

STARCOUNT

# *Why Consumers buy Electric Cars*





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“

We could definitely make a flying car - but that's not the hard part. The hard part is, how do you make a flying car that's super safe and quiet? Because if it's a howler, you're going to make people very unhappy.”

Elon Musk, Tesla

## Foreword

The Electric Vehicle (EV) market is forecast to be worth over £450 billion by 2025. As both governments and vehicle manufacturers seek to radically shrink the market for Internal Combustion Engine (ICE) cars in the next 20 years, there is a lot to play for in the EV world.

Yet there is a conundrum. Whilst there is rising consumer awareness, concern and even anger, over a perceived lack of urgent action to tackle green issues, pollution and raising CO2 levels; the same consumer has been slow to purchase an EV.

Electric Vehicles currently take less than a 1% share of UK car sales. Indeed, there has been a marked decline in hybrid sales since subsidies for plug-in hybrids were removed and the grants for fully electric cars reduced.

Consumers voice concerns over barriers to purchase. They fret over range, cost and charging infrastructure. Clearly, those customers taking the plunge have overcome such fears and Starcount has profiled them to find out how. So what does

our data tell us about how to turn desire into action? What consumers should we be targeting and how should we be talking to them? Starcount has used its social data and clustering models, to analyse the change in the mindset of consumers over time and identify the opportunities for brands to succeed in this space.

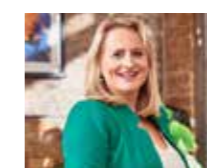
The following paper is a broad overview of the market: the key challenges and opportunities and how Starcount is helping brands to address them using data and insight that provides a unique understanding of consumers and the drivers of their decision making.





**Clive Humby**  
Chief Data Scientist  
Clive.Humby@Starcount.com

## Contributors



**Jo Wardle**  
Chief Commercial Officer



**Rowena Humby**  
Chief Product Officer



**Hannah Poskett**  
Observatory Data Scientist



**Chris Nourse**  
Senior Product Manager

## Executive Summary

Over the past few years we have seen a huge rise in the adoption of and innovation in Electric Vehicles (EVs). Almost all of the major car manufacturers are now offering either 100% electric or hybrid models, with investment hitting new highs. Jaguar Land Rover recently pledged to invest £100 million and incumbents face new competition from challenger brands, not least Tesla, with numerous tech giants also investing heavily in autonomous vehicles.

# What is driving the electric car consumer to purchase?

With a focus on the UK, this paper aims to help brands understand what is driving the electric car consumer to purchase? This will help;

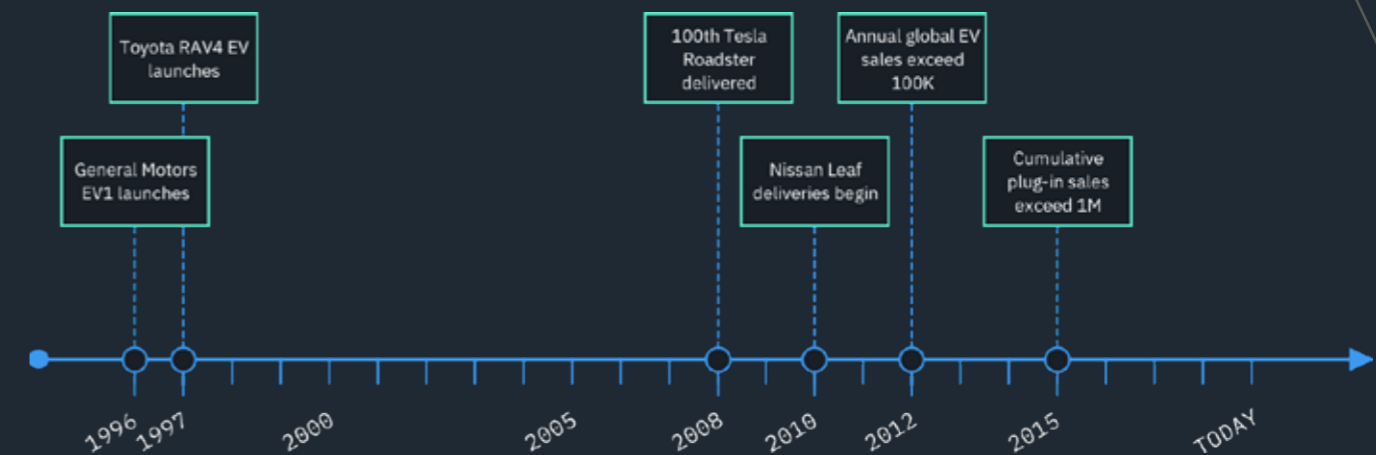
- shape brand proposition
- ensure brands become the voice of authority in the EV space, therefore gaining competitive advantage
- communicate relevant product features and overcome barriers
- acquire new customers through more granular and bespoke targeting

Ultimately allowing brands to create the perfect customer journey to purchase and optimise brand communications.

### Glossary of terms

**PEVS** - Plug in Electric Vehicle  
**BEVS** - Battery Electric Vehicle  
**PHEVS** - Plug-in Hybrid Electric Vehicle

## Early Electric



The last few years have seen a surge of interest in electric vehicles. Yet they have been around since the late 1800's.

Early automotive pioneers explored battery power as an alternative to the polluting coal and petrol fuelled vehicles of the age. This initial flurry of electric vehicle advancement was curtailed by the discovery and extraction of huge reserves of petroleum across the globe, that made fossil fuel cheap and accessible, whilst the improvement of road infrastructure meant that electric cars couldn't match the pace or range of ICE competitors. With a global decline of EV manufacturing in the early 1920s, electric cars found a humble niche as milk floats and golf carts.

Roll forward to the 1990s. The challenges of climate change and pollution were becoming understood and climate change agreements targeted CO2 emissions. Car manufacturers renewed their interest in electric models, amongst the first being General Motors (GM) with their EV1 produced and leased from 1996 to 1999. While customer reaction to the EV1 was positive, GM believed that electric cars occupied an unprofitable niche of the automobile market and ended up crushing many of the cars. The Toyota Prius, released in Japan in 1997, became the world's first mass-produced hybrid electric vehicle. By 2000, released globally, it became a notable success.

