



Driving demand: EVCI funding and development opportunities

OCTOBER 2022

For what comes next
tlt.com



Contents

Introduction	1	Chapter 4: Unlocking new finance	15
Acknowledgements	2	Private equity and debt – the domino effect.....	15
Executive summary	3	Utilisation-linked loans.....	15
Chapter 1: Consumer charging habits	4	Charging data.....	16
Chapter 2: Are we keeping pace with demand?	10	New funding models.....	16
Phenomenal recent growth	10	Optimising returns through partnerships	16
Clear use cases	10	Rights foundations.....	16
Rapid and ultra rapid charging	11	Conclusion	17
On-street parking.....	11	About TLT	18
Education gap	11	About Zap-Map	19
Data provision	12		
Chapter 3: Leading the convoy	13		
Local authorities	13		
Destinations.....	14		
Land grabbing.....	14		

Introduction

We are delighted to bring you exclusive insights into how consumer charging habits have changed over the last year, as well as insights from some of the most engaged leaders in the e-transport revolution on future opportunities to fund and develop the UK's electric vehicle charging infrastructure (EVCI).

We've partnered with Zap-Map – the UK's leading EV charge point mapping service – to reveal where, when and how consumers are charging their vehicles and what this tells us about supply, demand and future opportunities for EVCI development and funding.

We are also grateful to our interviewees for sharing their analysis of the data, and for their valuable insights into the EVCI and funding landscapes – from taking the temperature on investor confidence, to describing new funding models and where they see the biggest opportunities for growth.



Data is key to unlocking funding. And significant funding is needed to build the right infrastructure for the UK's rapidly growing population of EV drivers.

Data is key to unlocking funding. And significant funding is needed to build the right infrastructure for the UK's rapidly growing population of EV drivers. This being the first full year since the Covid-19 lockdowns ended, we hope you find the report interesting and useful.



Maria Connolly

Head of Real Estate & Future Energy

T +44 (0)333 006 0109

E maria.connolly@TLTsolicitors.com

Acknowledgements

With thanks to the following experts for sharing their insights for this report.



Joel Teague
CEO
Co Charger



Maria Connolly
Head of future energy and real estate
TLT



Lauren Pamma
Programme director
Green Finance Institute



Kay Hobbs
Partner (corporate)
TLT



Jacob Lloyd
Specialist asset finance lead
NatWest plc



Matthew Grimwood
Partner (real estate)
TLT



Philippe Bazin
Head of sustainable energy
and green infrastructure
Novuna Business Finance



Gary Roscoe
Partner (banking and finance)
TLT



James McKemey
Head of policy and public affairs
Pod Point



Melanie Shufflebotham
Co-founder and COO
Zap-Map



Reza Shaybani
Co-founder and CEO
The EV Network

Executive summary

Even before the end of pandemic-related restrictions in 2021, EV drivers were showing a strong preference for rapid and destination charging. As we become more accustomed to e-mobility, there's a growing expectation that it will fit seamlessly into our lives on the road.

But in the first full year since 'Freedom Day', our report finds that a mix of charging options is needed to make EVs accessible to as many people as possible. Drivers also need to be given the tools and information they need to plan their journeys and drive EVs with confidence.

Investor confidence is growing, and new funding models are emerging, and we can expect to see this continue and further examples of this innovation in the coming year.

Key findings

- As the number of EV drivers and charge points has continued to grow, so too has investor appetite, highlighting a reduction in perceived risk as well as new ways of managing that risk
- Innovators are creating new funding models – from utilisation-linked loans to more bespoke models – that “will be copied”
- There is a critical need for accessible and user-friendly charging, supported by smart charging, which will eventually become mandatory and help encourage closer cooperation
- There is significant growth in the use of ultra rapid charging, as drivers grow accustomed to “filling up” their battery as they would have done on fuel
- There is also growing expectation of destination charging as part of the standard, value added service
- The launch of community EV charging hubs and driver-to-driver networks are literally helping to bring affordable charging options closer to home
- Infrastructure and similar funds are starting to see EVCI as a good long-term investment

Chapter 1: Consumer charging habits



89/100

Overall level of satisfaction with owning/using an EV

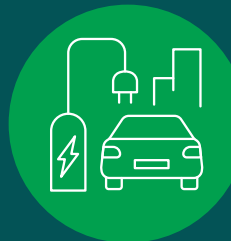
Do you use:

Home charger



84%

Public charging point



90%

Would you consider trading your EV
in for a conventional vehicle?



