
Shell Recharge
EV Driver Survey Report
2023
In partnership with LCPDelta

Contents

Industry perspective: welcome to the electric revolution

We have conducted the EV Driver Survey for the last six years, offering us unrivalled insight into the shifting attitudes of Electric Vehicle (EV) drivers across Europe. During this period, the adoption of EVs has accelerated rapidly, and I am proud to say that this year's research is the largest yet. The following report looks at the views of 25,000 European EV drivers, across Belgium, France, Germany, the Netherlands, the UK, and, for the first time, Italy.

From a global perspective, these are - alongside China - the most advanced EV markets across the world. As well as identifying local nuances, these results therefore might also preview trends in the EV experience, as adoption picks up elsewhere globally.

The nature of the EV adoption growth curve is clear in the data. Despite conducting the research in the first two months of 2023, a remarkable 1,038 respondents acquired their EV within that period. The latest findings reflect the record-breaking growth in global EV sales witnessed over the last 12 months.[1]

Our research shows that there are both new and persistent challenges as we look to accelerate the adoption of EVs. For a start, the economic headwinds that many businesses are adapting to are also filtering down to the consumer level, influencing EV driver behaviours and the likely rate of adoption. Charging infrastructure also remains a challenge that will grow in importance as EVs reach consumers for whom the adaptation to electric mobility might be more complex.

As a collaboration between Shell Recharge and the specialist consultancy LCP Delta, the research methodology and data analysis of this year's EV Driver Survey reflects a broad base of industry expertise and represent an important benchmark for organisations interested in the development of the EV ecosystem.

Many businesses have a graspable opportunity around EV charging - from EV charging providers, such as Shell, to employers and workplaces enabling business EV use. Meanwhile, charging and technology providers have significant potential to add value to the charging experience by offering smarter and more seamless solutions.

I believe we are at an exciting tipping point and are well on our way to EV mass adoption. However, if we are to continue accelerating at pace then industry must work together effectively and remove barriers into entry.

Firstly, I am grateful to every one of the respondents who shared their views. Secondly, I hope you find this report insightful, please do not hesitate to contact us with your questions or if you would like to understand how we could work together.

Florian Glattes
Vice President - eMobility Solutions
Shell

[1] One in every seven passenger cars bought globally in 2022 was an EV, according to a recent report by the International Energy Agency (IEA)

Summary of key findings

The pace of adoption is accelerating

42%

of EV drivers went electric within around a year of the survey

Range confidence is growing

47%

do not feel the need to charge every day

Drivers are seeking greater simplicity

47%

are willing to pay slightly more for a single method of access to charge points

Business drivers stand apart

50%

of business EV drivers receive employer-provided charge cards

Sustainability is a lifestyle

46%

of EV drivers also have at-home solar panels

Home charging is not universal

44%

of EV drivers do not have a charge point installed at home and need public charging solutions

Charge points win customers

57%

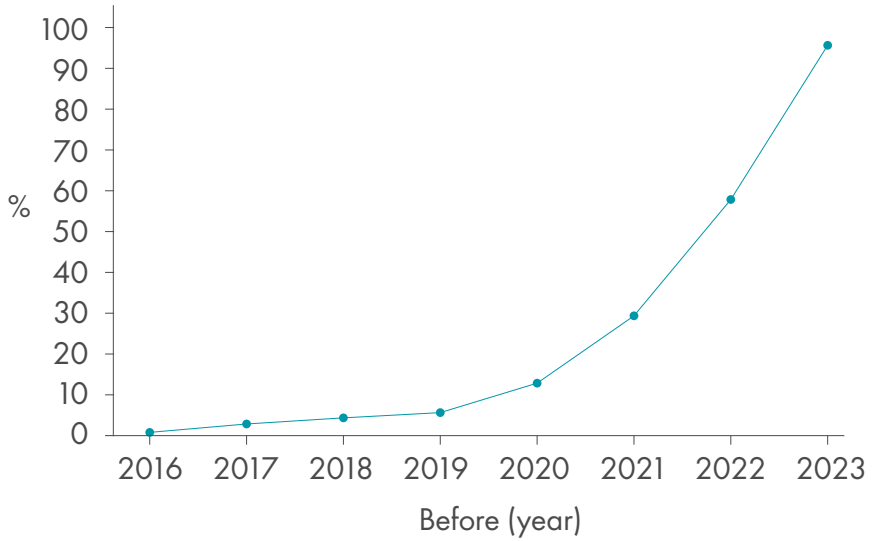
would more frequently visit destinations that offer charging

The dawn of a new electric era

Fresh faces on the road to electric

While it is well known that the rate of consumers adopting EVs has accelerated over the last decade, it is still impressive to note how new most consumers in this market are. 42% of the respondents purchased their EV within around a year of the survey, and over 67% within the last two years.

Figure 1: EV drivers are likely to still be relatively new to driving electric



Date on which respondents acquired their primary electric vehicle

This growth has been dominated by the new EV market. According to our research, 87% of current EV drivers bought their vehicle in new condition (while the equivalent figure for all vehicles in Europe is just 27%) suggesting that a lack of vehicle supply is currently a limiting factor in the second-hand EV market.[2] However, given the mass of EVs now on our roads we are already starting to see first generations of EVs being re-sold, and there is good reason to believe that we will witness further growth in the used vehicle market in the near future.

This is significant, as development of the second-hand market and the role it can play in introducing lower priced models into the market may support mass EV adoption, with 32% of respondents stating purchase cost as the third most important factor for accelerating the switch to electric - a drop from the second most important factor in 2022.

The data would suggest that consumers perceive purchase costs as less of a barrier to adoption, perhaps in recognition of lower cost EV models entering the market. This is significant trend given the Western European market first gathered momentum in the premium vehicle segment, and as a result, perceptions of high purchase costs have to date been a barrier for many consumers.

Our data shows that once drivers make the transition to electric, they do not intend to turn back. In 2022, only 2% of EV drivers expected their next vehicle to be petrol- or diesel-powered, suggesting that majority are pleased with the EV experience.

[2] Bain, The Outlook for the European Used Car Market, 2023

The dawn of a new electric era

An emerging sense of range confidence

One of the great constants of the EV industry, and a common topic in media reports, is the idea of range anxiety. Stemming from the limited battery capacity of the earliest mass-market EVs, range anxiety is the consumer perception that EVs do not have the sufficient energy storage needed to cover the distances they travel.

However, there is a contrast between this perception and the realities of EV usage. In fact, it is reasonable to assume that most journeys are well within even the average EV's battery range. Taking UK drivers, for example, the average length of a car trip is at 8.4 miles per trip.[3] This is well below the average electric car range, which can vary from 100 to 300 miles, depending on the vehicle model.[4]

While continued action and investment is needed to improve charger availability, growing charging availability and fast-charging networks mean that even cross-continental journeys are viable. There is also a complex trade-off between battery size, vehicle cost, and weight-related efficiency which means that range-maximisation is not necessarily the ideal consumer outcome.

Indeed, the perception that range anxiety is limiting adoption is slowly being shifted by real-world experience, with the 50% of respondents this year highlighting it as a top-three issue, being down from 60% in 2022.

Figure 2: Range, charging availability, and purchase costs remain major barriers

	2022	2023
1	Improved EV battery range	Improved EV battery range
2	Lower initial purchase costs	Better public charge point availability
3	Better public charge point availability	Lower initial purchase costs
4	Higher charging speeds	Higher charging speeds
5	More choice of vehicle	Reliability of public charging points
6	More tax benefits for EV owners	More tax benefits for EV owners
7	Higher taxes on fossil fuel vehicles	More secondary benefits for EV owners
8	Education about EV environmental benefits	Higher taxes on fossil fuel vehicles

Top 8 factors for driving the mass adoption of EVs

[3] Department for Transport, National Travel Survey England 2019
[4] Range of full electric vehicles cheatsheet - EV Database (ev-database.org)