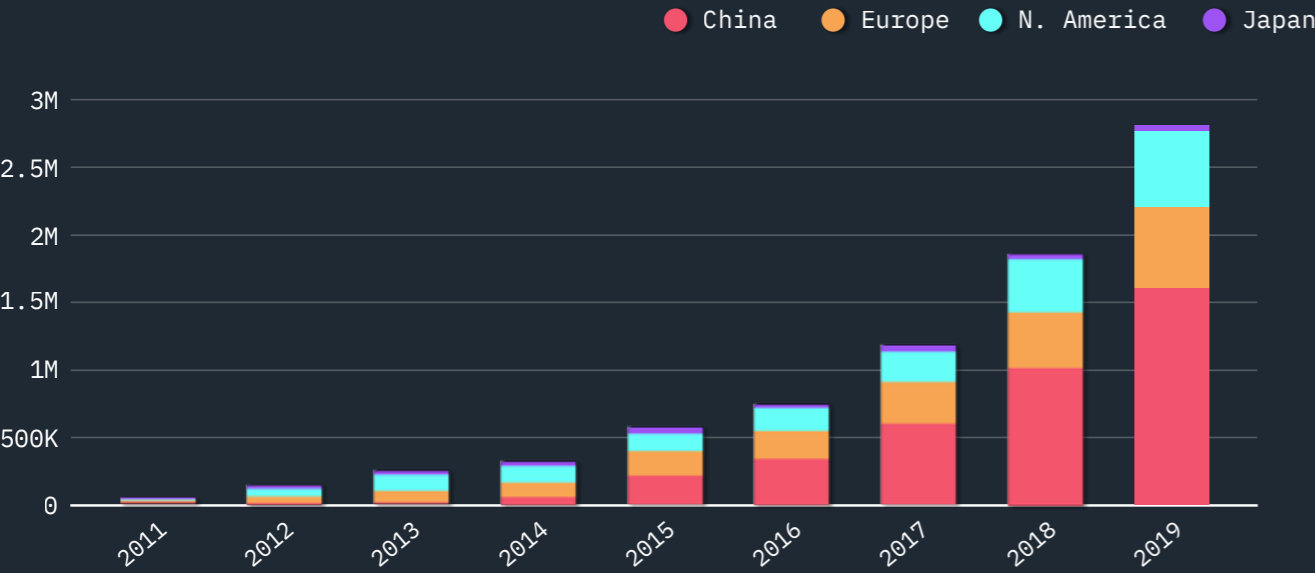
In 2004 Tesla began development of its Roadster, launched to market in 2008. Other major car brands were quick to follow. By 2010, the Chevy Volt (the first commercially available plug-in hybrid) and the Nissan LEAF (fully electric) were released in the US

Today, there are around 40 models of Battery Electric Vehicle (BEV) and Plug-in Hybrid Electric Vehicle (PHEV). The consumer now has more choice than ever.

# Global Appetite

The last 3 years have seen huge annual increases in global sales of electric vehicles, (both cars and heavy EVs), with China as the largest adopter of EVs, closely followed by Europe and North America.

ANNUAL SALES OF PLUG-IN EVS



Source: International Energy Agency - Global EV Outlook 2017

# China

Why is China ahead? In 2018, more electric cars were sold in China than in the rest of the world combined. Of course there is a population dynamic, yet it should be noted that the Chinese government has spent nearly \$60 billion in the last decade to create an industry that builds electric cars, while also reducing the number of licenses available for petrol powered cars to increase demand for electric ones. China has encouraged adoption by offering subsidies to EV buyers, though these are expected to be cut by 2020 due to concerns that this makes manufacturing less innovative.

China now has more than 100 electric-car manufacturers, and a sophisticated supply chain to support them. Investors have funded £6bn worth of Chinese EV start-ups such as NIO, BYTON and WM Motor. Many other automotive brands, such as Nissan, are exploring investment opportunities in China. Others have been looking to sell their EV technology to Chinese companies. According to J.P. Morgan, by 2020 China is expected to account for approximately 59% of global sales, falling slightly to 55% by 2025.

# The US

Home to Tesla, the biggest EV company in the world, the US has been the slowest major market to adopt. Partly due to lower domestic fuel costs, there has also been a lack of government incentivisation of EV adoption. This could have major implications for the US market, as a recent study by Autolist found that 74% of US consumers stated a tax credit affects their purchasing decision.

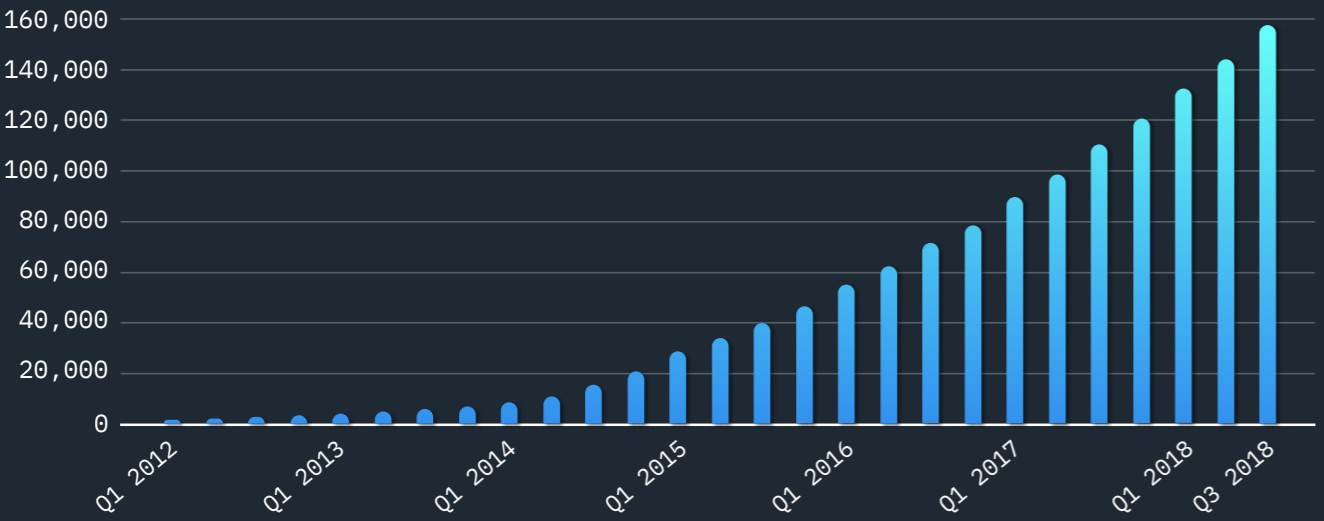
Ford, GM and Fiat Chrysler are all continuing to challenge Tesla and invest in more innovation, production and technology. Recent merger plans to capitalise on EV innovation and manufacturing investment such as Fiat Chrysler and Renault have been scrapped, a deal that would have created the world’s third-largest carmaker behind Volkswagen and Toyota.

# Europe

European countries made up 17 of the top 20 most ‘eco-friendly’ countries in Yale’s 2016 Environmental Performance Index (EPI), the others being New Zealand, Australia and Singapore. Accordingly, Europe has adopted EV technology, driven by government incentives or taxes. In 2018 the European plug in market grew 33% putting it (a distant) 2nd to China and slightly ahead of the US. Many EU countries have already started to ban older models of cars and there are targets to entirely ban fossil fuelled vehicles by 2030-2040. In terms of global market share of new EV car sales, the leaders of the European pack are Norway, Iceland and Sweden. Many of Europe’s biggest car manufacturers such as BMW, VW and Daimler have made significant investment in the advancement of battery and self-driving technology.