Maybe

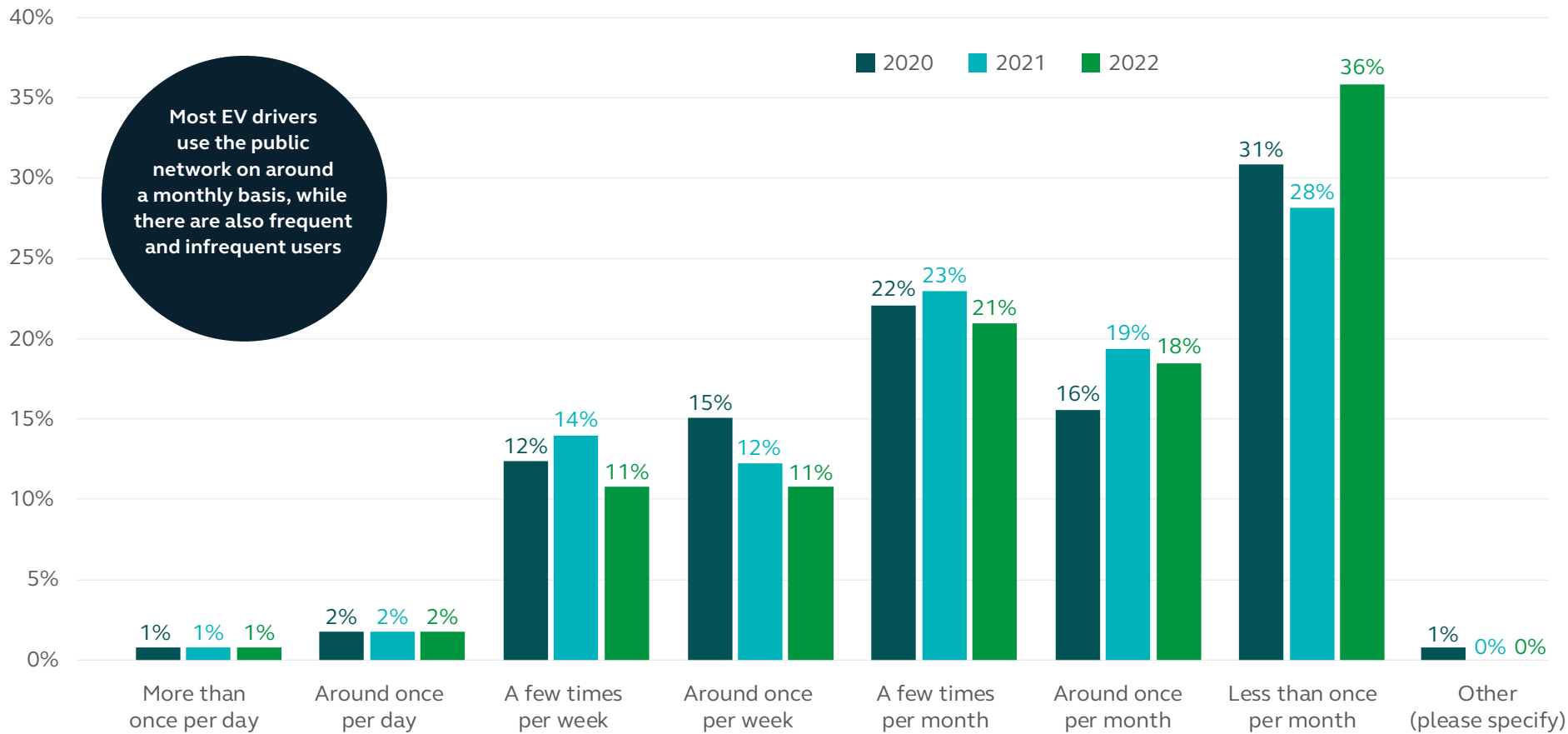
9%

Don't know
2%

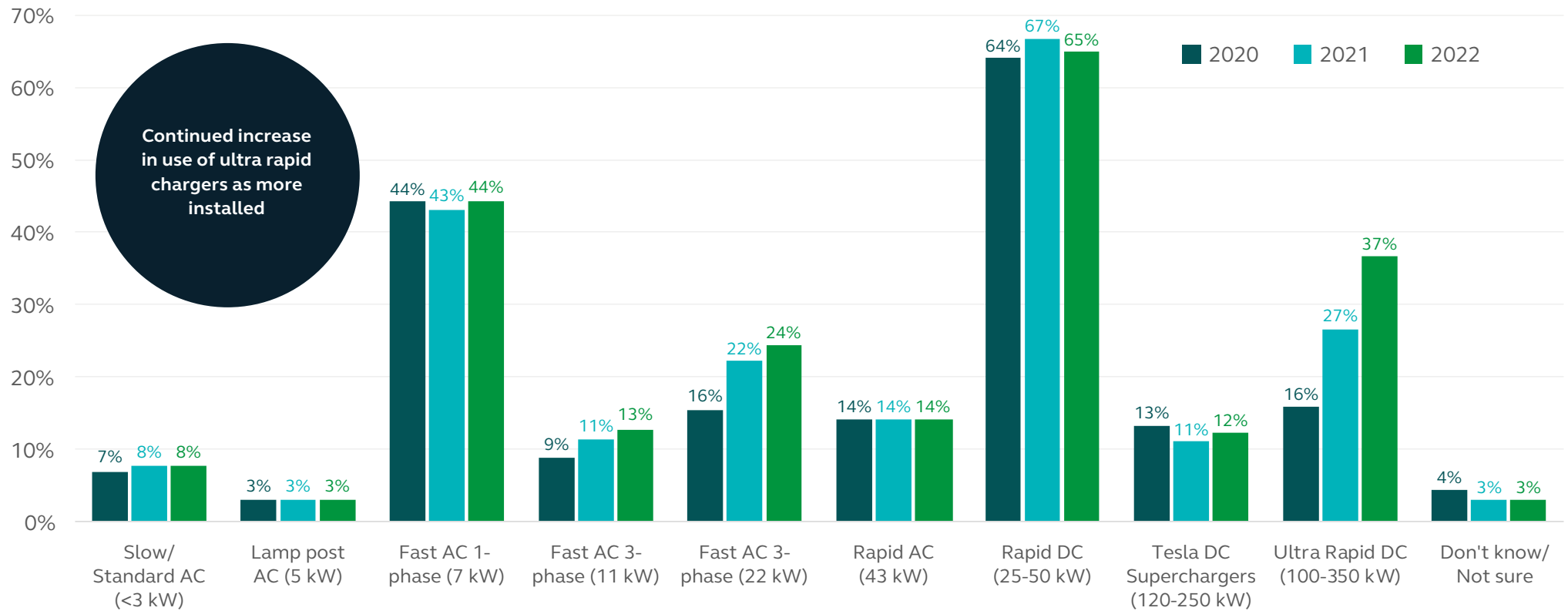
Yes
1%

All data taken from Zap-Map's EV Charging Survey 2022 –
conducted online with 4,358 EV drivers from Zap-Map's 44,400+ opt-in survey [panel](#)