The dawn of a new electric era

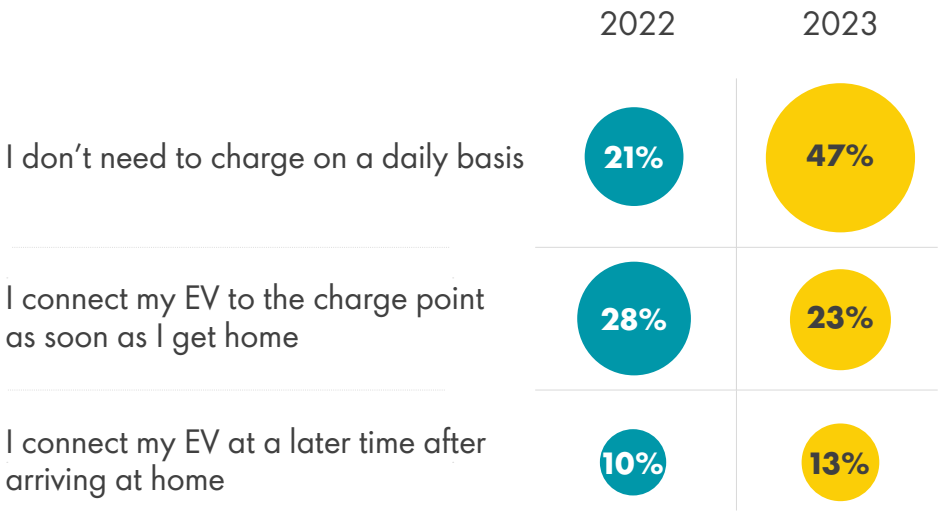
An emerging sense of range confidence

Evidence that range anxiety is reducing amongst drivers as they get more accustomed to their EV is supported elsewhere in the findings. For a start, only 14% of our respondents said they refrain from taking longer journeys. In fact, the number of respondents that are travelling to other European countries by EV, and having a good charging experience, increased by 5%, while reluctance to drive abroad because of charging or range concerns was down 7% and 5% respectively.

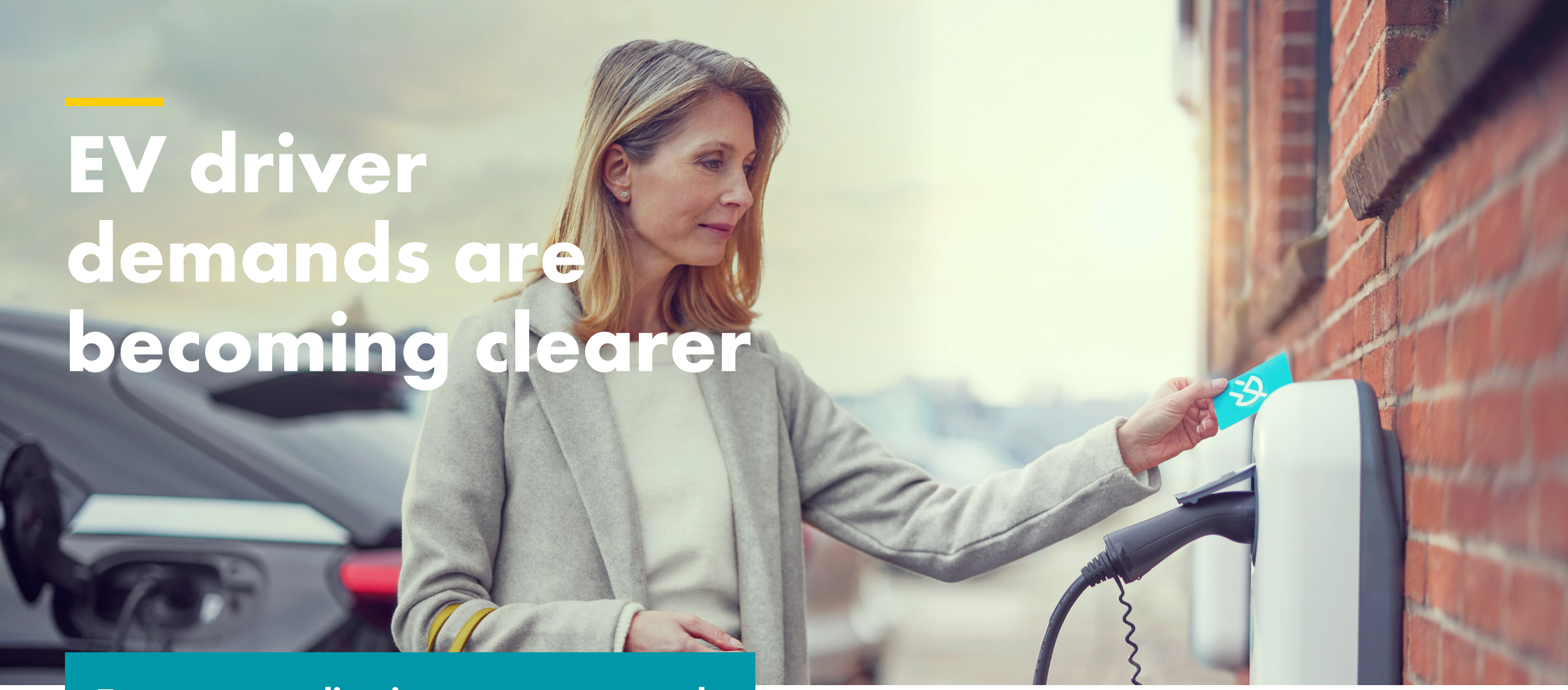
For customers that are making longer journeys, and therefore need to break more regularly, it is important that charging locations are places where they want to spend time waiting for their car to be charged. This can be achieved by creating improved convenience retail offers, such as quality food and drink options.

We are also seeing a notable trend of drivers becoming more relaxed about when EVs are charged, with 47% of respondents saying that they do not need to charge daily. The data would suggest that with experience, drivers are becoming more trusting of their EVs capabilities and starting to shift towards range confidence.

Figure 3: EV drivers are feeling less urgency around their own charging needs



Percentage of respondents agreeing with each statement



EV driver demands are becoming clearer

Too many applications, too many cards

While range anxiety has been a constant (albeit, decreasing) feature of the EV market, the growing ecosystem around charging has led to an emerging challenge, which the EV Driver Survey has tracked in recent years.

With multiple charging service providers rolling out public charging in more areas and introducing smarter back-end technology that simplifies billing, consumers are increasingly faced with a complex mix of applications and cards in order to access the most value from these services.

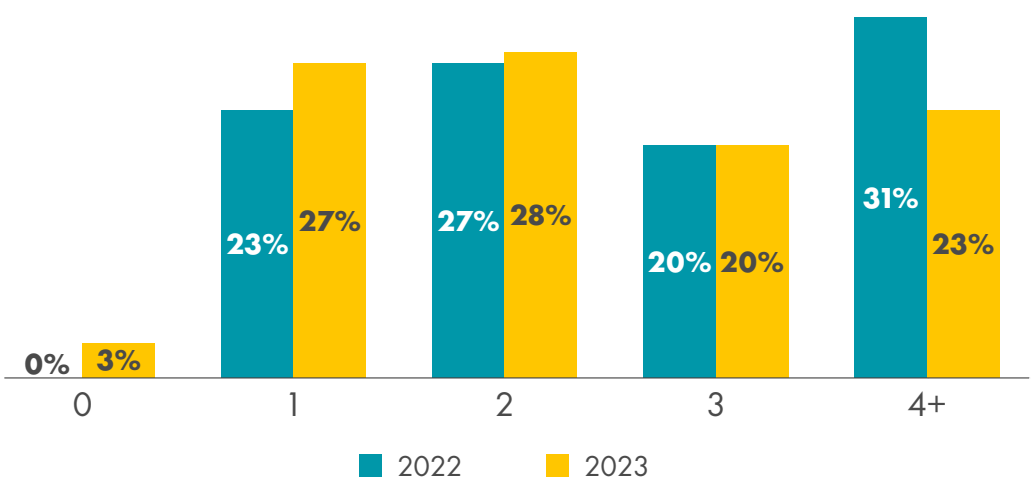
EV driver demands are becoming clearer

Too many applications, too many cards

Offering better, more integrated roaming services through network interoperability has been a key priority for some years. The good news is that the likelihood of having a wallet full of different cards is now slowly starting to decline, with the number of respondents who own four or more cards falling by 8% in the last year.