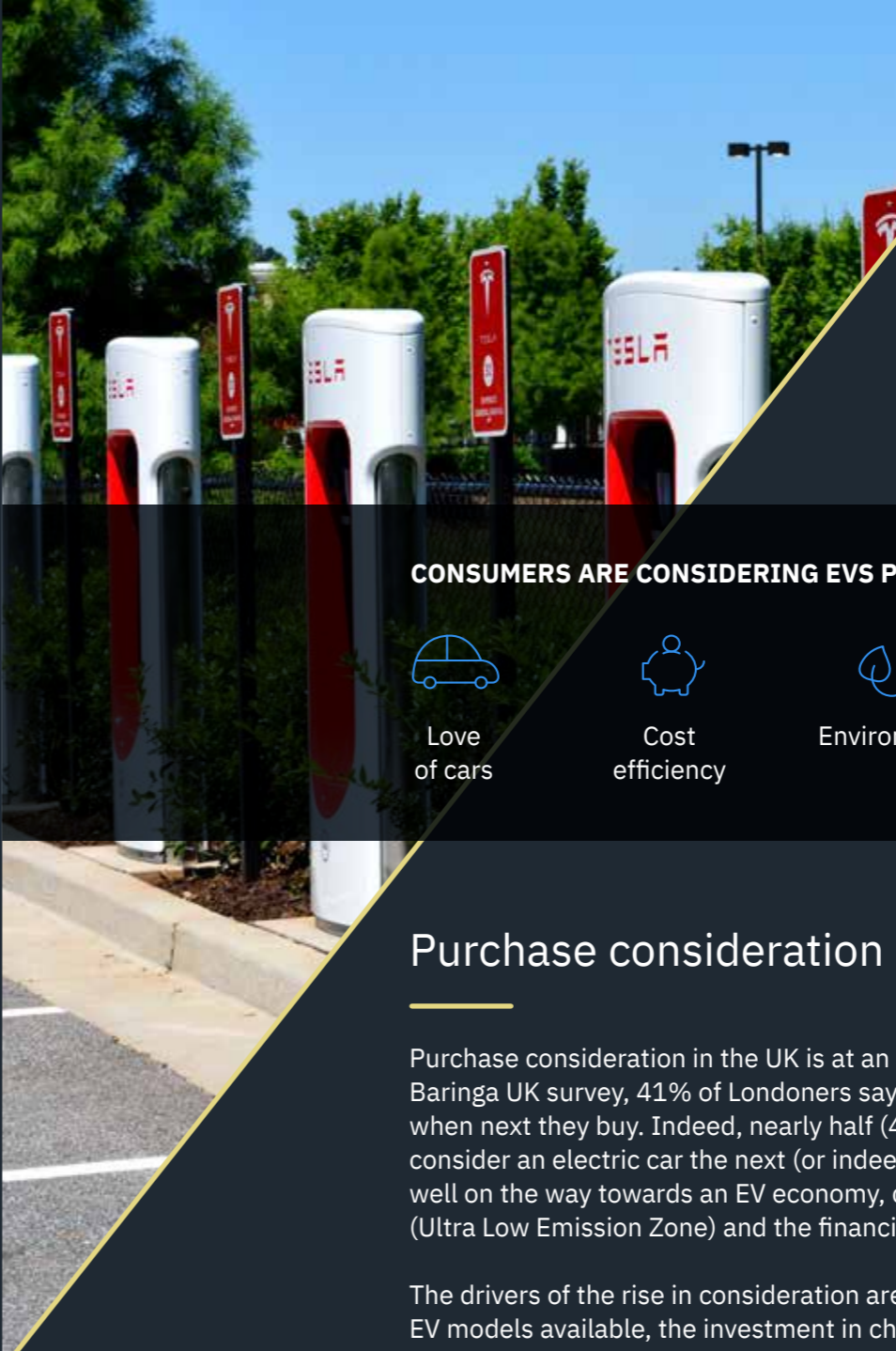
In the UK, consideration of electric cars has never been greater, yet this has not translated fully into sales. 2018 sales figures showed ‘alternative fuelled’ car sales are still under 200,000 with Petrol way ahead at 1.4 million. However, according to consumer site, Next Green Car 18,000 new EVs were registered in Q1 2019.

NUMBER OF LICENSED GRANT-ELIGIBLE PLUG-IN CARS IN THE UK



Source: Statista

This is not growing as fast as expected, given that at least 20 major cities across the globe have announced plans to ban petrol and diesel cars completely by 2030.



CONSUMERS ARE CONSIDERING EVS PROMPTED BY THESE FACTORS

- Love of cars
- Cost efficiency
- Environment
- Fuel economy
- Latest technology

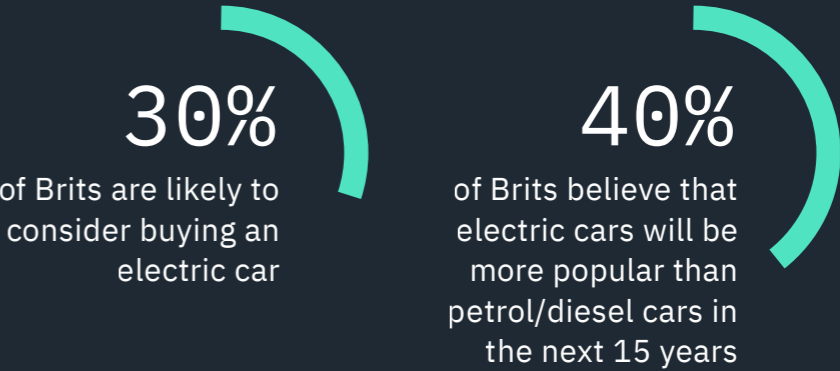
Purchase consideration

Purchase consideration in the UK is at an all-time high and according to a recent Baringa UK survey, 41% of Londoners say they would consider buying an electric car when next they buy. Indeed, nearly half (47%) of 18-34 year olds say they would consider an electric car the next (or indeed the first) time they buy a car. London is well on the way towards an EV economy, due to the implementation of London’s ULEZ (Ultra Low Emission Zone) and the financial benefits of electric for commuters.

The drivers of the rise in consideration are believed to be; the increasing choice of EV models available, the investment in charging infrastructure and an increased awareness of air quality issues and environmental impacts.

Research for leading YouTube channel The Fully Charged Show suggests that only 5% of electric car drivers would go back to a fossil-fuelled car once they’ve owned an EV.