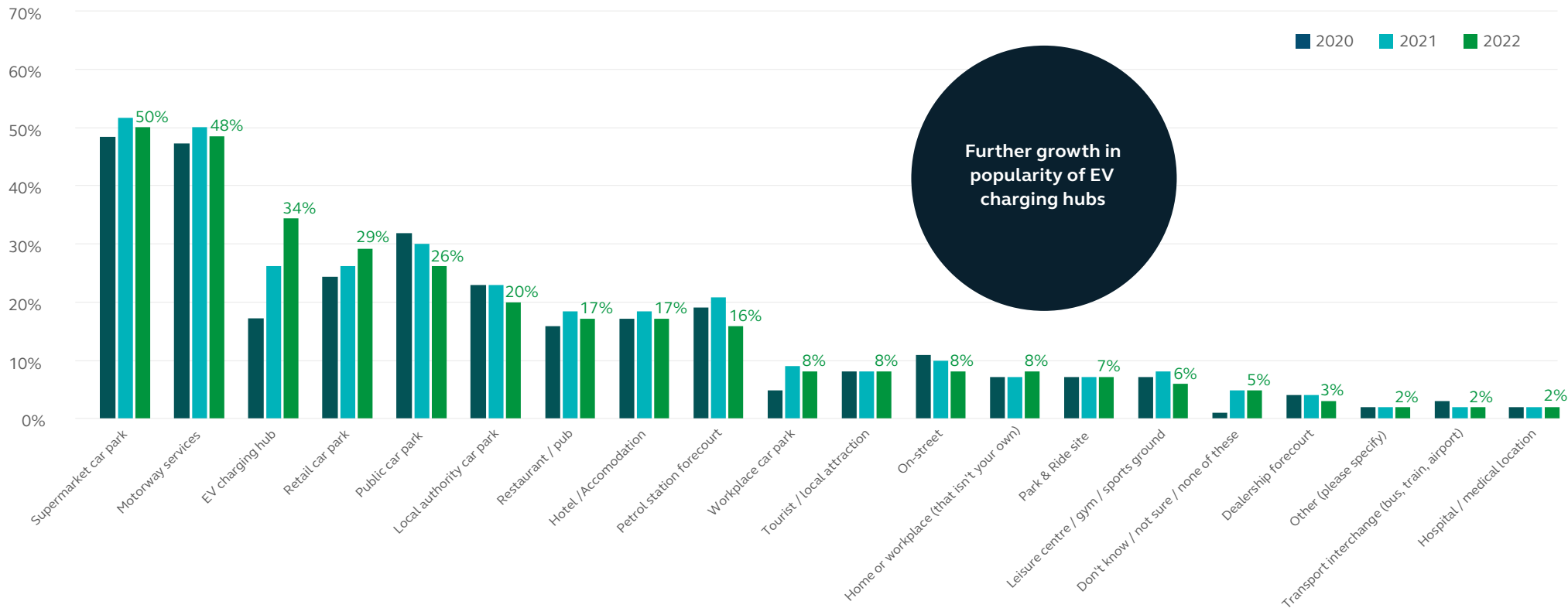
How often do you use public EV charge points?



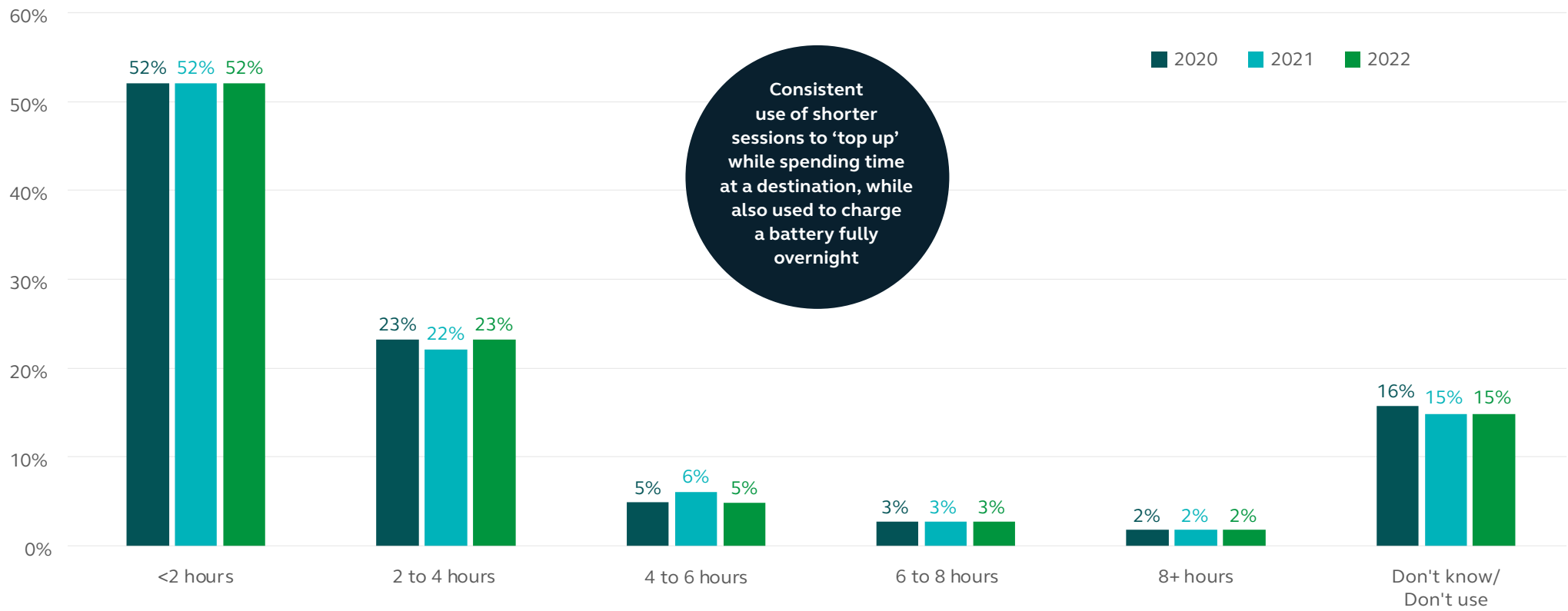
What types of public charge points do you use?