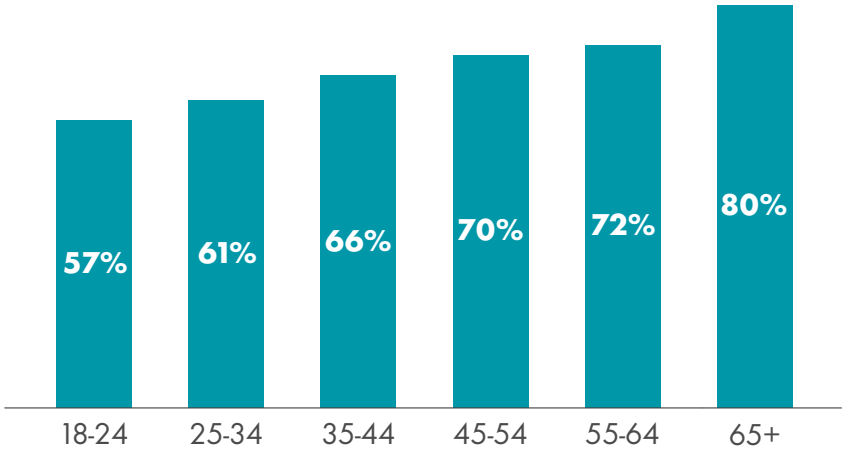
Unfortunately, the benefits are not being evenly distributed across the EV user base, with the number of cards correlating with age. While nearly three-in-five (57%) 18-24-year-old EV drivers own more than one charge card, that number rises to four-in-five (80%) for those aged over 65. This may be because older drivers are less proactive about moving to charging providers with wider coverage, or because their journey routes and destinations are more variable.

Figure 4: Multiple charge card usage is improving – but still remains high



Number of distinct cards for accessing public charging owned by respondents

Figure 5: The rate of multiple charge card ownership rises with age



Percentage of respondents who own multiple charge cards to access public charging

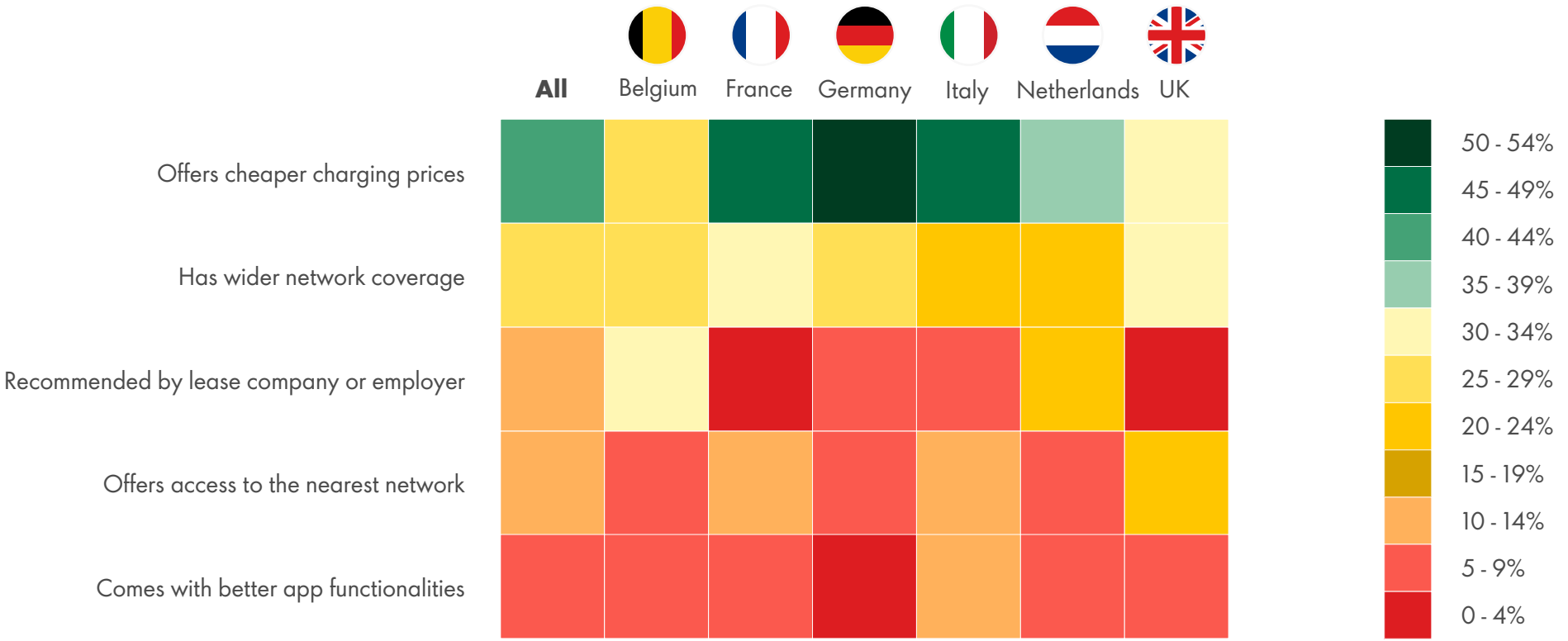
EV driver demands are becoming clearer

Too many applications, too many cards

Whilst our research shows that price is one of the leading factors for attracting users to charge cards, the full picture is far more nuanced. Convenience and experience also play a key role, with the size of the network coverage and application functions also attracting users.

In fact, 47% of respondents agree that they would prefer to have a single method of accessing all public charge points even if that means they were to pay slightly more per charge.

Figure 6: Cost, convenience and customer experience win charge card preference



Percentage of respondents favouring a particular charge card for each reason

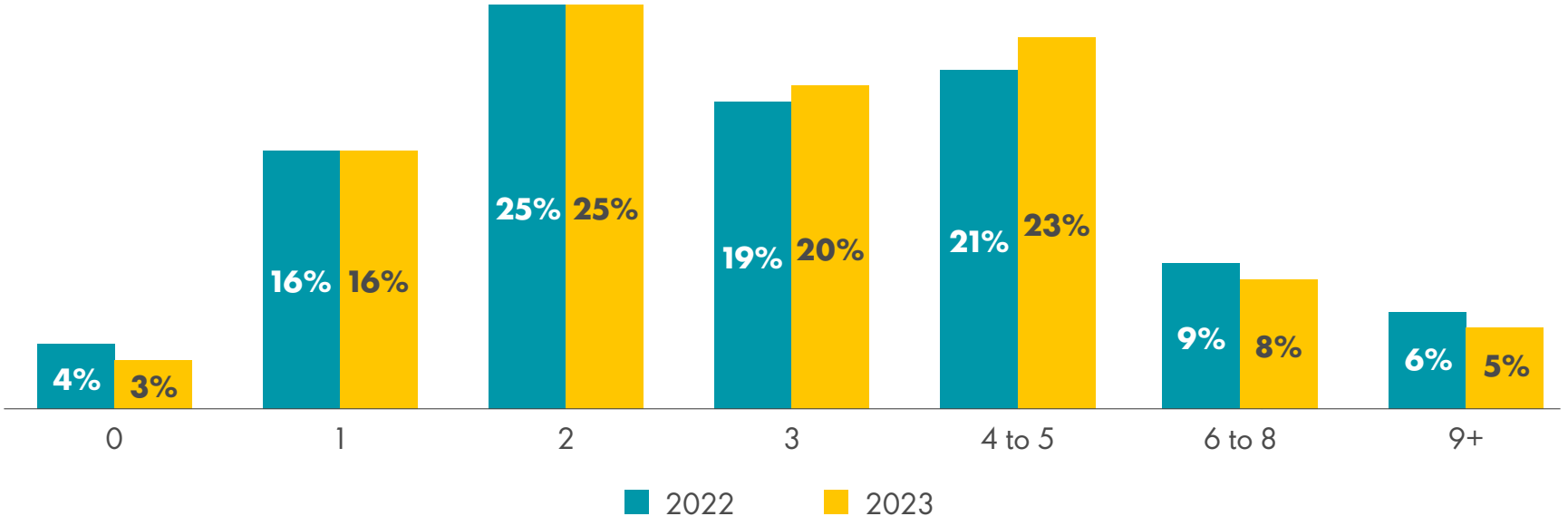
EV driver demands are becoming clearer

Too many applications, too many cards

Our findings show a similar picture for app usage, with 23% installing more than four applications to manage and make the most of their EV, and 13% of users using six or more.

One of the reasons for high app numbers is that they are much less likely to duplicate one another's functions, and therefore much harder to streamline compared to charge cards. While finding and using public charging are by far the most common uses for these apps, EV drivers also tend to engage strongly with vehicle management apps from car manufacturers and route planning apps.