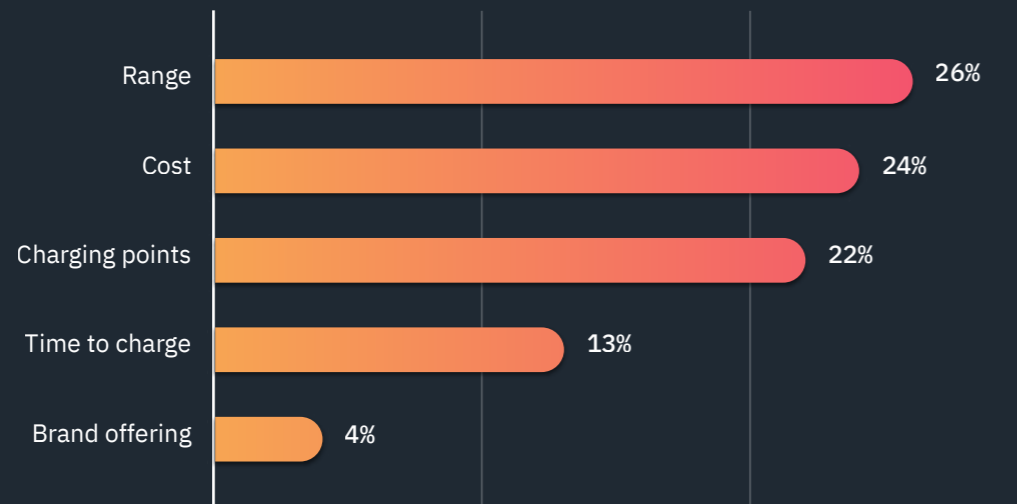
OPTIMISM AROUND EVS IS AT ALL-TIME HIGH



Source: Baringa - Is the UK ready for electric cars?

# Barriers to purchase

## BIGGEST CONCERNS REGARDING BATTERY-POWERED ELECTRIC VEHICLES



## Consumers have questions about the benefits and operational elements of EVs.

Google Trends data notes increased search traffic around EVs. Clearly marketers have the opportunity to educate audiences and overcome these barriers to purchase. The most common questions are:

### Range:

Range anxiety is one of the biggest consumer concerns in all markets. Google Trends shows this is one of the most searched groups of terms around EVs.

Research from the UK Department For Transport's (DfT) National Travel Survey 2016 showed that 98% of car journeys in England were less than 50 miles in distance - well within the 125-250 mile range of the latest 100% electric cars. Increased investment in charging infrastructure is helping to overcome this barrier.

### Cost:

Prices are becoming more competitive; with increasing production creating economies of scale and a reduction in battery costs.

A recent Deloitte study estimated that the market will reach a tipping point by 2022, when cost of ownership of an EV will match that of ICE. However, in many cases an EV is more expensive to buy, than an ICE, but cheaper to run.

Financial incentives and government subsidies have played a part in reducing the lifetime cost of owning an EV. Lifetime cost is a key persuader.

Cost of insuring an EV is still marginally higher than that of an ICE; the main EV's tend to be more expensive to repair, as well as the fact that the EV market is still developing. Insurers don't currently have enough data to analyse risk. It will take time to improve understanding and for prices to stabilise.

## CHARGING DISTRIBUTION ACROSS THE UK



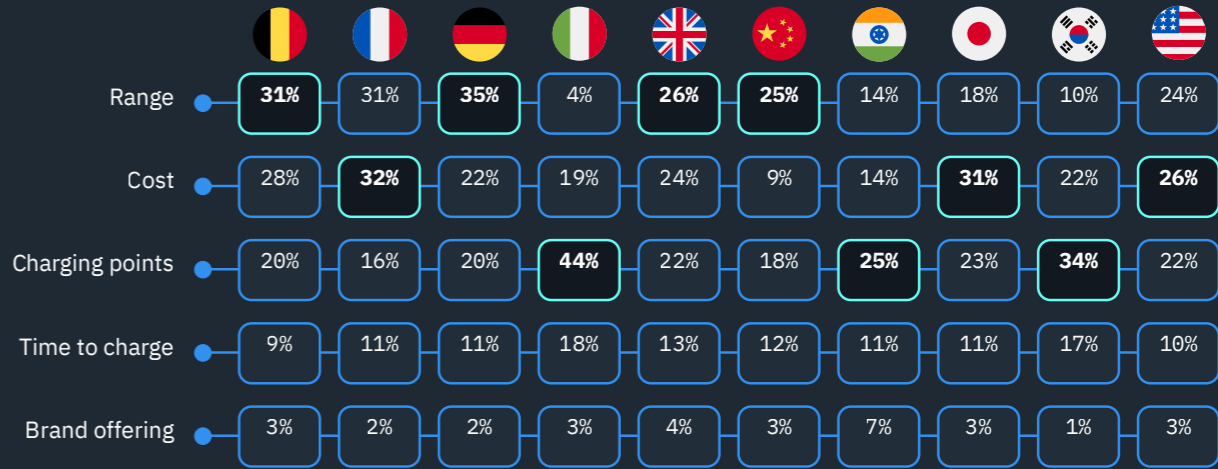
### Charging points:

Charging infrastructure is a main area of focus. Home charging is still not a viable option for a high proportion of EV customers, especially those in urban areas where on-street parking is necessary. High speed battery charging, whilst desired by consumers, can damage battery life, and can negatively impact range over time.

In the UK through 2018, the number of charging points significantly increased - with 'fast' charging points growing by 20,000 units and 'rapid' by around 100.

A recent study by Deloitte showed barriers to purchase by country. Driving 'range' was highlighted as the top barrier for Germany, Belgium, UK and China whereas Japan, USA and France indicated 'price'. Italy, India and Korea saw the 'lack of infrastructure' as the highest barrier, 'time to charge' and 'battery safety' being the next barriers for all markets. Inroads made with wireless or inductive charging, though not as fast, can still help counterbalance issues with infrastructure.

## CONCERNS REGARDING BATTERY-POWERED ELECTRIC VEHICLES GLOBALLY



## Brand challenge

How can you understand what is driving the electric car consumer to purchase?