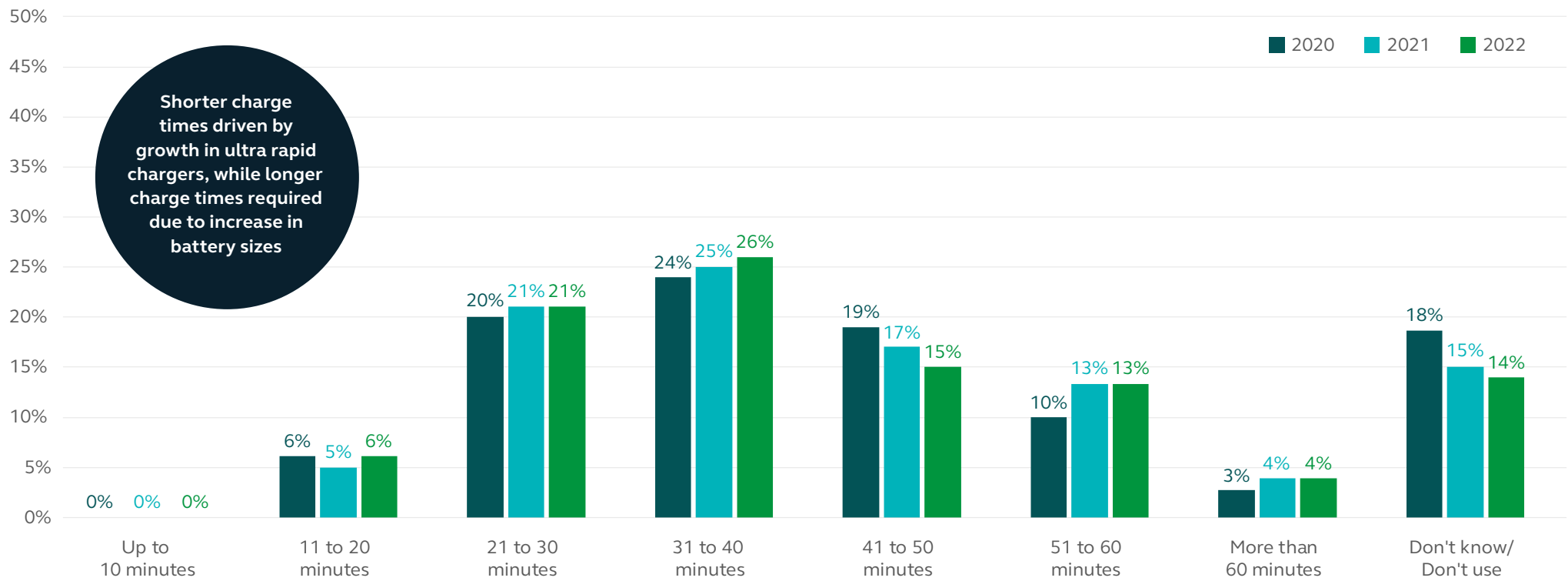
Where do you regularly use public charging?



When using public slow/fast charge points (<22kW), how long do you typically charge for?



When using public rapid charge points (AC/DC), how long do you typically charge for?



Chapter 2: Are we keeping pace with demand?

Phenomenal recent growth

At the end of August 2022 there were 33,996 EV charge points across the UK, marking a 34% increase on last year (**Zap-Map**). This, together with a strong development pipeline, reflects a growing confidence in the future of the EVCI market – as more drivers switch to EVs and businesses gain clarity on demand and revenue models, and explore innovative new ways of funding.

“There was a time when two chargers on the side of a parking lot was great,” says Reza Shaybani, co-founder and CEO of The EV Network. “Now we’re building 12 to 24 chargers, and more fast chargers.” In the last year, the use of ultra-rapid DC (100-350kW) chargers has continued to grow at a significant rate, with 37% of EV drivers now saying they use them (**Zap-Map**).

A number of factors are driving confidence, including the visible growth of EVCI, regulation and incentives. This is leading private equity investors to consider EVCI investment far more than even a year ago. “We’re starting to see a degree of confidence and firms coming in looking to fund,” says James McKemey, head of policy and public affairs at Pod Point.



We’re seeing firms coming in looking to fund.

James McKemey, Pod Point

Clear use cases

To increase investment in EVCI, we need more EVs on the road. “Once we start to get really significant volumes of cars, all the different routes to market make more sense,” James McKemey continues.

But many other parts of the picture have become clearer over the last twelve months. Post-lockdowns, there is a new degree of clarity over how consumers want to charge, and the use cases are beginning to solidify, revealing the need for a genuine mix of charging options.