Figure 7: Multiple app usage is common, and hasn't changed since last year

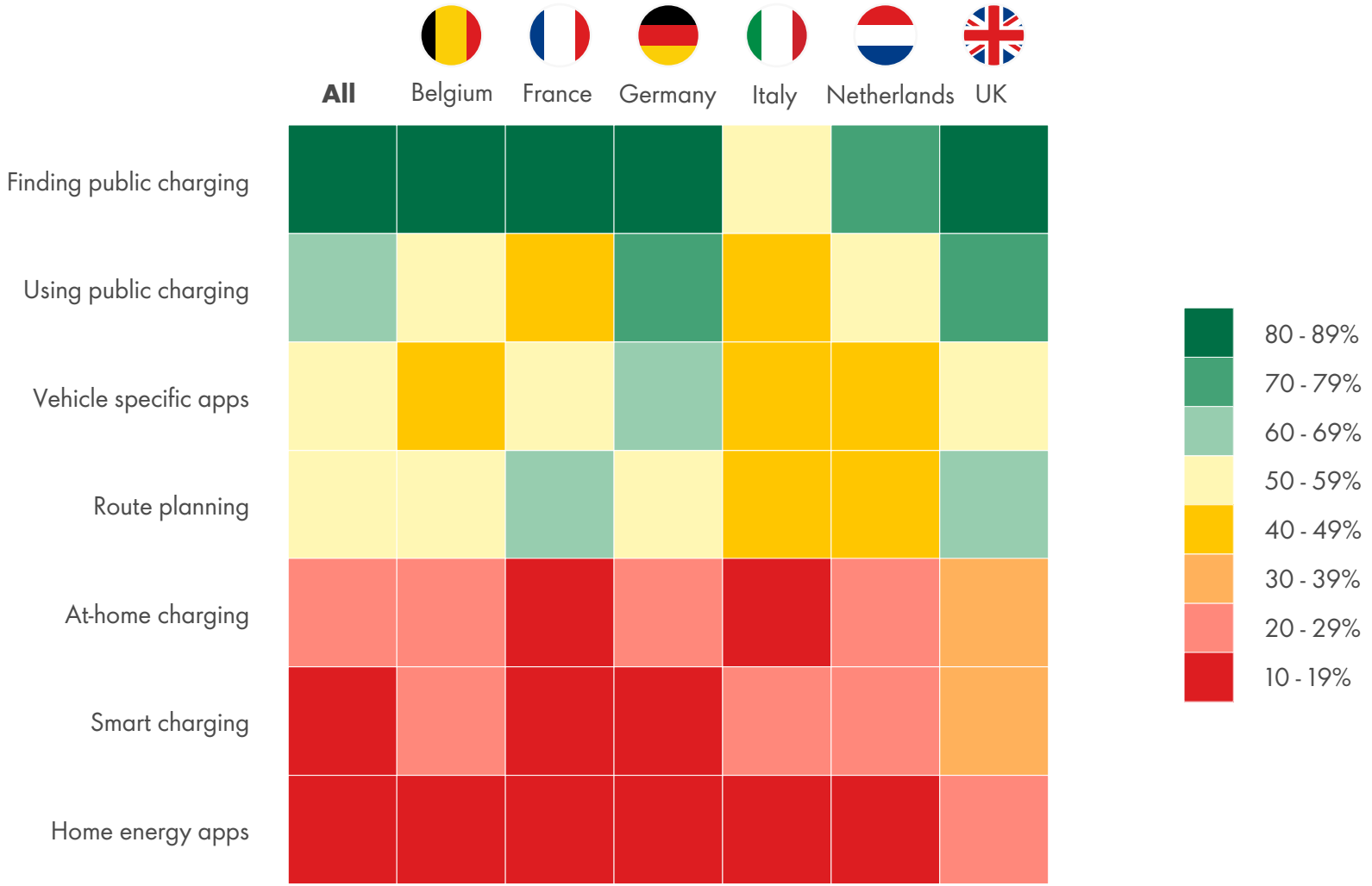


Number of EV driving and charging-related apps used by respondents

EV driver demands are becoming clearer

Too many applications, too many cards

Figure 8: Reasons for app usage vary significantly by market, but charging leads



Percentage of app-using respondents who say they have apps for each purpose

EV driver demands are becoming clearer

Too many applications, too many cards

As the adoption of EV continues to accelerate into the mass market, there is a good opportunity for stakeholders across the ecosystem to collaborate to provide customers with a more seamless and personalised experience.

At Shell we are collaborating with partners such as Eco-movement and Uberall to help customers find Shell Recharge points through their favourite mapping providers - including the Shell Recharge app, which is used by over 500,000 drivers - enabling them to make charging decisions based on what they can do nearby.

Partnerships between vehicle management, route planning, charging network software providers could also help generate unique offers based on range of factors, including customers preferences, weather, time of day or charge speed. For example, data could be used to estimate how much time a customer has available at charging stations and suggest suitable offers. By creating new customer loyalty schemes, such as these, businesses within the EV ecosystem could differentiate themselves from competitors and unlock new revenue streams.

For this, it is critical that charge point operators, charging network software providers and vehicle OEMs can seamlessly access and exchange relevant information to improve the EV charging experience and innovate service offerings under level playing field principles.

Functionality, customer experience, and network advancements are all critical to customer loyalty and preference. We anticipate that over time a single solution – which provides more value to customers – will become the mainstream. However, even in the current nascent market, greater functionality is needed to create a simplified customer experience.

EV driver demands are becoming clearer

Business drivers stand apart

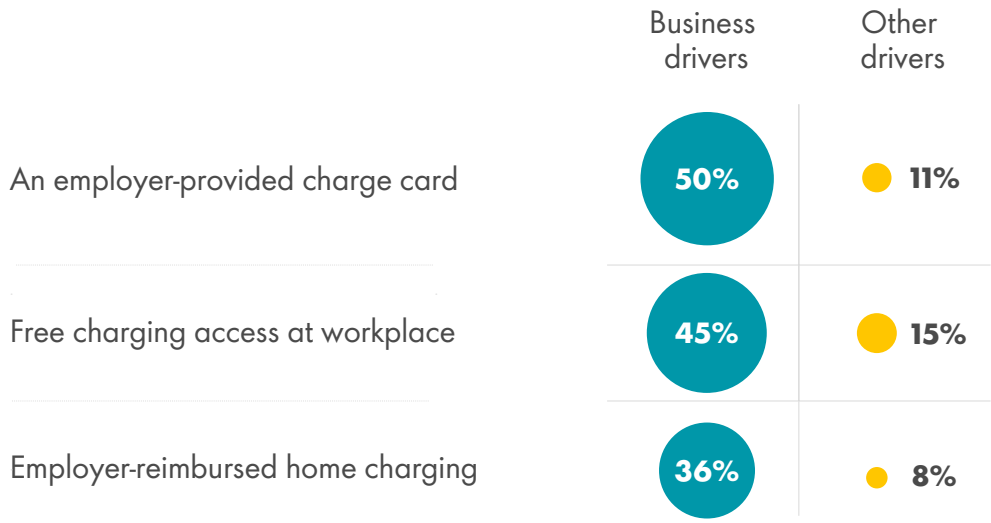
Our research revealed that EV business drivers have unique charging behaviours, and therefore, should be considered by the industry as a distinct sub-segment of the market. 50% of the respondents that we identified as business drivers received an employer-provided charge card, compared to only 11% amongst non-business drivers. This trend was particularly strong in the Dutch (65%), Belgian (65%), and German (59%), markets which have a relatively mature Mobility Service Provider (MSP) propositions.

MSPs offer EV drivers access to a wide range of charging networks and therefore greater freedom of choice, whilst meeting the needs of employers, who only want to deal with one vendor to enable charging for their employees.

We can see a similar pattern when it comes to free charging being offered at the workplace or reimbursed home charging, with business drivers trending higher than non-business drivers. While this makes intuitive sense as those employers are more likely to consider benefit schemes to accompany the switch to electric, it does highlight two important considerations for the industry.

Firstly, maturing the EV ecosystem to further enable the operation of EMSPs could open a broad range of opportunities for making charging more useful and integrated with drivers' lives. Secondly, the industry can promote overall EV adoption by creating more propositions focused on targeting business drivers.

Figure 9: There is a real difference in usage possibilities for business drivers



Percentage of respondents with access to each amenity

EV driver demands are becoming clearer

Sustainability is a lifestyle

One consistent finding over the last four years is that driving an EV tends to correlate positively with other environmentally positive consumer decisions - such as choosing a 100% renewable electricity home energy tariff and the link between EV ownership and broader low-carbon lifestyle commitments shows no sign of diminishing as more drivers switch to electric.