- ... to shape your brand proposition
- ... to communicate relevant product features
- ... to acquire them through targeting
- ... to create the perfect customer journey to purchase

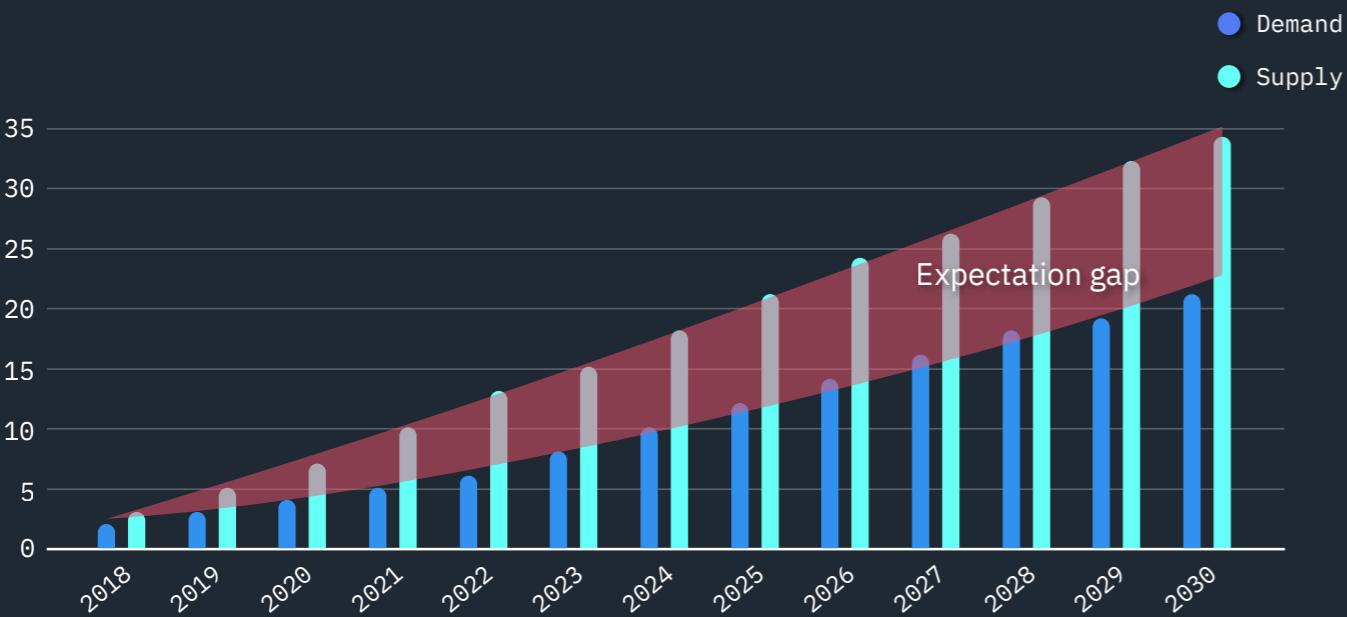
The biggest challenge is overcoming the barriers for consumers and reassuring their concerns with an authoritative brand voice, as well as ensuring consumers associate your brand with EV.

Do you use your existing credentials to do this? Do you risk anything in this process?

Finally, without an existing EV customer base, how can you acquire new customers for your new proposition?

With a focus on the UK market we have conducted this study, utilising the Starcount Observatory platform and using UK social media data.

### NUMBER OF LICENSED GRANT-ELIGIBLE PLUG-IN CARS IN THE UK



Source: Deloitte - Battery Electric Vehicles

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## Gaining competitive advantage

Using the Starcount Observatory platform, which contains insights from over one billion global consumers and tracks how their passions, motivations and mindsets change over time, we have identified 4 key consumer motivations for purchasing an electric vehicle.

By looking at who people follow on social media, we have a unique lens into their passions and lifestyles.

Blending traditional research, with our social universe, we have looked at who consumers follow on social media, and identified the 'silent majority' who are truly motivated by the 4 key purchase drivers for electric cars.

Casting the net further, we then take a holistic view of their entire following, to analyse and profile the lifestyles, and triggers of these consumers, revealing granular insights into their top brands, influencers, media titles, destinations and events.

To understand the market, we've blended traditional research with our social universe to derive four key consumer motivations for purchasing an electric vehicle.

## WHAT FUELS EACH MOTIVATION?



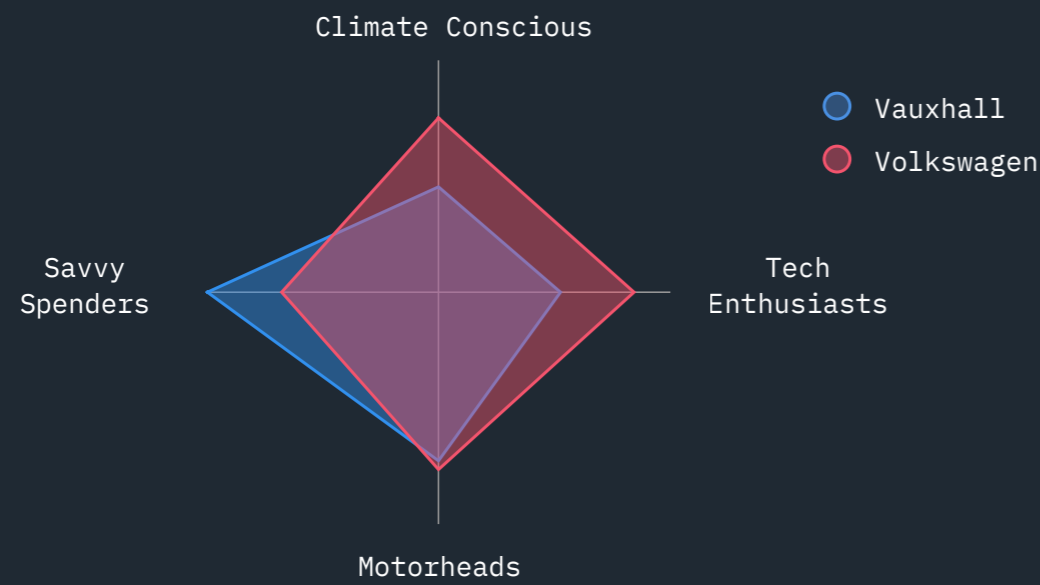
## UNDERSTANDING HOW YOUR CONSUMERS SELF IDENTIFY BY ANALYSING THEIR BIOS



Where previously, Climate Conscious people were talking about veganism and recycling, the focus on lowering the UK's emissions has seen their interest in motoring soar over the past 6 months.

We have gone beyond each motivation's passion for motoring and dived deep into the specific automotive brands that resonate with each audience.

WHICH BRANDS ARE MOST IMPORTANT?



Source: Starcount Observatory

Comparing the reach of Vauxhall, versus VW, we begin to pull apart the reasons your consumers are buying electric cars from one brand, and why they are going elsewhere.

For Vauxhall we are able to see the main motivation for purchase is being a Savvy Spender, whereas we can see that VW is winning over the Climate Conscious and Tech Savvy audiences.

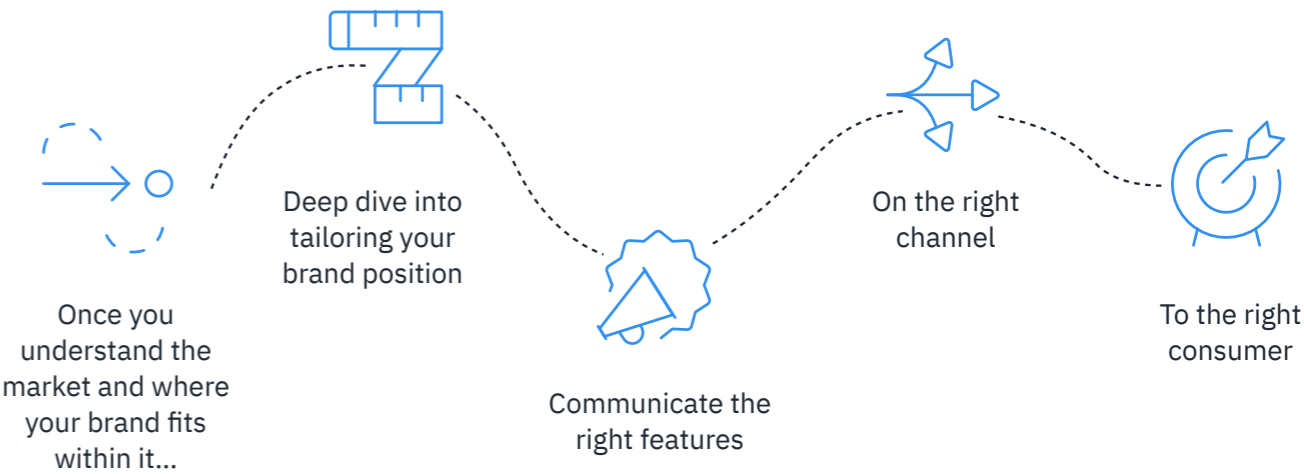
This is vital in knowing how to position your brand in the EV market.



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# How to overcome consumer barriers

Once you understand the market, and specifically where your brand sits within it, you can dive deeper to tailor your brand proposition. Communicating the right product feature, to the right consumers on the right channel, crafting the best customer journey and experience.



# Communicate the right product features

Start with understanding which features resonate with each mindset








### Climate Conscious













### Savvy Spenders

#### CLIMATE & GREEN ISSUES

-  Guardian Environment
-  UN Environment
-  UN Climate Change
-  DECC
-  The Carbon Trust
-  Climate Reality
-  TreeHugger.com
-  Energy Saving Trust
-  Friends of the Earth
-  BusinessGreen

#### ARCHITECTURE

-  Smart Cities Dive
-  The Building Centre
-  RIBA
-  Architects' Journal
-  RIBA Journal
-  Connected Places Catapult
-  ARCHITECT Magazine
-  BuildingDesign Media
-  ArchDaily
-  RIBA Education

#### HOUSE & HOME

-  Building Design
-  EDF Energy
-  OVO Energy
-  Planning Magazine
-  Inside Housing
-  E.ON Energy UK
-  National Housing Fed
-  British Gas
-  @LandsecGroup
-  Architectural Digest

#### COUPONS & SAVING MONEY

-  Money Saving Expert
-  Home Bargains
-  VoucherCodes
-  uSwitch
-  airfarewatchdog
-  vouchercloud
-  Quidco
-  MyVoucherCodes
-  Poundland
-  Groupon UK

#### HOLIDAYS & TRAVEL

-  LateRooms.com
-  airfarewatchdog
-  Skyscanner
-  lastminute.com
-  easyJet
-  Jurys Inn Hotels
-  Virgin Atlantic
-  Thomas Cook
-  BeeckHillHotel&Spa
-  TripAdvisor

#### HOUSE & HOME

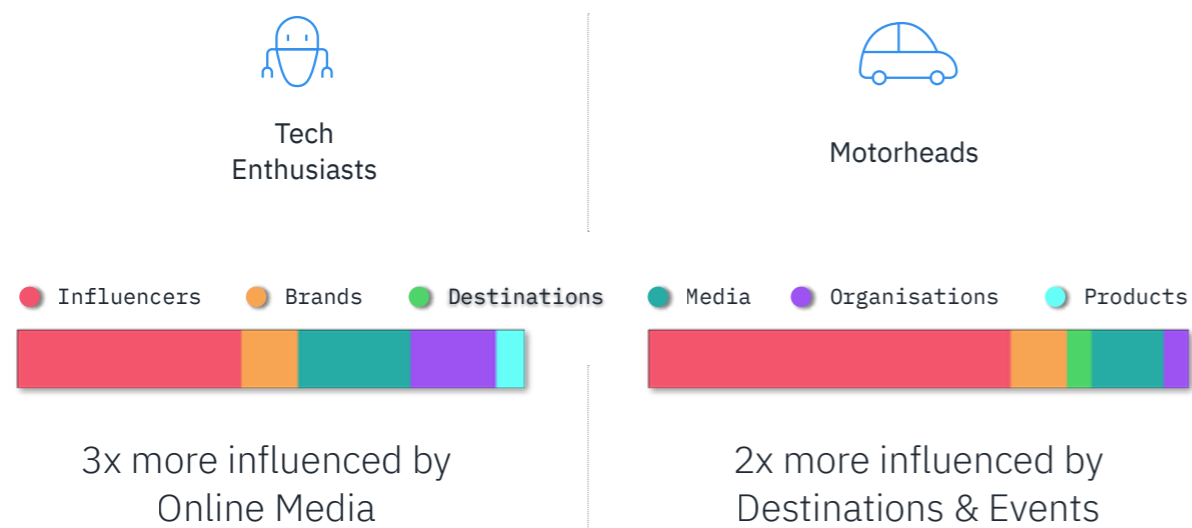
-  Wilko
-  ao.com
-  B&Q
-  Ora
-  Bunzl Cleaning
-  BISSELL (UK)
-  Tefal UK
-  Laura Ashley
-  Homebase
-  ADDIS Home

Source: Starcount Observatory

Looking into the lifestyles of consumers, we can see Savvy Spenders are family people, focused upon needing boot space, wanting to have safety features pointed out. Less interested in aesthetics and technology, they want to understand the nitty gritty of the financial plan.

The Climate Conscious want to hear about the efficiency of the engine, the specifics of emissions, the environmental impact on wildlife, and the planet. Is it solar powered? Was it made using recycled materials?

Find the right channel to reach your customers through



When you know what matters to a group and which media channels they consume, you can communicate with them. Looking at Tech Enthusiasts versus Motorheads we can see, compared to the UK average, that Tech Enthusiasts consume 3x more online media, whereas Motorheads are twice as influenced by destinations and events.

BUILDING ONLINE AND OFFLINE EXPERIENCES FOR CUSTOMERS


Find the websites, forums, bloggers that your target audience love.



Tech Crunch




Engadget



Gizmodo




The Drive




AutoBlog




Green Car Reports



Lord Aleem




Matt Farah



Alex Goy


They want real experiences, race events, factory tours, track days.



Car Fest




Motorcycle Live



Beaulieu




Shell Eco Marathon




Silverstone Races



Ant Anstead



Quentin Wilson



Christie Brimberry

Knowing this, we can find the right websites, bloggers and forums to target, to curate the perfect online experience for your tech enthusiast customers.

We can pinpoint events and destinations that resonate best with each audience, thus shaping content and themes for offline experience. For example, the Motorhead audience want real experiences, race events, factory tours, track days.

Source: Starcount Observatory

CREATE THE RIGHT MESSAGING

In order to land the message most effectively, and to ensure brand credibility, it is important to get the language and the creative right. Using our pioneering AI driven creative moodboards, we are able to look at the actual imagery particular audiences are consuming, to inform a data driven creative strategy. We can see the type of content the audience likes to consume and then emulate that in your marketing. E.g. motorheads like bright colours, big imagery around the look and feel of the cars/products whereas tech enthusiasts want imagery and language that show the detail of the technology, product features and functionality.

PERSONALISE CREATIVE ACROSS CHANNELS

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3

# Target the right customers and prospects to grow your sales

Once you know who you want to target, and how - we can help you find even more customers. Using geographic data of 29 million UK households which accounts for 53 million consumers overlayed with demographic, passions and motivational data - we can profile your current consumers as well as finding lookalike areas which exhibit the same interests. This helps you find additional people that you aren't currently talking to.

For example, we can overlay charging point data to optimise targeting and find exclusion areas based on lack of infrastructure.

In the graph to the right, we have highlighted the areas with a higher motivation to buy an electric car in lighter blue, and flagged the destinations of charging points. Looking at London, we can see there are many EV charging points, especially in more suburban areas, making it a viable purchase for these consumers.



Zooming out however, looking at the wider South West of the UK we can see large areas around Bristol and Brighton with a high interest in electric vehicles, and therefore a propensity to buy, however they are being blocked by far less dense infrastructure for EV's. As well as overcoming the emotional barriers for your customers, it is important to tackle the practical barriers too.



In addition, understanding the catchment of your dealership is just as powerful as understanding your consumer. We can profile your store or dealership locations and analyse the catchment areas, within given drive times. This is key for understanding the motivations driving people to your retail outlet, across the UK.

We are also able to take your actual customers, and match them to our rich social data to find out who they are and specifically what motivates them when they aren't shopping with you.

# *Driving the Insight into Action...*

## 1. Enrich your CRM:

We can enrich your CRM to see which electric vehicle purchasing motivation resonates with your actual customers, and how to activate against that.

## 2. Enhance Communications:

Strengthen your creative targeting with AI driven moodboards for each of your consumers segments, serving the type of imagery that your customers like to engage with as well as the type of language that resonates best with them helping drive improvements in open rates and engagement.

## 3. Reveal brand perception from the consumer point of view

Find what your customers are passionate about in order to improve digital and social targeting at a more granular and meaningful level.

Analyse your competitor landscape in real time using our dynamic social panel of millions, updated monthly, based on consumer perception.

## 4. Find prospects:

Profile the catchments of your current customers and find look a likes around the UK.

Plug in customer passions and demographics to see at postcode level for more relevant and targeted OOH, doordrop, digital and reduce cost per acquisition (CPA)

# Brand affinity ranking

For the first time ever, we have also ranked the top automotive brands based on consumer perception within the current EV market.

1		Tesla	6		Chevy Electric	11		Honda	16		Jeep
2		Nissan Electric	7		Jaguar	12		Audi	17		NIO
3		Renault ZE	8		Ford Motor Company	13		Lexus	18		smartcar
4		Land Rover	9		Porsche	14		Mercedes-Benz	19		Skoda
5		BMW i	10		Toyota	15		Volvo Car	20		Citroën

Source: Starcount Observatory

# Making you first for your customers...

By understanding your customers’ motivations, we know why they buy and what they will do next. To identify the next best offer, next best product, for each and every customer to make you relevant and keep pace with changing tastes and trends.

We are a data science consultancy working with some of the biggest brands in the UK and abroad. Our innovative technology uncovers patterns in the vast array of information generated by 1.3 billion online consumers. That’s equivalent to the data analysed by the world’s largest telescope every day. But it’s what we do with it that makes Starcount unique. By overlaying the passions and motivations of relevant consumers on your existing data, we provide a catalyst for change that will grow your business exponentially. That could mean making changes to your pricing, ranging or locations, creating a loyalty programme or personalised customer offers and communications.

We use big data, within and outside our client’s organisations, to help understand their customers better than anyone else. **We have pioneered a new data and segmentation technique to reveal your customers future intent – through the identification of mind-sets and motivations.** Your data alone can tell you what someone bought. By combining this with when and why consumers are motivated, we predict their next purchase and make you their first choice.

Our data:

WE’VE GOT

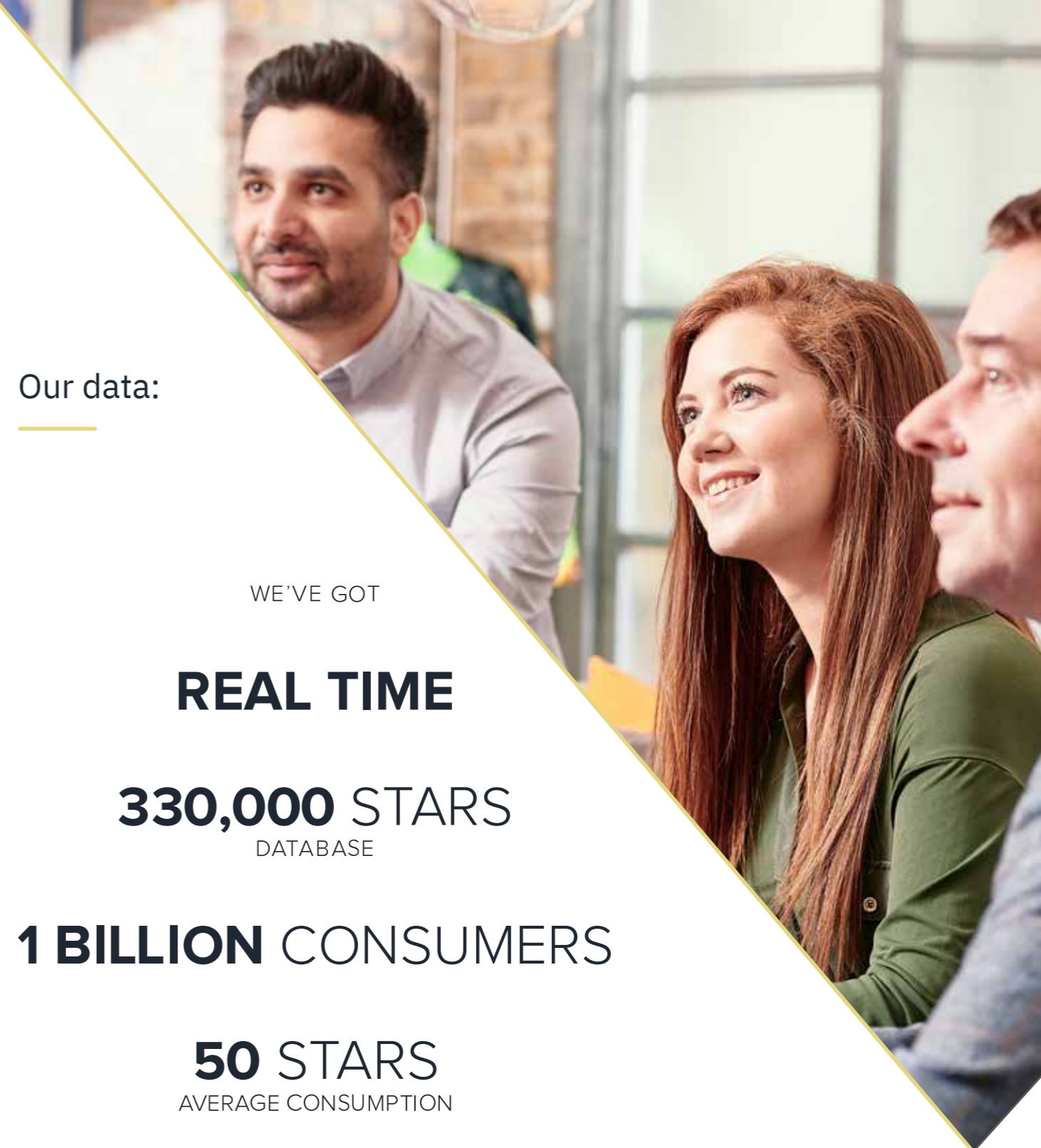
REAL TIME

330,000 STARS  
DATABASE

1 BILLION CONSUMERS

50 STARS  
AVERAGE CONSUMPTION

GLOBALLY



Our Products:

Starcount Observatory:

The Observatory data science platform contains insights from over one billion global consumers, tracking how their passions, motivations and mindsets change over time. It shows when and why consumers engage with brands, influencers, and media titles aswell as identifying emerging trends and future buying behaviours.



Starcount Audiences:

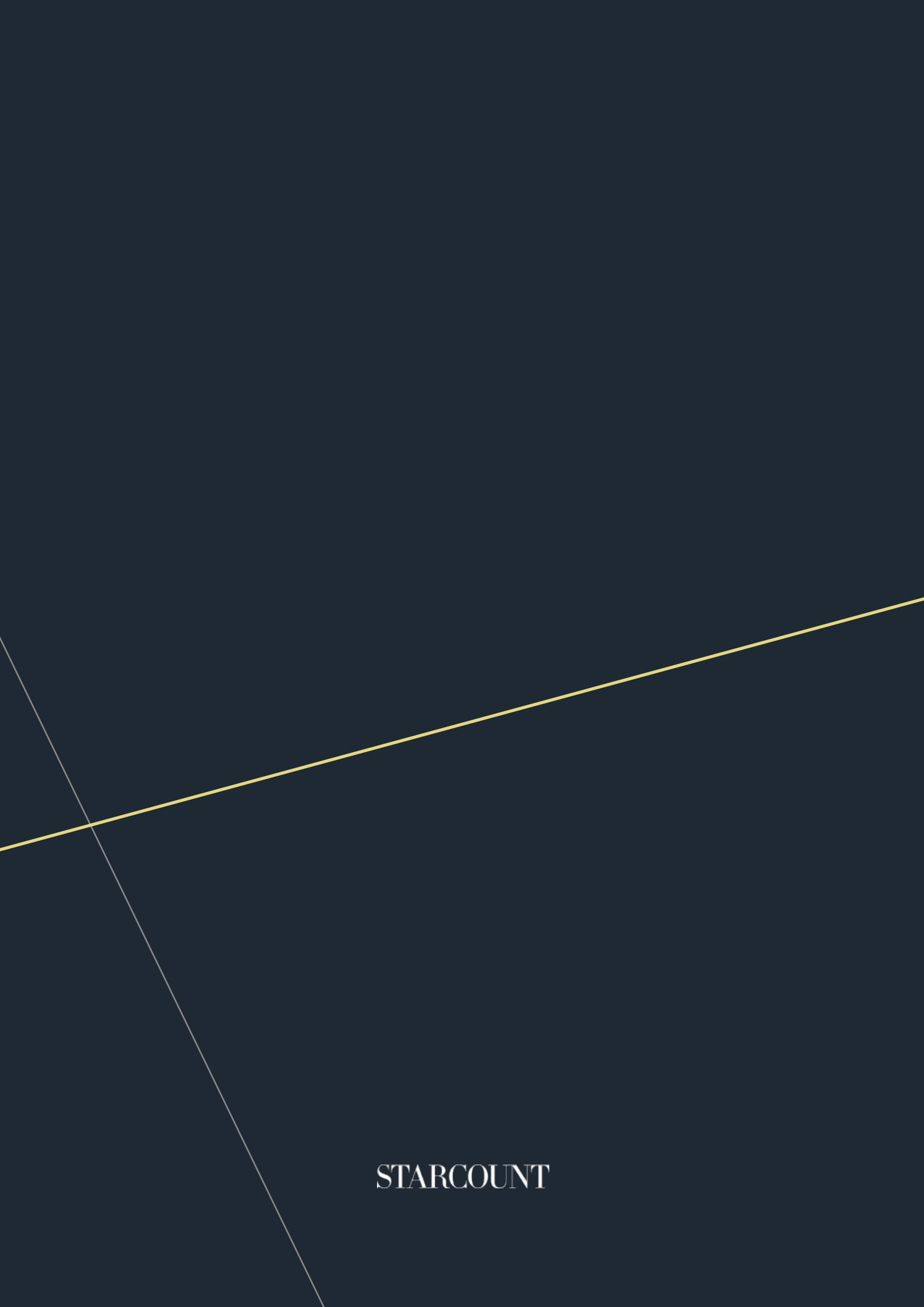
Traditional, survey-based lifestyle research is usually driven by a panel just a few thousand strong and is slow to evolve. So we developed Starcount Audiences, to provide infinitely greater clarity by mapping the ever-changing interests of consumers onto the geographic area where they live.

Then we take these “Passions to Postcodes” insights and use them for everything from finding the best site for your new location, to choosing the right media channels to hit your target audience e.g. out-of-home, direct marketing and digital.





To find out more about Starcount please visit:  
[www.starcount.com](http://www.starcount.com)  
or email [team@starcount.com](mailto:team@starcount.com)



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