The development of this EVCI mix “depends on continued government and regulatory support,” says Maria Connolly, head of future energy and real estate at TLT. Confidence that such support will be maintained was bolstered in June 2022, when new EV charging requirements came into force in England as part of an overhaul of building regulations. The regulations require charge points to be provided for all new homes, and non-residential buildings with more than 10 parking spaces, offering a minimum of one charging point for every five parking spaces.

In August 2022 the government also announced a new Local EV Infrastructure (LEVI) pilot scheme, backed by £20m of government and industry funding to support the creation of new EVCI. The motor industry is now calling on the government to roll more funding like this out across the rest of the UK.



Rapid and ultra rapid charging

Ultra rapid charging, which can add from 60 miles in 15 minutes, will be vital and much focus is on providing this on the strategic road network in EV charging 'hubs'. Zap-Map's data shows significant growth in the use of hubs over the last year, as consumers looked to charge en route.

Future provision will need to consider the usability of hubs, and the role of data, payments and other services in making the experience as seamless as possible for drivers. "People need to feel confident they won't need to queue or that, even if there is a queue, they won't have to wait too long before they can charge," says Melanie Shufflebotham, COO and co-founder of Zap-Map.

On-street parking

A pressing demand is also emerging to address the needs of drivers who do not have driveways and therefore need a regular way to charge. According to Melanie Shufflebotham, "One solution is community charging – getting people who've got their own on-street parking to share that space. Another is the provision of on-street residential charging, or alternatively creating local rapid charging hubs where people go to charge up once a week, as they currently do at a petrol station."

In the South West, TLT has supported Action Net Zero with the launch a new community EV charging model offering fair charging prices, with the first installation at Lansdown Cricket Club in Bath and more developments in the pipeline.

Education gap

More education, myth-busting and a change of mindset is also needed to increase consumer and investor appetite, with government and industry both playing a role; for example, reminding drivers who cannot charge at home that petrol and diesel cars cannot be filled up at home either. Indeed, the options with EVCI are far more numerous than they are with petrol and diesel vehicles.

"Many consumers still have no idea of the range of an electric vehicle and even when they're told it's up to 300 miles, they think that's not enough," says Kay Hobbs, corporate partner at TLT. "But how often do we drive 150 miles in one go? And if you do, you can plan where to stop and charge. Many consumers still don't know you can have a charge point in your driveway. If there was more education on all of this, I think we would see consumer appetite significantly increase with very little cost."



Many consumers still have no idea of the range of an electric vehicle and even when they're told it's up to 300 miles, they think it's not enough.

Kay Hobbs, TLT

More education is also required regarding the different types of charge point and their capacities, so that drivers don't make journeys to the slower 7kW chargers, for example, whilst expecting a high speed charge. "There are different types of chargers available for different uses", explains Melanie Shufflebotham. "A slower 7kW charger would be perfect if you were looking for a top-up at the supermarket or were parked for a couple of hours at a destination. However, if you are on a longer journey, drivers need to hone in on a rapid or ultra rapid charger that will provide a quick charge."

Fleets have extra information needs. "Many fleet vehicles are larger than the standard car, so they can have problems accessing a typical charging bay and thus need more detailed information," Shufflebotham continues. "Planning journeys for fleets is also more complex as they need to take into account the different types and capabilities of charging available across the network, whether this is home charging, depot charging or charging on the public network."

Gary Roscoe, banking and finance partner at TLT, believes the government should "go on an information campaign just to let people know that that concern around range anxiety really isn't what it once was, and that the total cost of ownership of EVs is, in many cases, already less than a comparable ICE vehicle."



Philippe Bazin, head of sustainable energy and green infrastructure at Novuna Business Finance, believes developers have the ability to play a greater role in educating the public and local authorities about why EVs and EVCI are good for communities. He comments: “Destinations have large footfalls, so I’d like to see them actively educate the public on the benefits of charging.”



Destinations have large footfalls, so I’d like to see them actively educate the public on the benefits of charging.

Philippe Bazin, Novuna Business Finance

The industry is also playing its part. The Green Finance Institute is putting out a handbook together with BEAMA on EVCI to educate investors and installers about the technology, so that they understand the considerations they need to make. Lauren Pamma, the institute’s programme director, says: “We need to explain the different technologies, business models and use cases. As long as careful consideration has gone into the type of charge point, the use case and the contract period, there are returns to be made.”

Data provision

Mandatory data provision and sharing by EVCI operators will also improve the experience for drivers, by offering better and more up-to-date information on the services available. With reliable live status data, drivers can check if a charge point is available, in use or out of service. Zap-Map currently show this for circa 70% of the UK’s charge points.

“Live data will increase consumer confidence in public charging,” says Lauren Pamma. “Smart charging is now mandatory for new home charge points, but I expect it will come in to on-street charging eventually to help manage the increase in electricity demand from the transition to EVs.”



I expect [mandatory smart charging] will come in to on-street charging eventually to help manage the increase in electricity demand from the transition to EVs.

Lauren Pamma, Green Finance Institute



Chapter 3: Leading the convoy

Local authorities

Building our smart cities

Following the launch of the LEVI pilot scheme, local authorities (LAs) will play an even greater role in EVCI development. Under this scheme, nine LAs will work with industry to deliver 1,000 new charge points in total.

The emergence of LAs' own strategies to integrate EVCI also offers great potential for learning and identifying what works. "Where practical, consistency in business models across multiple local authorities would allow EVCI to be bundled up for institutional investors at scale," says Lauren Pamma. Melanie Shufflebotham, meanwhile, looks forward to local authorities "having a number of frameworks available based on experience at the exemplar local authorities, and funding covering operating and capital costs from government to roll out programmes at a local level to suit their particular needs."