In fact, nearly half (47%) of our respondents have invested in at-home solar power, while 36% have smart home thermostats and 19% have heat pumps. To take one market as a comparison, data from the UK's industry body for at-home power generation suggests that around 5% of homes have solar panels. Our survey data, meanwhile, shows that 26% of British EV drivers have solar panels installed at home.[5]

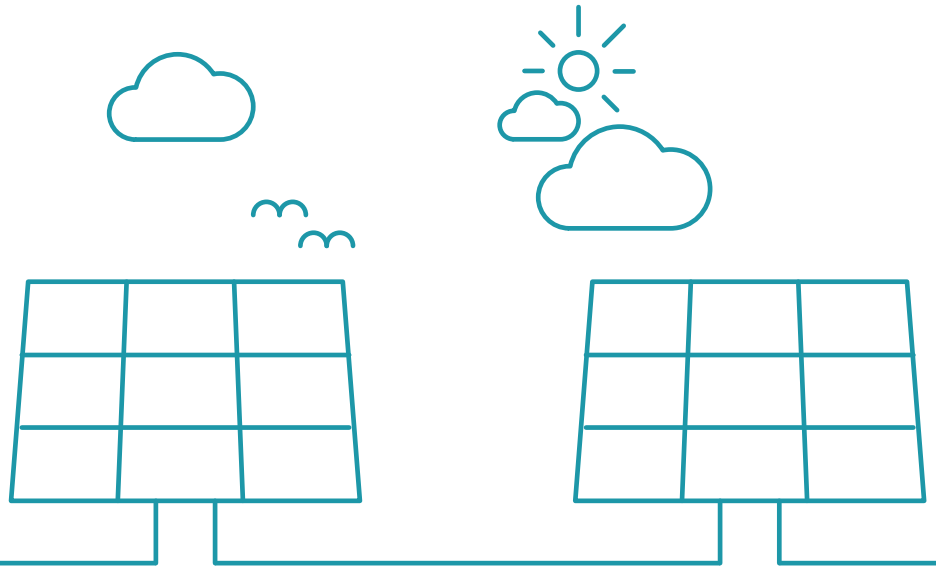
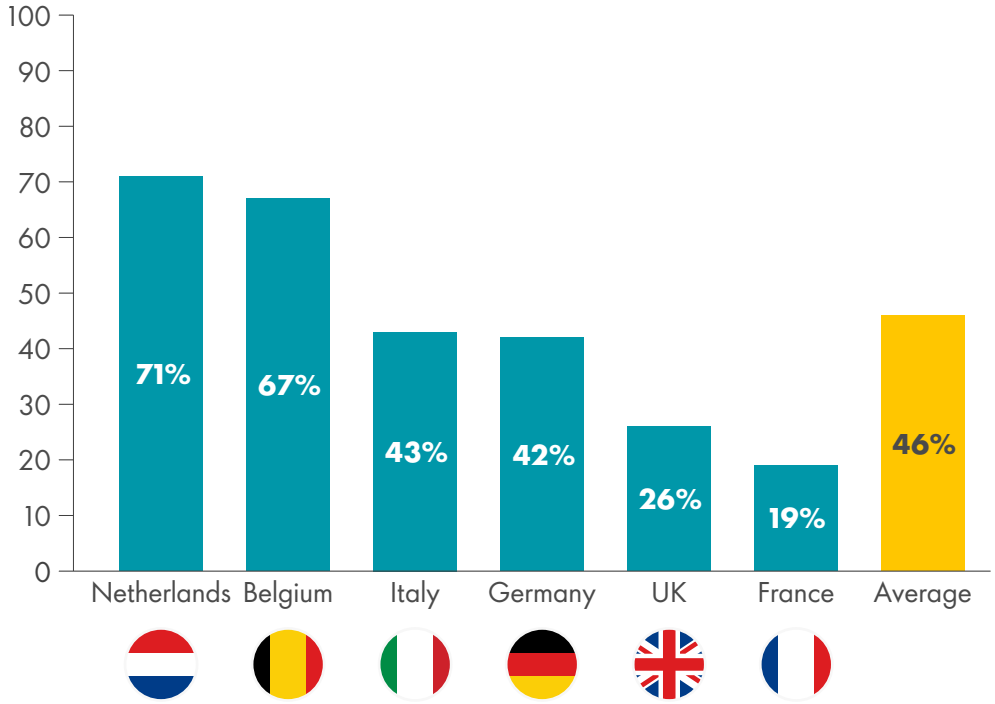


Figure 10: EV drivers are quite likely to have invested in at-home solar



Percentage of respondents with solar photovoltaic panels installed at home

[5] At the time of writing (May 2023) the MCS Data Dashboard stated the UK had 1,318,819 solar panels, which is 5% of the 28.1 million UK households according to the Office for National Statistics, Families and households in the UK: 2021

EV driver demands are becoming clearer

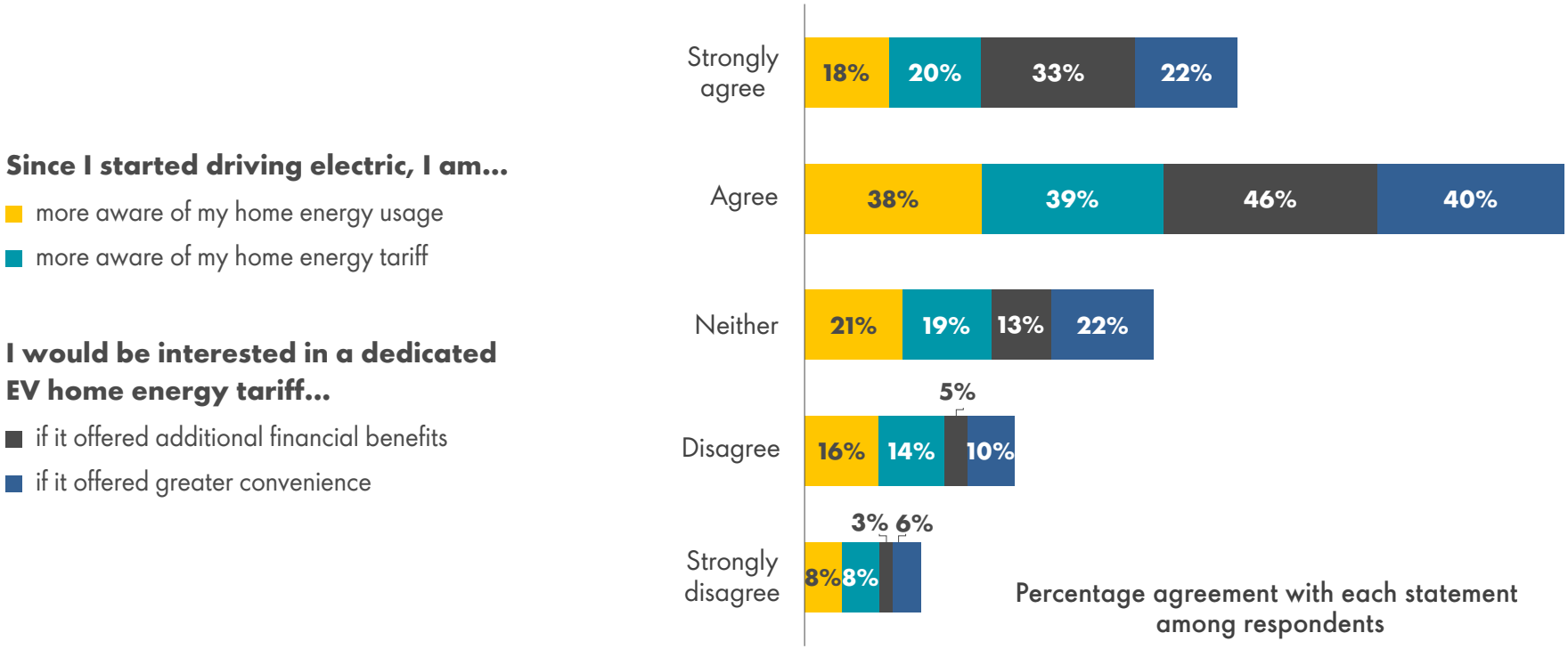
Sustainability is a lifestyle

The sustainable lifestyle aspect of EV ownership also extends to willingness to make adaptations to maximise the benefit of their vehicle. For example, 66% of respondents would like their charge point provider to offer them an EV-specific energy tariff, while 48% would like smart charging services to be included, and 33% want devices like solar panels and home batteries to be offered as part of their charge point deal.

There is also some evidence that this motivation correlates with age, as those between 18-24 are 16% more likely than the average to say that they will drive further for a charge point that is powered by renewable electricity.

