reduce the cost of energy** in my household. For getting an electric car I'm still considering the higher electricity cost due to charging."

"Well it's going to be needing charging for a right few hours. It's a big battery so I reckon it will cost on electricity bills and at a time when electricity is so expensive."

"I may not/ Can't afford to pay for it. The cost of living is tough with food costs and interest rates going up."



# **Improving Trust**

Consumers are quite cynical towards the government's ability to implement incentives.

Additionally, there's ambiguity surrounding profits in both the car industry and electric companies, stemming from the inflated costs of electric cars, which causes distrust.

#### **GOVERNMENT**

#### **Reasons for distrust**

- Ability to implement more rapid charging stations
- Certainty and continuity on policies and promises

### **CAR INDUSTRY**

#### **Reasons for distrust**

- Usurping and raising prices to cancel out government incentives to purchase an EV
- Greenwashing electric cars are not as eco-friendly as they claim to be

### **ELECTRIC AND ENERGY COMPANIES**

#### **Reasons for distrust**

 Uncertainty of having to enrol on a new plan and increase prices after increased usage due to charging and calculations.

# **Improving Trust**

Consumers are quite cynical towards the government's ability to implement incentives.

Additionally, there's ambiguity surrounding profits in both the car industry and electric companies, stemming from the inflated costs of electric cars, which causes distrust.

#### GOVERNMENT

- "[On reducing VED tax] It will anyway change at some point with the government looking to tax people more and more... so this will not last"
- "[On Salary Sacrifice Scheme] I don't believe this will make a difference, salary sacrifice sounds like the government wants more money off me"
- "I don't believe the government. They have said a lot of things and never fulfilled"
- because the government is very cunning and they will input the VAT at any time to offset the incentive. So it does not matter to me."

### **CAR INDUSTRY**

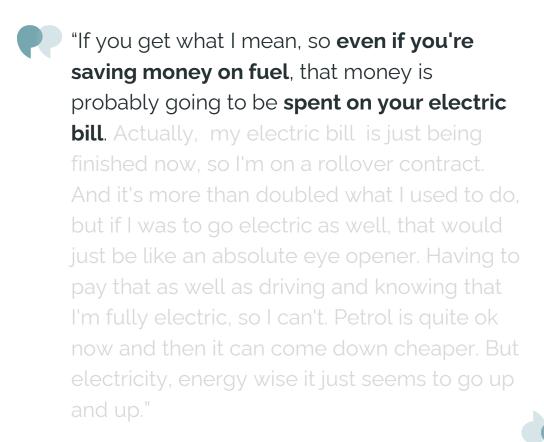
• "So even if the government says, oh, we'll scrap your car for five grand, we'll give you another two grand on top. The manufacturers most likely are going to increase mark up the prices by £5000-£7000. So even if the government does do anything, it cancels itself out."

### **ELECTRIC AND ENERGY COMPANIES**

- "Price of electricity has gone up a lot. It's something to consider, the electrics expense, might as well consider the petrol side of things. It's not like what it used to be when people started buying electric cars."
- "I don't know how you do it but the amount of money the likes of BP and Shell make are just obscene. And just make them bring the cost of charging the car down."
- "I have a friend who was always gloating about the fact that it would cost him, say, 50P to charge a Tesla up fully and he could get to 300 miles out of it. He's not thinking that at the moment."

# The cost-of-living crisis has driven consumers to prioritise cutting down costs







# The lack of clarity regarding electric bills and plans increases the risk associated with going fully electric

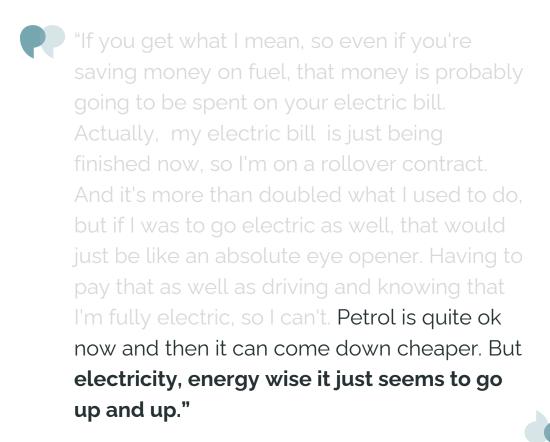


"If you get what I mean, so even if you're saving money on fuel, that money is probably going to be spent on your electric bill. Actually, my electric bill is just being finished now, so I'm on a rollover contract. And it's more than doubled what I used to do, but if I was to go electric as well, that would just be like an absolute eye opener. Having to pay that as well as driving and knowing that I'm fully electric, I can't. Petrol is quite ok now and then it can come down cheaper. But electricity, energy wise it just seems to go up and up."



# Clearer and more familiar pricing of petrol contrasts with the uncertainty surrounding electric bills, posing a barrier to adoption

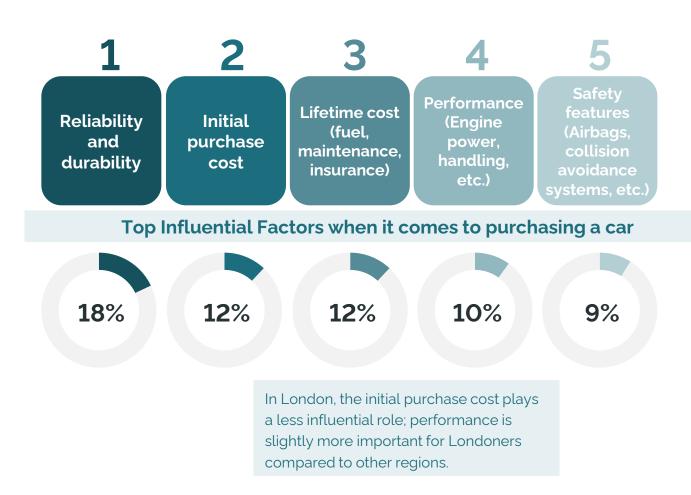




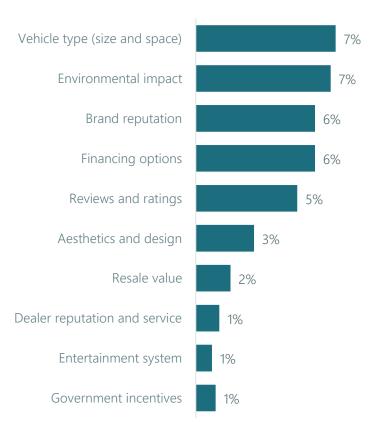


# Reliability and durability becomes by far the number one factor, as it makes consumers feel their money is going for longer