Consistency in business models across multiple local authorities would allow EVCI to be bundled up for institutional investors at scale

Lauren Pamma, Green Finance Institute

A future area of growth will be integrating EVCI alongside other green features – such as battery storage, solar power and heat pumps – within local authority infrastructure to create 'smart cities'. "Banks like to de-risk what they're lending against," says Jacob Lloyd, special asset finance lead at NatWest, "so a local authority that has government backing that offsets risk is helpful."



A local authority that has government backing that offsets risk is helpful

Jacob Lloyd, NatWest

A lack of resources has been a barrier for LAs, but as confidence grows, funding is being supplied and we are seeing interest from infrastructure and similar funds – a strong sign of increased confidence in the market.

"Pension funds should be interested because it's a long-term investment," says Lauren Pamma. "Contracts are now being written with local authorities upwards of 12 years." "Once infrastructure and similar funds are interested, then I think this really gets done at a massive scale," says James McKemey.



Once infrastructure and similar funds are interested, then I think this really gets done at a massive scale

James McKemey, Pod Point



Destinations

Part of the value add

Destination charging has huge potential to benefit both the host business and consumers, either for daily use or occasional recreational and holiday charging. Supermarket car parks (50% use regularly) and motorway services (48%) remain the most popular public charging locations, while significantly more drivers are using EV charging hubs (34%) and retail car parks (29%) ([Zap-Map](#)).

City centre destination charging, integrated into smart cities as mentioned above and bringing charge points onto our streets is, for Jacob Lloyd, one of the biggest things that will help deployment. “EVCI is then no longer a business model,” he says, “it becomes the norm, because chargers are everywhere.”

For destinations, it’s more about the added value to the customer and less about the revenue from the charge point itself, just as they’ve become accustomed to offering free toilets and wifi. “Consumers will start to look for retail and leisure facilities – hotels in particular – that have EV charging,” says Lauren Pamma. “You now see EVCI in a number in retail parks,” adds Reza Shaybani. “These locations are suited to the 15 to 20 minutes dwell time – you can get a coffee, check your email, use the washroom and be back on the road. That’s really working well.”



You can get a coffee, check your email, use the washroom and be back on the road in 15-20 minutes. That’s really working well.

Reza Shaybani, The EV Network

Pod Point has two different models for destination charging. It sells charging infrastructure to destinations that effectively become hosts of its network, but also to companies that buy the charge points and build infrastructure to go into a third party’s commercial operations site. “The first model enables the site owner to set the charging fee, while the advantage of the latter is that the site doesn’t pay for the infrastructure,” says James McKemey.

Land grabbing

The race to secure the best EVCI sites for developers and charge point operators is still ongoing. To secure more sites, The EV Network has set up a separate property company and, rather than leasing land for 20-30 years as it has done for the last four years, it has started to buy the freehold. “We’re buying key sites ranging from one to ten acres of land, installing appropriate infrastructure and selling or leasing the rest to other partners or developers,” says Reza Shaybani.



Chapter 4: Unlocking new finance

Private equity and debt – the domino effect

Maria Connolly is expecting a further boost to equity funding, “because there is so much capital coming into the UK from overseas. There’s only a limited number of wind, solar and battery storage projects coming online to put money into, so you will have equity funders starting to pick up EV projects.”



There’s only a limited number of wind, solar and battery storage projects coming online to put money into

Maria Connolly, TLT

Over the past year, private equity has invested in EVCI at a greater speed and in higher sums than the government and, as Jacob Lloyd points out, this unlocks debt funding. “The banks will follow sponsors into the market because the typical assumption is if a sponsor backs a large project and it goes awry then it will put more equity in before it lets the project get into default.”

Just as with battery storage, which only saw its first major debt funding in the last two years but has grown considerably since then, Jacob Lloyd predicts that “in twelve months the EVCI market will have more depth” and follow the same trajectory. “The appetite for investing in EVCI is there,” he explains, “but it doesn’t supersede credit risk.”

Funding models are emerging, for example InstaVolt has received £110m in senior debt financing – from Santander, Lloyds Bank, Investec, Natixis and NIBC – to continue to expand its rapid EV charging network. “Concerns around the perceived risks still exist in the sector. However, as we’ve seen in other sectors such as offshore wind, once a lender makes the first move this gives confidence for others to move in too,” says Lauren Pamma

Utilisation-linked loans

One funding model that has been proposed by organisations such as the Green Finance Institute is utilisation-linked loans, where repayments only begin when a base utilisation level has been reached. This offsets the risk that repayments will exceed revenues, which is a particular issue in places such as rural communities.



“Investors face uncertainty about when they’re going to get their returns and over what time period,” explains Lauren Pamma. “Akin to a student loan, repayment of utilisation-linked loans could commence once a base utilisation threshold is achieved, with payment profiles linked to anticipated utilisation rates. This could unlock investment in sites that may not be immediately commercially viable, but we know will be profitable in the future.”



[Utilisation-linked loans] could unlock investment in sites that may not be immediately commercially viable, but we know will be profitable in the future

Lauren Pamma, Green Finance Institute

Charging data

Data is helping to address the utilisation barrier. “Data gives the market confidence. It helps people understand the revenue streams in a better way,” says Maria Connolly. “We need more data to give strategic direction to the developers as to where they’re targeting EV charging infrastructure.”

Charge points have now been on motorway service stations long enough for a body of historical data and trends to emerge that support utilisation forecasting. Melanie Shufflebotham adds: “Understanding the current usage patterns across en-route, destination and on-street charging is essential for future charge point planning for investors, charge point operators, local authorities and landowners alike. This data is being collected and can be a great tool to identify hot spots and key trends in charging.”