Interestingly, driving an EV appears to be influencing energy awareness on a much broader level, with over half (59%) of respondents saying that they have become more aware of home energy usage since making the switch.

Figure 11: EV ownership raises energy awareness – and drivers are keen on EV-specific offers



EV driver demands are becoming clearer

Sustainability is a lifestyle

Of course, sustainability is not the only motivation for purchasing an EV, but the correlation between EV ownership and other sustainable behaviours suggests that decarbonisation is a strong driver for consumers.

EV drivers also understand and are enthusiastic about the role they can play in managing future energy demands through innovative charging, with 81% saying they would be willing to delay charging to help prevent an energy demand spike. There is particularly growing interest in the use of smart charging services which can automate charging times to ensure the vehicles do not draw power during periods of peak energy demand – with an 11% increase in the number of respondents who agreed these services would be a powerful selling point to prospective EV drivers from the previous year.

There is also a slight growth in interest in using Vehicle-to-Grid (V2G) technology, which enables EV drivers to sell excess energy back to the grid during periods of peak demands. Whilst still in its infancy, when rolled out at scale, this technology could offer a solution where everyone benefits: enabling lower running costs for the drivers, whilst balancing the grid for the country.

Figure 12: Interest in future charging innovation remains high

2022	2023	
80%	81%	would be willing to delay charging to help prevent an energy demand spike
68%	70%	would be interested in receiving financial benefits for using V2G technology
58%	69%	believe that smart charging would be a good way of encouraging more people to drive EVs
59%	57%	would accept slower charging in order to help maximise national renewable energy usage
40%	37%	are willing to pay more for an at-home charge point with smart services

Percentage of respondents responding positively to each suggestion

Untapped opportunities

More charging is needed, everywhere

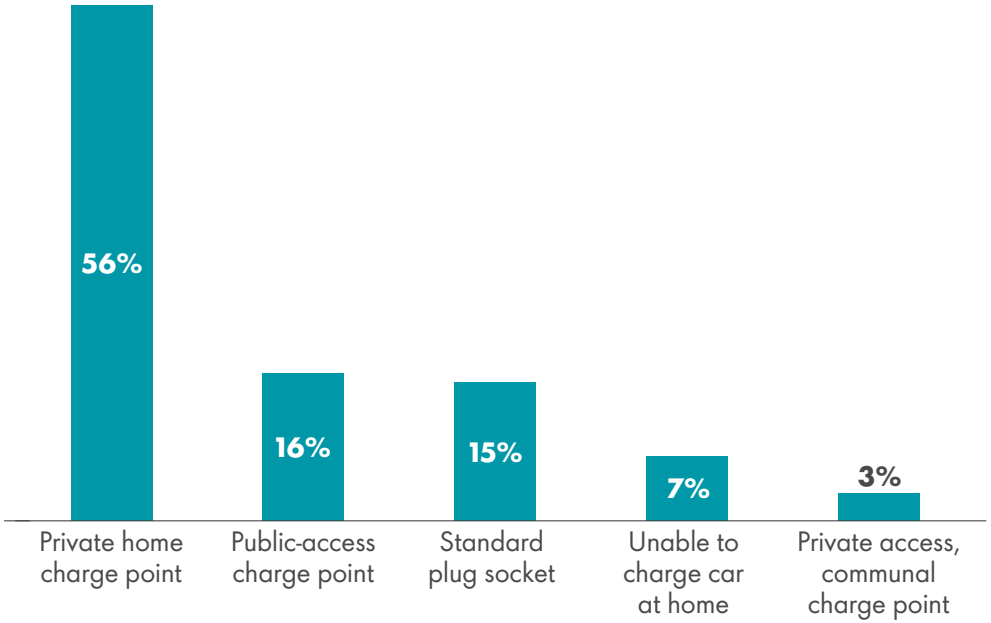
When considering what the future EV charging ecosystem should look like, it is useful to think about why the outgoing ecosystem around ICE (internal combustion engine) vehicles has been so successful. The traditional fuelling infrastructure is both widespread and dense - if you are driving a vehicle almost anywhere in the world, it is safe to assume that a petrol station will be within range.

Whilst the first wave of EV owners had access to off street charging, 44% of the EV drivers in our survey this year said they do not have a charge point installed at home, an 11% increase from the previous year. The number of drivers who charge outside the home is likely to increase as EV adoption accelerates – especially in highly dense urban cities, where access to off street parking is limited.

Untapped opportunities

More charging is needed, everywhere

Figure 13: Just under half of drivers do not use a dedicated at-home charge point



Percentage of respondents who use each method for charging at home

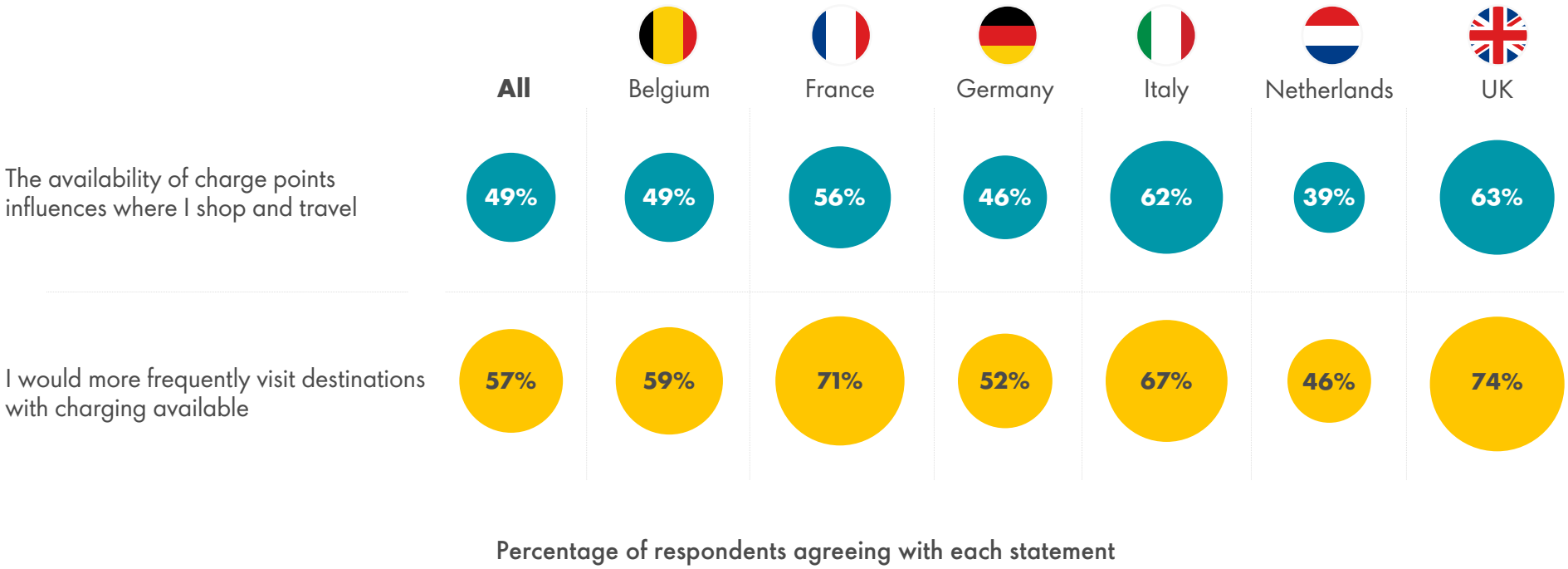
While refuelling requires a degree of centralisation, charging can be made available, in principle, anywhere. This change will become a catalyst for increased public-charging demand and will offer businesses with parking infrastructure the opportunity to attract new business by collaborating with charging infrastructure partners.

Untapped opportunities

Destinations can attract more customers, and for longer

Destination charging not only provides accessible networks in communities, but also offers EV drivers the opportunity to use their charging time in a productive way. Nearly half (49%) of drivers already say they choose where to shop and travel based on the availability of charge points, and 57% said they would visit destinations more frequently if they had charge points.