Initial cost and lifetime expenses also play pivotal roles in the decision-making process



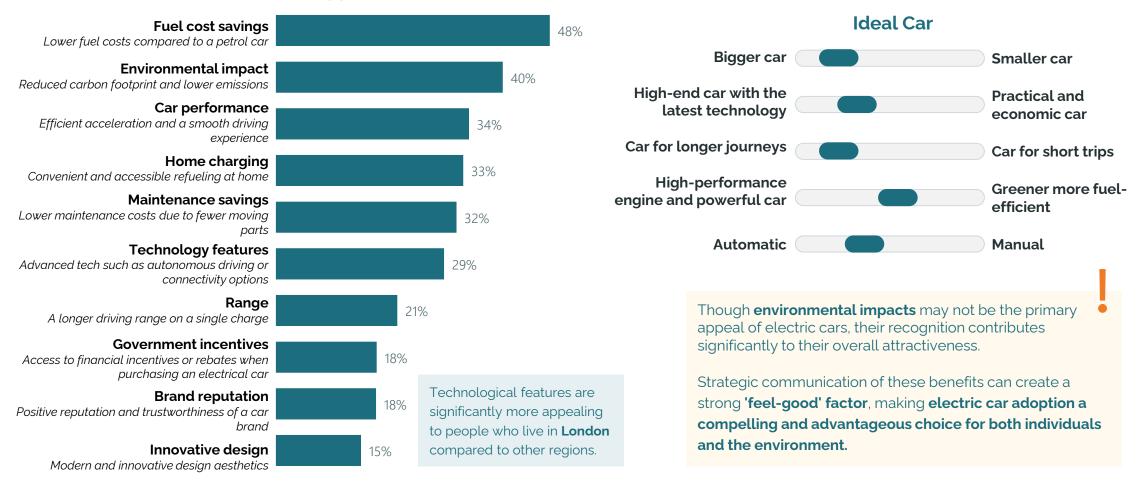
#### Other Factors (ranked 5+)





# People are most drawn to electric cars for the cost savings on fuel, closely followed by the positive environmental impact

#### **Feature Appeal**





### Recommendations for policy-makers and industry

Increase knowledge on electric cars and their reliability

Communicate with tangible, simple facts that are easy to find on channels people use.

Provide messaging on the reliability of the car and incentives throughout the lifetime of the car (free checks and maintenance to make sure the car keeps on going) to ease the fear of the unknown.

Make sure the information is relevant and resonant

Customise messaging towards what matters for people – warranty, reliability, how to maintain the car, and ensure its value over the lifetime.

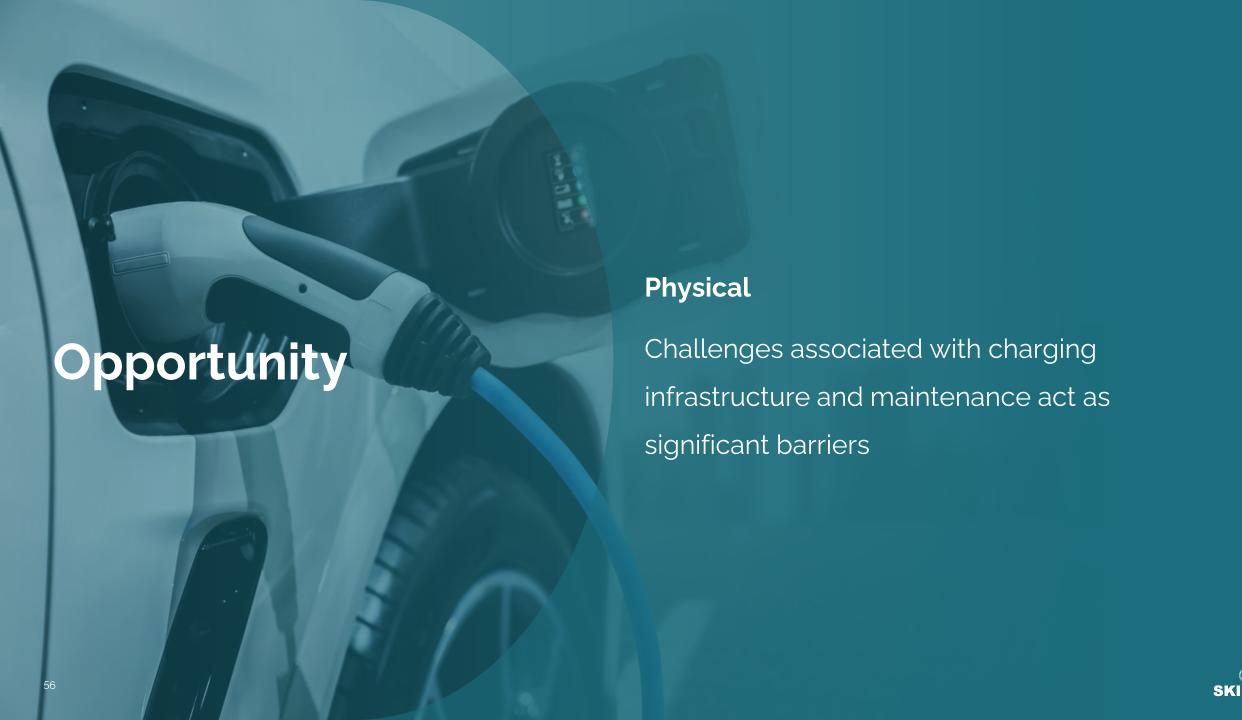
Making sure the relevant information is in the relevant channels and touchpoints.

Make electric cars more financially attractive and relative to ICE cars

As initial investment is still quite high, providing financial incentives to compensate for this upfront cost can help. This does not have to be a purchase price incentive.

Flat rate for charging at home to reduce price fluctuations and feeling of risk with the electric company.





### **PHYSICAL**

# **OPPORTUNITY**

# Is there sufficient opportunity for behaviour to occur?

#### What is it?

 Supporting ecosystem, environment and infrastructure around a consumer to help them before, during, and after their purchase of an electric car

#### **Example considerations**

- Do I have sufficient public charging infrastructure around me?
- Are there garages I can trust for repairs and maintenance?
- Do the available car models satisfy my needs?

#### What is it?

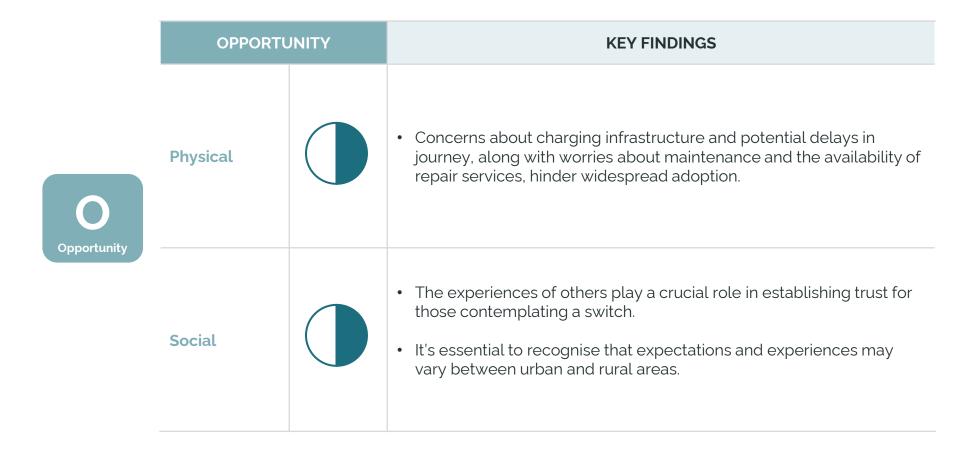
 Social norms and cues that can encourage or discourage buying an electric car

### **Example considerations**

- What is the attitude of my peers towards electric cars?
- Can I the use experience of others?



# Charging remains a key barrier which needs to be addressed with both education, user experience improvements, and accelerated deployment



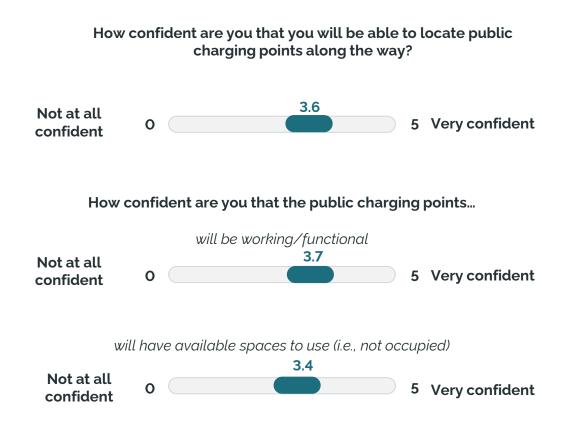
#### **KEY TAKEAWAY**

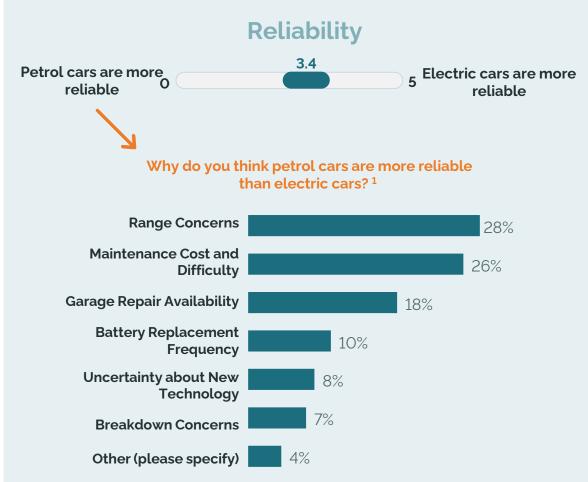
- Highlight existing public charging options to counter misinformation and alleviate perceived scarcity
- Foster positive reviews and feedback from both peers and reliable information sources to reinforce confidence
- Recognize that experiences and expectations differ between urban and rural settings



# Consumers have some confidence in public charging points

But concerns about range, maintenance costs, and garage repairs contribute to a perception of petrol cars as more reliable





A12bRealibilityDD - Why do you think petrol cars are more reliable than electric cars? | N = 101



<sup>&</sup>lt;sup>1</sup>Among those who thought ICE cars are more reliable compared to electric cars

**A11a** Imagine that you are about to go on a longer journey (more than 250 miles) driving an electric car. How confident are you that you will be able to locate public charging points along the way? | N = 1605 **A11b.c.** And how confident are you that the public charging points... [will be working/functional] / [will have available spaces to use (i.e., not occupied)] | N = 1605 **A12aReliability** - In your opinion, how reliable are electric cars compared to petrol cars? Drag the slider to the type of car you think is more reliable | N = 1605

# But access to charging is still a cause of major concern for some, in particular those who are more reliant on public charging



"Because it's the **most crucial**. I need to have access to chargers to use my car and that might not be possible if chargers don't work."

"This ensures **confidence** when driving on the road. You know you can just get a place to recharge and keep going."

"News stories of faulty chargers, queues, not having the correct account and therefore unable to charge, not having the correct adaptor"

"As most people will be using electric cars in the very soon future. I live in city of London where I could imagine getting a charging spot would very difficult. We live an apartment building with on street parking which is **sparse** as it is.."

"The infrastructure for knowing that **charging** stations are available and working takes away the range anxiety issue."

"I have **no idea where I'd charge it** If I needed to while out - most of the **charging stations I see are broken** and out of service"

"Because if there's no guarantee that public chargers will be accessible and in good working condition then you have as well a worthless car not minding whatever new technology it comes with."

"Because there has been a distinct lack of investment, particularly by the Government in providing these facilities. You constantly hear stories in the media of people being stranded or waiting for a long time to charge their car or find it virtually **impossible to actually find a** charging station, especially in more rural areas".





# Although the statistics around the number of public chargers are clear, public concerns remains (1/2)





Yes; most EV owners do charge at home, awkward though this is for those in terraced houses. The problem comes when they venture beyond the vehicle's battery range, especially when entering unfamiliar territory, which brings uncertainty and can add substantially to journey times. So, for now, EVs are OK for short distances but not for anything over (say) 200 miles, especially on a cold day and with an ageing battery pack.

approach it.

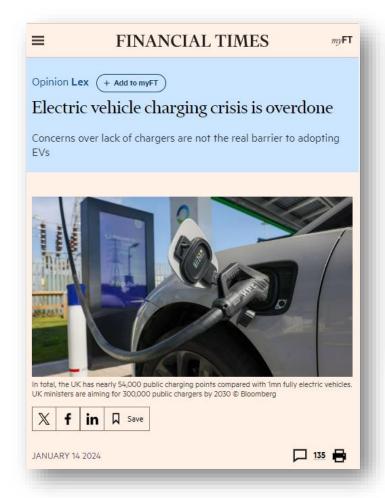
olic 2 WEEKS AGO

So In reply to Puzzled, Clapham

The secret is planning ahead. These days there is a wealth of information you can look up ahead of a trip, including if a charger is working or broken, and your co-pilot can even look up if it's in use as you

The road warrior who wants to be back on the road in 30 seconds with a full tank and a takeaway coffee will not be satisfied, but once you start travelling with kids, the idea of a stop that takes less than 15 minutes becomes a fantasy anyway.

# Although the statistics around the number of public chargers are clear, public concerns remains (2/2)



darcyblagdon 2 WEEKS AGO

To answer a number of questions:

We have two evs one big skoda and one small fiat 500 both are great. We live in the country and have solar. I think that is the most optimal set up.

Out solar and ev arrived in jul 2021 we do 32000 miles a year. Our electricity consumption has stayed the same but we have no petrol costs. This combo the roi was 2.5 yrs

The arguement about green or not, largely depends on how the electricity is made. There is a big difference between an ev in poland vs Norway due to how the electricity is produced. Our supplier is green only plus solar It's most optimal when you drip charge, ie whenever you stop you charge. You sip with an ev vs downing a pint with an ICE

As far as the roll out we take our daughter to uni from suffolk to Leeds. To about Leicestershire there are plenty of fast chargers up the A1 from there north they are slower and less common. And Leeds itself has less than ipswich (3 times smaller)

We bought ours thro a lease in the business which again is a no brainer vs buying in own name.

When we replace it, speed of charge the car can cope with 350kw chargers most cars only car to 50-100 as they are not desgned to cope. Charging at 350kw would be as quick as filling up with petrol.

I think that evs have now become part of the culture wars, and there is a reaction against them by the antiwoke/green portion of the population.

We didn't buy them as a statement but for some they definitely are, and many friends and acquaintances are very anti EVs (I'm woke for my cohort of 50 something white public school ex army working in FS)

#### ⇔ In reply to Le Gun

We have though. We drove from London to spend 10 days near Lough Ness and visiting the Isle of Skye twice and Isle of Mull last summers. Via Lake District on the way up and Northumberland on the way back. Found chargers easy to find and got free charging at our hotel. We've even rented the same VW ID3 from Hertz in Greece ( where charging is prehistorically still dependent on apps instead of contactless). Charged up via a granny cable mostly using a 3 pin plug at a friends place there.

95% of our charging over the past 3 years has been done for about £5 a week at home for 40,000 miles but that hasn't stopped us driving from Lands End to John O'Groats totally for free (as hotels often offer guests free charging) and noticing how public charging on motorways and at restaurants or pubs near major roads have vastly improved recently.

So I agree with this article. 85% of charging is done typically OVERNIGHT whilst owners sleep at HOME or at hotels.

We have 700,000 home chargers for our 1 million EVs where most charging is done. With 250 to 300 mile ranges you hardly ever need to use a public charger.

But for those rarer longer trips to Cornwall, Scotland or Yorkshire we've left fully charged and aimed to come back almost empty so the public chargers are still only used to top up the middle of the trip - whilst eating or sleeping.

And there are now EIGHT times as many public chargers as petrol stations (55,000 public chargers compared with 7,000 petrol stations) with 32 million ICE cars sharing those 7,000 petrol stations.

Don't forget that any 3 pin plug can also be used to charge an EV. Whilst it's slow, we found it perfectly adequate whilst on holiday in Greece to keep up with our holiday trips from Athens to Stoupa and to Sparta and to local restaurants etc.

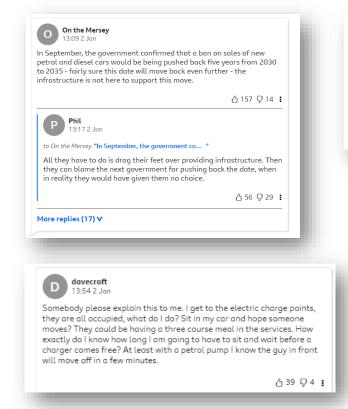
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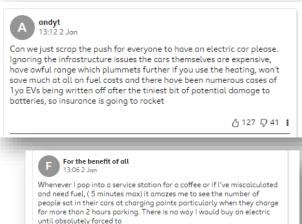


# Public confidence in the government's ability to create a suitable infrastructure for electric cars is limited



# Public discourse on current viability of public charging infrastructure



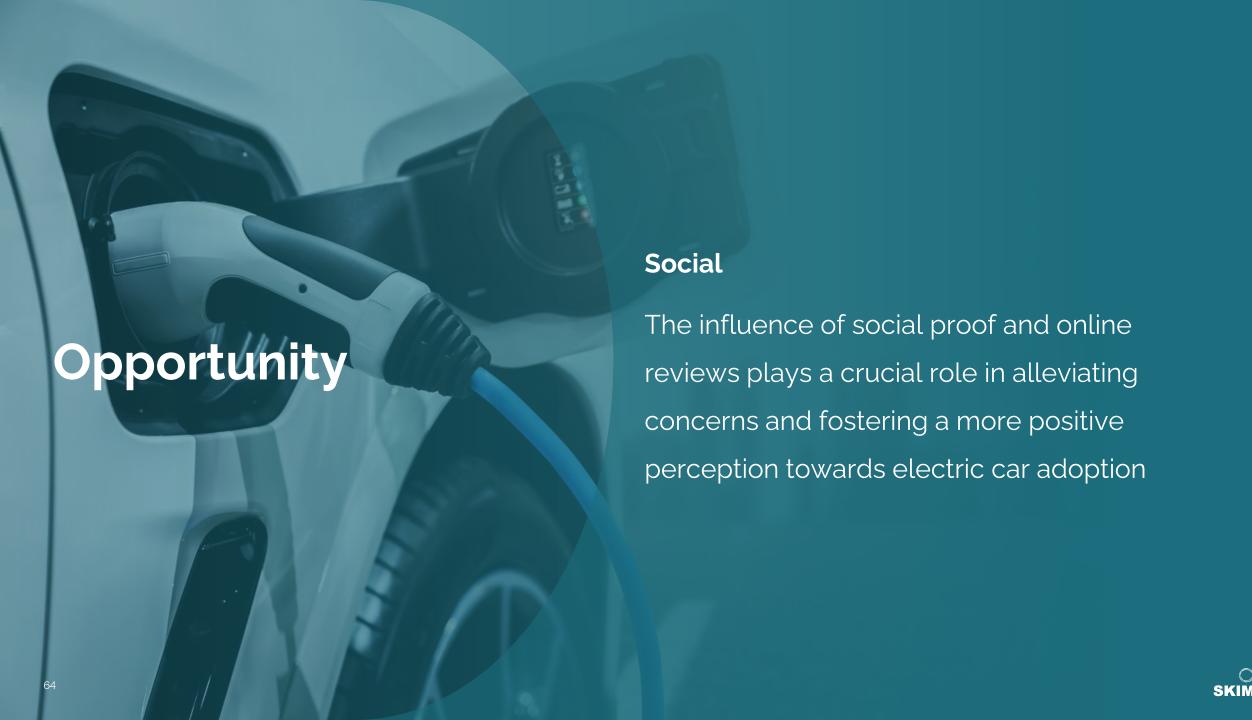




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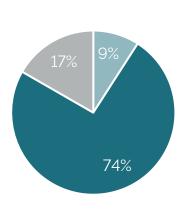
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# Most people have friends or family with electric cars, and they generally have positive experiences

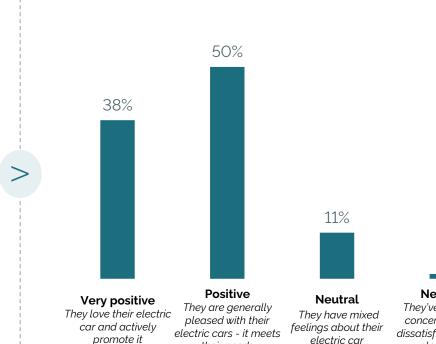
#### Social Proof



- Many, A significant number of my friends, family, or acquaintances drive electric cars.
- A few, A small number of my friends, family, or acquaintances drive electric cars.
- None, I don't know anyone who drives an electric car.

Those who have already owned an electric car have relatively more friends and family with electric cars compared to others with less experience with electric cars.

### Social Proof Sentiment



their needs



Negative They've expressed They've had a bad concerns and are dissatisfied with their electric car

Very negative

0%

experience and regret their purchase



# People often choose SUVs for their spacious interiors, comfort, elevated seating for better visibility, and versatile capabilities

# **Car Type** Cross-over / SUV Sedan/Saloon 55% Small car (Compact or 32% Hatchback) Cabriolet / Sports car / 16% Roadster Station wagon / estate Mini-van Pick-up truck Utility van

#### WHY SUV?



### **Space**

More passenger space and cargo capacity, which makes them convenient for families, outdoor activities, hauling large items, etc.

### **Comfort and visibility**

Higher seating position and more upright seating which provides better visibility of the road.

### **Capability**

All-wheel drive capabilities and higher ground clearance which allows them to better handle off-road driving situations, rough terrain, snow, etc.



### Recommendations for policy-makers and industry

Emphasize existing public charging availability

Highlight available public charging points through user-friendly resources, claims campaigns and integration with popular navigation apps (Waze, Google, etc.), ensuring easy access for electric car users.

Improve user-experience and accelerate deployment

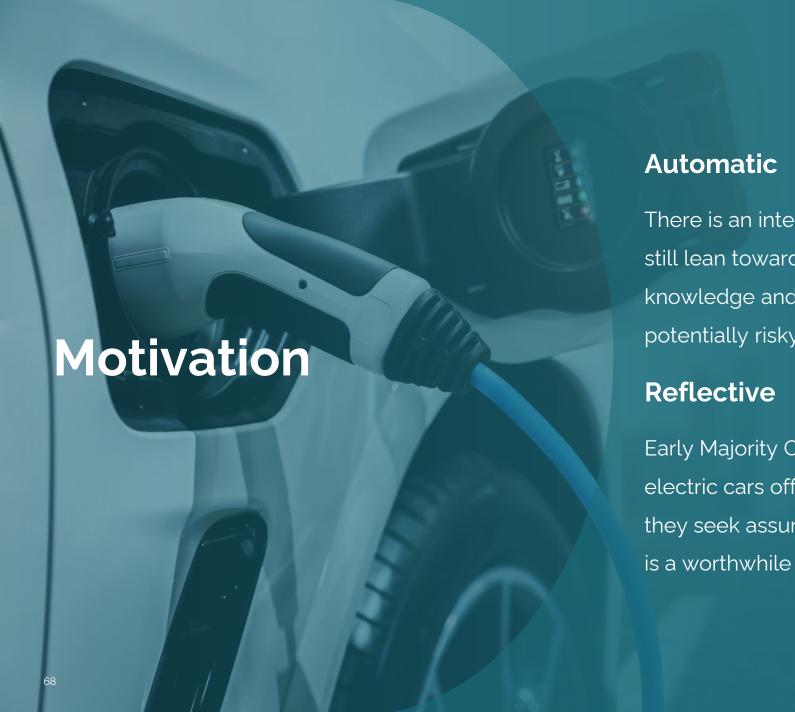
Even if there are more chargers than consumers think, there are still real-world challenges with availability, reliability and ease of use.

Accelerating deployment and improving reliability and aspects like contactless payment are needed to reassure Early Majority Consumers who are thinking about their first electric car.

Ensure there is positive news/information from others

Strengthen the electric car community by sharing positive testimonials from influencers and notable individuals, fostering a sense of belonging and engagement within car communities.





There is an interest in adopting electric cars, but people still lean towards traditional cars due to insufficient knowledge and high costs, portraying electric cars as potentially risky investments.

Early Majority Consumers appreciate the advantages electric cars offer, including their green credentials, yet they seek assurance to feel confident that an electric car is a worthwhile investment in the long term.

### **AUTOMATIC**

### **MOTIVATION**

How might we create sufficient motivation for purchase?

#### What is it?

 Automatic processes that are often outside of our awareness, such as emotional responses, habits, impulses and inhibitions.

#### **Example considerations**

- How much do I lean on my habits and knowledge of petrol cars?
- How risk averse am I?
- How skeptical am I of new technology?

#### What is it?

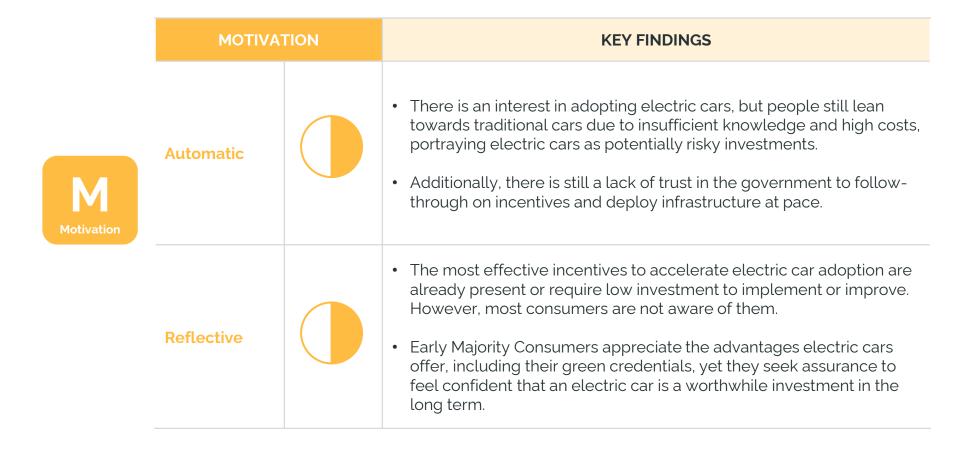
- High cognitive processes, such as beliefs, values and goals.
- Sense of self-identity and selfefficacy - beliefs about a person's ability to do things.

### **Example considerations**

- Do I think this electric car is worth it?
- Is this car better than others / what I usually would do?
- Can I achieve my goal with this car?

REFLECTIVE

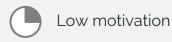
# By educating consumers about electric car benefits and incentives and making simple improvements, motivation can be increased

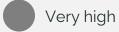


#### **KEY TAKEAWAY**

- Highlight the advantages of electric cars and emphasize the feel-good factor to strengthen the influence of the 'sustainability driver'.
- Address concerns through transparent and effective communication.
- o Ensure a clear understanding of the long-term benefits of electric cars.

SKIM





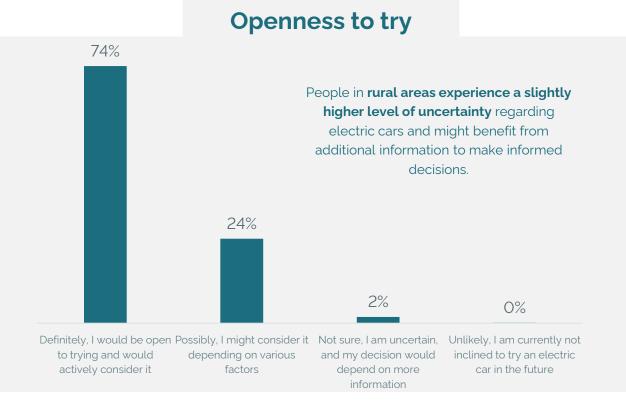


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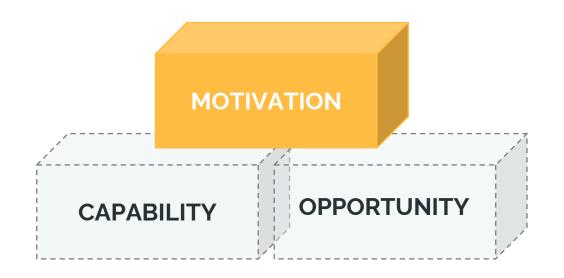
# Experience with electric cars positively influences the likelihood of purchase and openness to trying an electric car







But due to low levels of capability and opportunity, building sufficient motivation is difficult





# 8-year warranty alleviates cost and maintenance concerns in the long-run

Rank	Category	Claim	Rejection	Net Score	Appeal		2
1		r 8-year extended warranty for the car	-13%	27%	40%		8-year warranty (Rank #1)
2	Financial	Charging always at least 50% cheaper than petrol per mile	-12%	27%	39%		"Because within the electric car,
3	Financial	Free home charger installation	-15%	24%	39%		there are so many electronics and due to weather condition, these
4	 Financial	£1000 government grant on electric car purchase	-16%	21%	37%		electronic can easily becomes
5	Maintenance and repa	r Free checks and maintenance for 3 years	-17%	10%	27%		damage and needs replacement.
6		r Public chargers guaranteed to work 99% of time and take contactless payment	-19%	8%	28%		Having warranty including these parts helps me to buy an electric
7	·	r Car battery health guarantee	-19%	6%	26%		car. Else replacing the broken parts
8		ir Zero interest (0% APR) car financing	<b>-24</b> %	5%	29%		are expensive."
9	De-risking trial	No car tax (VED) for electric cars	-22%	5%	26%		
10	Financial	More public chargers in my local area	-21%	4%	25%		Free home charger installation
11		ir 25% discount on electric car insurance	- <b>21</b> %	<b>2</b> %	24%		(Rank #3)
							"Free home charger installation guarantees that you don't have to
12	Financial	Electric car batteries 100% guaranteed recyclable	-29%	-9%	20%		go out searching for charger to use
13	De-risking trial	A government scheme to lease an electric car for around £100 a month for those on low incomes	-33%	-12%	21%		on your car and having to queue up
14	Maintenance and repa	ir 3 years of free road recovery	-29%	-13%	16%		as all may not be available to use at
15	De-risking trial	Employer offer of salary sacrifice scheme (30% cheaper leasing cost)	-34%	-16%	18%		the time you want."
16	Maintenance and repa	r More electric car models/ranges available in different sizes	-38%	-24%	14%		Rental cars
17	Maintenance and repa	r Electric car rental same price as petrol car rental	-40%	-28%	13%		(Rank #17)
18	De-risking trial	Try before you buy 1-week free loan of an electric car	-48%	-37%	11%		"I don't rent any cars to make it of use to me"
Incentiv	ves already in effect are ind	icated in <b>bold</b> .	Ne	et Scores	Most influ	ential	Influential Neutral Less influential

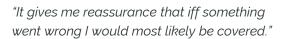


# Warranty, cheaper charging and free home charger installation are the most appealing incentives

#### Top 3 Incentives

# 8-year extended warranty for the car

It fosters **buyer confidence**, signaling the automaker's trust in the electric car's **quality** and **longevity**. This reduces **long-term maintenance** costs, **offsets upfront expenses**, **builds trust**, and promotes environmental sustainability through extended car lifespan



"Because it guarantees the parts for longer. The cars are already very expensive so I wouldn't want expensive repairs as well, so this gives peace of mind."

"It shows a commitment of car makers and it gives me piece of mind."

# Charging always at least 50% cheaper than petrol

This financial advantage is a key factor driving individuals to choose electric cars. Respondents emphasize long-term economic benefits, offsetting higher purchase costs with lower running expenses, enhancing the appeal of electric cars.



"Because the cost of charging an electric car is the biggest worry because of the price."

"It's because this the makes it feel like an investment to buy an electric car, as long-term running costs will be lower, despite the initial upfront cost.."

### Free home charger installation

Primarily due to the significant upfront cost savings, convenience, and peace of mind it offers, it is an important relief for people. They value the accessibility of a reliable home charging point, avoiding the challenges of public infrastructure.

"Because it gives me confidence that I'll be able to charge my car when needed."

"It's a worry knowing where charges are located. So, having one at home would be ideal."

"I can comfortably charge my battery 100% at home without pressure and while leaving the house. I can be confident knowing that I won't be stranded on the way because of low battery."



# Reducing the initial purchase burden and improving opportunities to maintain the car can also be effective

#### Incentives 4-6

# #4 | £1000 government grant on electric car purchase

This incentive reduces the **initial investment risk** of purchasing an electric car. Especially with the **cost-of-living crisis**, a £1,000 grant can reduce the price barrier for many households.

Additionally, a grant from the **government shows** a **clear commitment** towards the green transition.



"Seems like it would offer the biggest concrete reduction in costs - Cost is my main barrier to going electric"

"This would indicate that the government really wants to subsidise electric cars."

"Helps with the payment of the car. Who wouldn't want a free £1,000 towards purchasing a brand new electric car?"

# #5 | Free checks and maintenance for 3 years

This incentive reduces the risk over the longer term and provides reassurance over the lifetime of the car. Since it is a relatively new technology, the Early Majority may not know how to maintain an electric car. This further de-risks the purchase and adds another layer of certainty.

"Because three years is such a long time and I want my car to be checked and maintained for that time."

"Because then it will reduce my MOT cost and maintenance cost for the next three years so it is a good incentive."

"Shows that an electric car is better and the same price as a petrol and it's cheaper in the long run."

# #6 | Public chargers guaranteed to work 99% of time and take contactless payment

Simplifying charging provides reassurance for those who may not have a home charger available is key. For those living in a rural area, the availability and functionality of public chargers may alleviate the stress of being stranded in a remote area with no chargers.

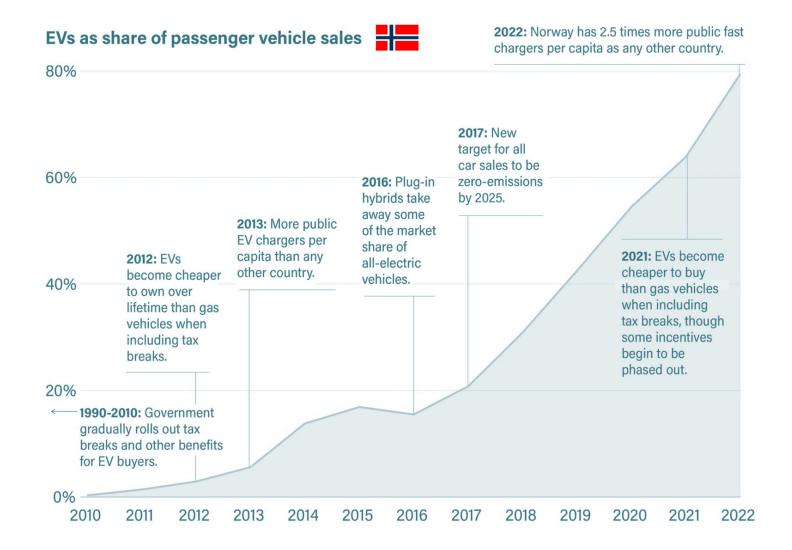
"I live in a rural area and the nearest town has 3 charging points and every time I go passed them at least one of them is out of order or damaged. I feel that it is important to be able to charge your car without having to worry about where you charge it."

"Charging in public is the greatest hassle of owning an electric car. If you go to a charger and it doesn't work, you could be forced to risk journeying dangerously close to a dead battery. Chargers are frequently broken and I worry that as electric car usage increases the ones that are left working will be insufficient. I also currently have almost a dozen apps on my phone for charging my car. This is a nightmare. Simple contactless would make life so much easier."



# We know that incentives can lower psychological and physical barriers, motivating Early Majority consumers to adopt an electric car

Markets who are ahead of the UK, such as Norway, have shown that consumer education, effective incentives and investment in infrastructure work





# Recommendations for policy-makers and industry

Emphasise electric car advantages and the feel-good factor to boost the 'sustainability driver' impact

Craft engaging content to promote eco-friendly practices, making them appealing and easily understandable for the public.

Address concerns through transparent and effective communication Clearly communicate government incentives to foster trust and motivate citizens to embrace green actions, emphasising ongoing support during the transition.

Ensure a clear understanding of the long-term benefits of electric cars

Address common concerns through collaboration with trusted messengers, respected activists, and relatable peers, emphasising the long-term benefits despite initial high costs.







# Who we spoke to

- Nationally representative sample of new car-buyers, i.e. those considering buying their next car in the next 18 months
- Open to, but not necessarily decide to buy an electric car as their next car (non-rejector)

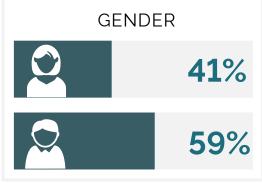
# The research took place in the UK in January 2024

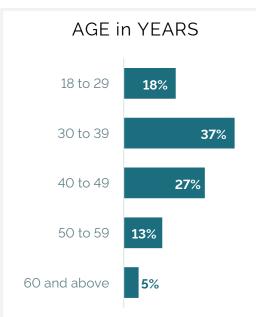
- **88** Sample N=1605
- % Avg. expected incidence rate = 15%
- ~ 15 min survey length

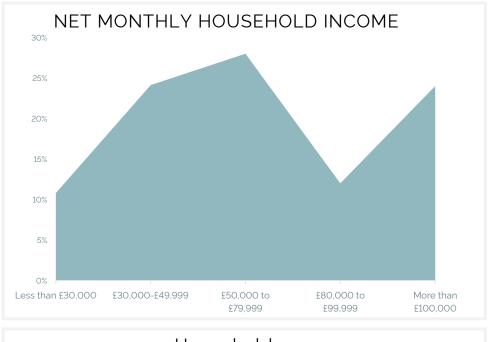


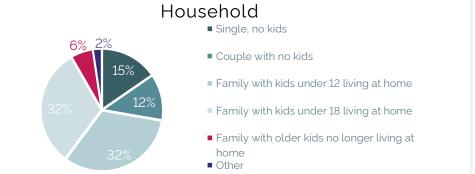


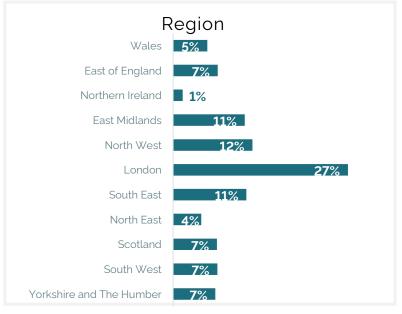
### Sample and demographics

















# **About SKIM**

### **Experts in decision-behavior**

SKIM is a global decision-behaviour consultancy. For over 40 years, we have been advising some of the world's leading organisations by combining expertise in research, communications, marketing, data science and analytics.

#### **Sustainability & Behaviour Change**

SKIM's Sustainability Practice specialises in helping our clients understand how to successfully navigate the sustainability transition by understanding their markets and customers.

### For more information, please visit

https://skimgroup.com



# Thank you

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