New funding models

Philippe Bazin says Novuna Business Finance is adapting and creating new strategies to help support the development of EVCI and enable funding. “We have developed a new sustainable development and project finance product offering, and we’re looking to support sustainable transport, including financing rapid charging infrastructure and the elements around it.”

Meanwhile, the Co Charger app connects motorists who have home charge points with neighbours who cannot charge at home, so that they can share the facility. The company is part of a group that won funding through a LA to develop the sharing of cars and charge points to try and persuade drivers to switch away from fossil fuel vehicles. Co Charger CEO Joel Teague believes the model can relieve pressure on public charging and will create a template for EV adoption that can be followed nationally. “Nobody likes to go first,” Teague says, “but these models will be copied.”



Nobody likes to go first, but these models will be copied

Joel Teague, Co Charger

Optimising returns through partnerships

Kay Hobbs sees the potential for investors to work more closely with other parties, so that the size, scale and location of infrastructure can be more profitable. “Working in partnership with the local authorities, the energy network, the charging companies or software providers helps investors understand where the demand is going to be coming from, and how consumers are going to be using electric vehicles.”

Reza Shaybani agrees some investors have seen the best returns from working with an established EVCI developer. “One EV Network partner said the choice was between buying an existing company, building a team, or working with us. The first wasn’t an option because there was no company to buy, and the second wasn’t either because they said it takes too long to build a team. Working with us was the easiest option because we can put them on the map very quickly and they don’t need to find funding.”

Rights foundations

One of the barriers to funding is obtaining property rights, but Philippe Bazin believes good legal advice is the key to overcoming the problem. “You’re taking a calculated risk, to get your money back over time, and the property rights are the foundation of all of that, along with the grid connection rights. I think there’s room for improvement in terms of what standards are agreed and viewed as acceptable, to really facilitate the investment.”

Another barrier to funding is the lack of standardisation in public sector contracts and concession agreements, which have demanded a lot of time and money to be invested in upfront costs. “With more cooperation between public and private industry”, he adds, “transaction costs can be driven down to boost funding and investment.”

Conclusion

As the building blocks for a fully-functioning EVCI network become clear, the industry will continue to gather momentum and attract more funders and larger sums.

In the short-to-medium-term, we would expect to see:

- Continued growth in private equity funding, especially as the number of wind, solar and battery storage projects available to put money into becomes increasingly competitive
- More early adopters replicating today's emerging funding models, and debt funders dipping their toe in the water, including exploring near-debt funding models
- A greater focus on the need to support local authorities with EVCI rollout, and consideration of the role of EVCI in smart cities
- The proliferation of EV charge points at popular destinations, with a growing discourse around the wider business benefits of EVCI provision at scale in car parks and the need for reliable charging away from home
- The growth of standardised data protocols, allowing EVs, charging stations and charging operators to share data connections and make it easier for people to charge with confidence
- The maturity of other consumer-facing services, including payments, to put consumers firmly in the driving seat and improve usability



About TLT

For what comes next

We're your business advisers as well as your lawyers, working in step with you to protect your interests today and progress your ambitions for tomorrow.

With local, national and international reach, we draw on our diverse expertise to find solutions and look ahead to create new opportunities.

We're a leading adviser to the global future energy sector. Immersed in the sector as it's grown, we've built an unrivalled track record delivering what our clients need so that they can lead the journey to net zero and a more sustainable future.

We've also grown one of the UK's largest and most experienced financial services legal teams, with the expertise and solutions to deliver what you need.

We specialise in the digital; financial services; future energy; leisure, food and drink; real estate; retail & consumer goods; and government & public services sectors, offering tailored, commercial advice rooted in experience.

[tlt.com](https://www.tlt.com)

Contacts



Maria Connolly
Head of Real Estate & Future Energy
T +44 (0)333 006 0109
E maria.connolly@TLTsolicitors.com



Kerri Ashworth
Partner | Real Estate
T +44 (0)333 006 0423
E kerri.ashworth@TLTsolicitors.com



Simon Courie
Partner | Banking & Finance
T +44 (0)333 006 1552
E simon.courie@TLTsolicitors.com



Katherine Evans
Head of Planning & Environment
T +44 (0)333 006 0098
E katherine.evans@TLTsolicitors.com



Matthew Grimwood
Partner | Real Estate
T +44 (0)333 006 0393
E matthew.grimwood@TLTsolicitors.com



Joanna Hamilton
Legal Director | Real Estate (Scotland)
T +44 (0)333 006 1257
E joanna.hamilton@TLTsolicitors.com



Kay Hobbs
Partner | Corporate
T +44 (0)333 006 0977
E kay.hobbs@TLTsolicitors.com



Kevin Murphy
Partner | Real Estate (Northern Ireland)
T +44 (0)333 006 0361
E kevin.murphy@TLTsolicitors.com



Nick Pincott
Partner | Projects, Infrastructure and Construction
T +44 (0)333 006 1224
E nick.pincott@TLTsolicitors.com



Gary Roscoe
Partner | Banking and Finance
T +44 (0)333 006 0466
E gary.roscoe@TLTsolicitors.com



Andrew Ryan
Partner | Real Estate (Northern Ireland)
T +44 (0)333 006 0967
E andrew.ryan@TLTsolicitors.com



Nick Shenken
Partner | Real Estate (Scotland, E&W)
T +44 (0)333 006 1643
E nick.shenken@TLTsolicitors.com



Antonia Silvestri
Partner | Corporate
T +44 (0)333 006 0189
E antonia.silvestri@TLTsolicitors.com



Stuart Urquhart
Legal Director | Commercial
T +44 (0)333 006 0230
E stuart.urquhart@TLTsolicitors.com