Figure 14: Around half of EV drivers favour destinations with charging



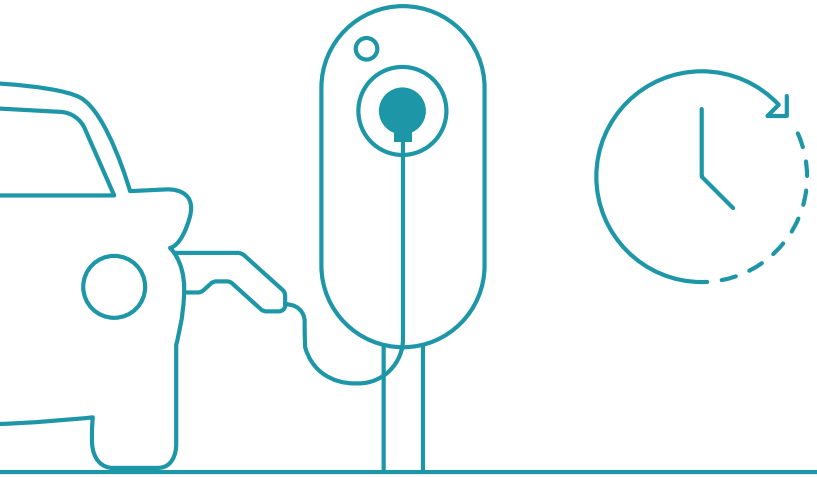
Percentage of respondents agreeing with each statement

Untapped opportunities

Destinations can attract more customers, and for longer

As well as potentially attracting new customers, destinations such as supermarkets with charge points can also benefit from longer dwell times, increased basket sizes, and therefore, higher revenue for retailers. In fact, separate Shell data indicates that EV drivers are willing to spend an hour or more at supermarkets whilst they charge, and this additional dwell time could have a significant impact on the profitability of the retail sites.

This shows how different capacity chargers can provide a good charging experience if they are in the right locations. For example, on a highway site customers want to get back on their journey as soon as possible, therefore they should include the highest capacity charging. However, at destination sites drivers are more willing to base their decision on where they are going to have a more enjoyable experience.



Conclusion: our top takeaways

Drivers

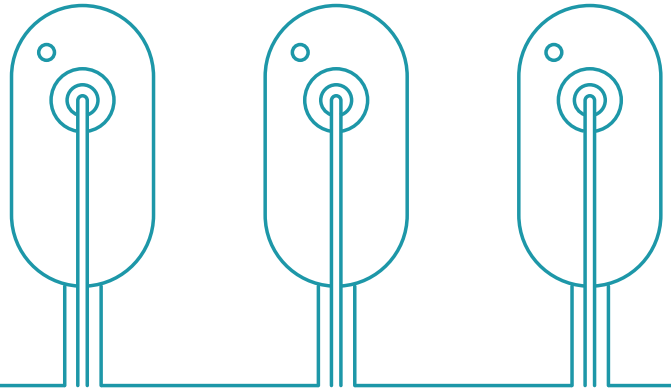
The growing awareness of EV realities can be capitalised on with strong consumer education to further grow range confidence and spread knowledge around charging technologies. A focus on pushing the frontiers of innovation must be balanced with keeping drivers effectively in the loop.

- Barriers to EV adoption such as range anxiety are being reduced as industry communications and the positive reality of EV driving are becoming more apparent
- Charging innovations should be developed in conjunction with efforts to create a more holistic and streamlined charging experience for drivers
- Industry should develop more personalised charging experiences that recognise the unique needs and behaviours of drivers. This can be achieved through improved convenience retail offers at charging hubs, especially when it comes to quality food and drink, and through collaborations between destinations and charging infrastructure providers

Businesses

Charging rollout relies on a broad coalition of businesses and policymakers, which can be built by identifying the mutual benefits of charging provision. Drivers, destinations, workplaces, and the grid all have something to gain from better, broader, smarter charge point availability.

- Better charging availability is a critical need, and the nature of charging means that, unlike petrol stations, many stakeholders with differing types of location are part of the answer
- Destination charging unlocks the potential for collaborations between real estate owners and charging infrastructure providers that generate economic benefits for both businesses, whilst creating rewarding experiences that go to the heart of customer needs
- Businesses can increase customer loyalty by engaging with EV drivers that are looking to use their charging time in a productive way



Conclusion: our top takeaways

Policymakers

It is clear from the research we are at the tipping point of mass adoption. This will require parts of Europe's electricity grid to be reinforced and the roll-out of innovative technologies, such as V2G, which helps to stabilise the grid, lower system cost and supports the integration of more renewable electricity in the energy system. While the EV Driver Survey is focused on end-users, not policymakers, it does demonstrate some of the ways governments can support the effective roll out of charging infrastructure and its integration with renewable electricity.

Urgent investment and action are needed by governments on electricity grid capacity and connection timelines to ensure sufficient charging infrastructure remains available for the growing number of drivers switching to EVs

In order to create even more consumer demand for smart charging (and later bi-directional charging), policymakers should create frameworks which seek to reduce peak demand through incentives and energy management solutions - an area currently relatively unexplored in most policies

Creating harmonisation and standardisation of the EV charging experience will be key to drive accelerated growth. At the same time, a balance must be sought to avoid overregulation that might stifle innovation of new business models and services - charge point operators need the flexibility to roll out cost-effective business models that facilitate innovation, scalability, and fair competition

Why partner with Shell?

It is clear from this report that more needs to be done to enhance the customer experience. It is also clear that there is an abundance of untapped opportunities for businesses to get involved in the ecosystem and forge mutually beneficial collaborations. At Shell we are eager to form new partnerships, and to strengthen those already in place.

However, the question remains:

Why should someone choose Shell as a partner in the electric revolution?

The first reason is the diversity of Shell's business portfolio. We participate in virtually every aspect of the energy system, from production to distribution to retail sales. This integration is an enormous advantage, particularly when it comes to issues such as the provision of renewable energy for EV charging.

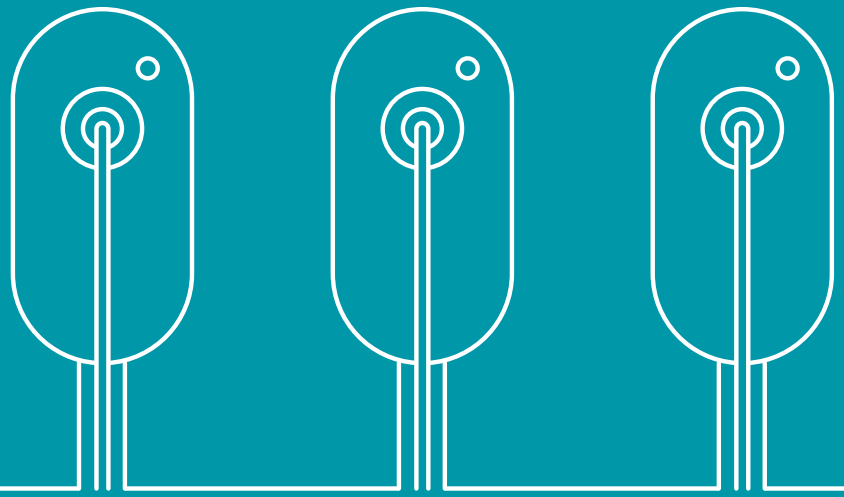
The second point is our global scale. With the largest mobility retail network in the world - serving an average of 32 million customers per day at over 46,000 retail sites in around 80 markets - we have an unrivalled insight into the individual needs of customers across the world. However, it is not just our retail network that is important – we are supported by a global innovation and production network, which allows us to deliver products that meet consumer needs.

Finally, we have a long history of successful partnerships with a range of partners across sectors. It all comes back to this. Our entire ecosystem needs to transform, and for a project of this magnitude, the road to success can only be travelled together.

Why partner with Shell?

Partnering with retailers, shopping centres, restaurant chains, hotels, and car park owners

- We take care of the installation, maintenance and operation of the charging stations adapted to your needs at your locations, plus manage all aspects of payment settlement, both for Shell Recharge and roaming customers
- Where possible, we supply the charging stations with 100% certified renewable electricity
- At certain locations we are also able to provide a Shell Café serving coffees and snacks while customers charge their vehicles
- Beyond EV charging, we can also help you decarbonise your own business by providing renewable power through Shell Energy, carbon compensation, and Shell Fleet Services



Partnering with business owners, fleet managers and workplaces

- Our Shell Card for EV Charging has access to over 500,000 Shell and third-party charge points in over 35 countries in Europe. It also covers traditional fuel, and day-to-day transport expenses - whether your employees are at home, the office or on-the-go
- We can equip your depots with tailored EV charging solutions for reliable charging, including durable hardware, smart software, and a complete set of services to enable efficient and cost-effective management of the EV infrastructure
- We can also transform your employees' driveways into charging locations. Our solution includes automatic reimbursement of charging costs to make payments easier

If you are an existing customer or partner of Shell, I am asking you to think about how we can strengthen our partnership and do more together.
If you are not yet a customer or partner of ours, I am asking you to think about how we might support you. In either case, please do not hesitate to contact us with your ideas or questions.