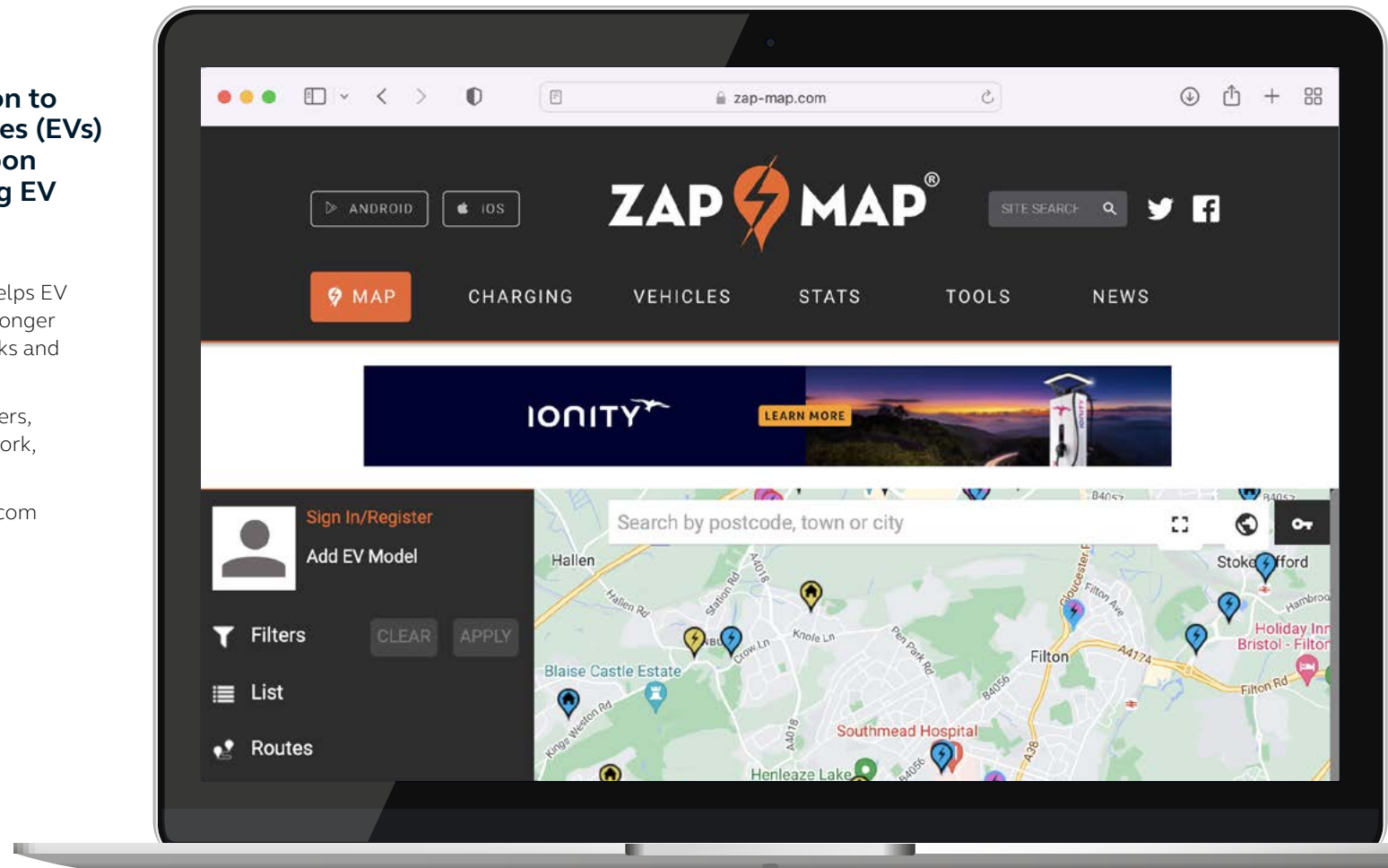
About Zap-Map

Launched in June 2014, with a mission to accelerate the shift to electric vehicles (EVs) and help the drive towards zero carbon mobility, Zap-Map is the UK's leading EV charge point mapping service.

Available on iOS/Android and desktop, Zap-Map helps EV drivers to search for available charge points, plan longer journeys, pay for charging on participating networks and share updates with other drivers.

Zap-Map currently has over 460,000 registered users, and over 95% of the UK's public points on its network, around 70% of which show live availability data.

For more information, please visit: www.zap-map.com



tlt.com/contact

Belfast | **Bristol** | **Edinburgh** | **Glasgow** | **London** | **Manchester** | **Piraeus**

TLT LLP and TLT NI LLP (a separate practice in Northern Ireland) operate under the TLT brand and are together known as 'TLT'. Any reference in this communication or its attachments to 'TLT' is to be construed as a reference to the TLT entity based in the jurisdiction where the advice is being given. TLT LLP is a limited liability partnership registered in England & Wales number OC308658 whose registered office is at One Redcliff Street, Bristol, BS1 6TP. TLT LLP is authorised and regulated by the Solicitors Regulation Authority under ID 406297.

In Scotland TLT LLP is a multinational practice regulated by the Law Society of Scotland.

TLT (NI) LLP is a limited liability partnership registered in Northern Ireland under ref NC000856 whose registered office is at River House, 48-60 High Street, Belfast, BT1 2BE

TLT (NI) LLP is regulated by the Law Society of Northern Ireland under ref 9330.

TLT LLP is authorised and regulated by the Financial Conduct Authority under reference number FRN 780419. TLT (NI) LLP is authorised and regulated by the Financial Conduct Authority under reference number 807372. Details of our FCA permissions can be found on the Financial Services Register at <https://register.fca.org.uk>