Sincerely,

Florian Glattes
Vice President E-Mobility Solutions
Shell

Methodology

Interviews for the 2023 Shell Recharge EV Driver Survey were conducted in January and February 2023 using an email invitation and an online survey. We sampled a total of 24,771 BEV or PHEV drivers in the UK (4,698 respondents), Germany (8,368), France (2,303), Italy (1,364), the Netherlands (6,715), and Belgium (1,305).

Respondents were sourced from Shell Recharge's customer databases (21,716) and Sapio Research partner panels (3,055).

Disclaimer: Our renewable electricity is certified by Renewable Energy Guarantees of Origin (REGOs), which means that all of the electricity Shell purchases to supply our Shell Recharge sites is matched with the equivalent amount of units from 100% renewable sources in the UK, Netherlands and Germany.

About Shell Recharge and LCP Delta

This year, Shell Recharge proudly partnered with research and consultancy company LCP Delta to provide an extensive analysis of the trends and behaviours underpinning EV experiences today.

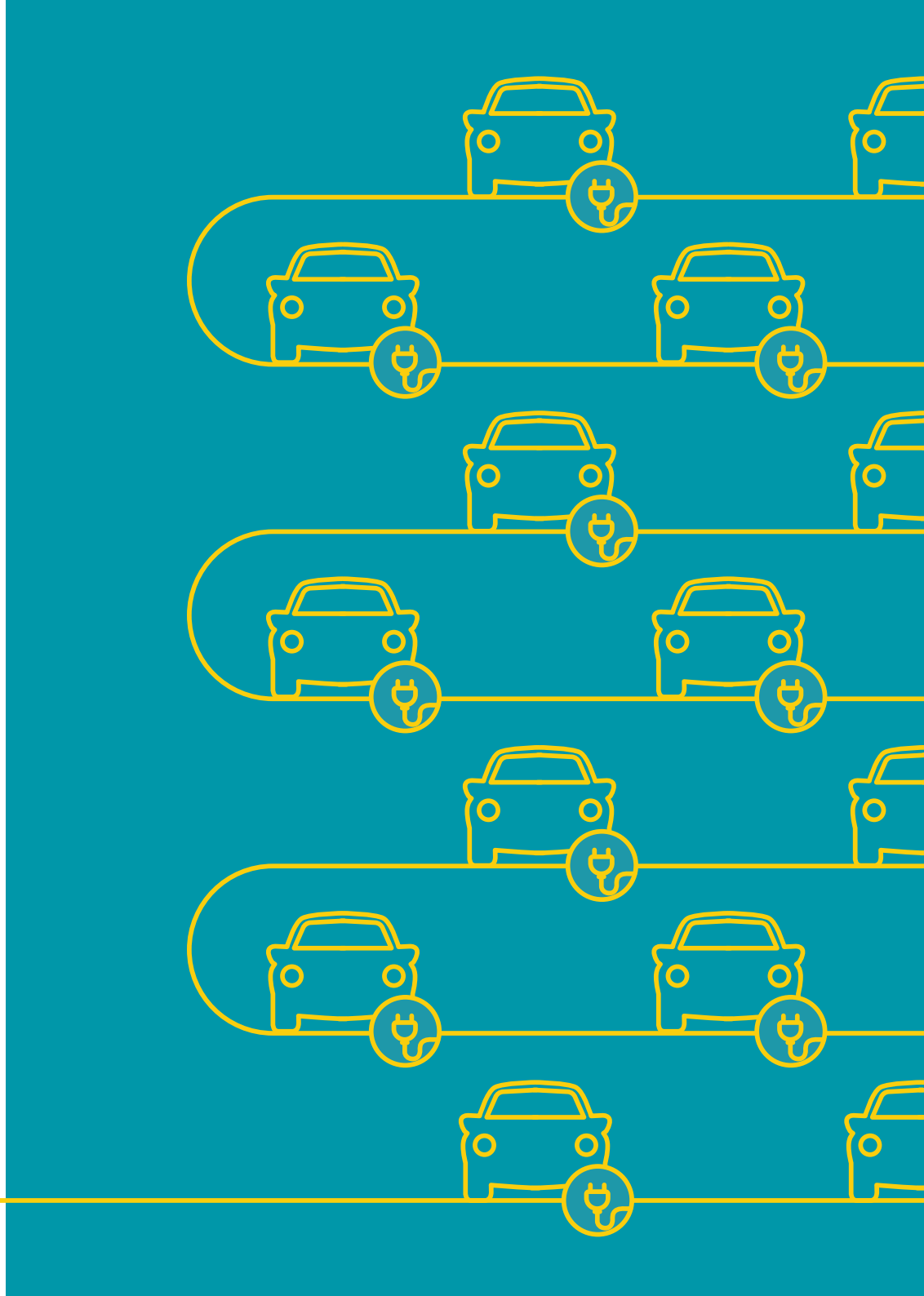
Together, our collaboration aims to inform and support industry stakeholders on their journey to facilitating EV adoption and providing a more seamless electric journey for all.

About Shell Mobility

Shell is one of the world's largest mobility retailers with more than 46,000 Shell-branded mobility locations in more than 80 markets. With Shell Recharge being present in more than 25 countries, we are also one of the largest EV charging companies globally in terms of reach. Every day, around 32 million customers visit our mobility locations for an evolving range of quality fuels, including electric vehicle charging, and convenience and non-fuel products and services. Shell owns or operates around 150,000 charge points globally, including more than 30,000 charge points at Shell forecourts, on-street locations, mobility hubs and destinations like supermarkets. Shell intends to operate more than 500,000 EV charge points worldwide by 2025, and 2.5 million by 2030.

About LCP Delta

LCP Delta™ is a leading research and consulting company helping organisations navigate the energy transition. We provide our clients with in-depth expertise through subscription research, consulting advice, data platforms and training. Our clients include many leading global players in the energy, manufacturing, technology and investment sectors. Discover more about our services at www.lcpdelta.com.



Cautionary note

The companies in which Shell plc directly and indirectly owns investments are separate legal entities. In this EV Driver Survey Report 2023 "Shell", "Shell Group" and "Group" are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this EV Driver Survey Report 2023 refer to entities over which Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. "Joint ventures" and "joint operations" are collectively referred to as "joint arrangements". Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

Forward-Looking Statements

This EV Driver Survey Report 2023 contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "milestones", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this EV Driver Survey Report 2023, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, judicial, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak; and (n) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this EV Driver Survey Report 2023 are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Shell plc's Form 20-F for the year ended December 31, 2022 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward-looking statements contained in this EV Driver Survey Report 2023 and should be considered by the reader. Each forward-looking statement speaks only as of the date of this EV Driver Survey Report 2023, [insert date]. Neither Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this EV Driver Survey Report 2023.

Shell's net carbon intensity

Also, in this EV Driver Survey Report 2023 we may refer to Shell's "Net Carbon Intensity", which includes Shell's carbon emissions from the production of our energy products, our suppliers' carbon emissions in supplying energy for that production and our customers' carbon emissions associated with their use of the energy products we sell. Shell only controls its own emissions. The use of the term Shell's "Net Carbon Intensity" is for convenience only and not intended to suggest these emissions are those of Shell plc or its subsidiaries.

Shell's net-Zero Emissions Target

Shell's operating plan, outlook and budgets are forecasted for a ten-year period and are updated every year. They reflect the current economic environment and what we can reasonably expect to see over the next ten years. Accordingly, they reflect our Scope 1, Scope 2 and Net Carbon Intensity (NCI) targets over the next ten years. However, Shell's operating plans cannot reflect our 2050 net-zero emissions target and 2035 NCI target, as these targets are currently outside our planning period. In the future, as society moves towards net-zero emissions, we expect Shell's operating plans to reflect this movement. However, if society is not net zero in 2050, as of today, there would be significant risk that Shell may not meet this target.

Forward Looking Non-GAAP measures

This EV Driver Survey Report 2023 may contain certain forward-looking non-GAAP measures such as cash capital expenditure and divestments. We are unable to provide a reconciliation of these forward-looking Non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those Non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of Shell, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Shell plc's consolidated financial statements.

The contents of websites referred to in this EV Driver Survey Report 2023 do not form part of this EV Driver Survey Report 2023.

We may have used certain terms, such as resources, in this EV Driver Survey Report 2023 that the United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov.