



UK EV home charging apps

State of UX review

BY ED ROBERTS

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Introduction

Last year, we undertook some research and produced a report into the current state of user experience (UX) for public and destination electric vehicle (EV) charging apps in the UK.

In this second report in the series, we'll focus on the market for home charging. Home charging apps are crucial for many EV owners' charging setup, preferable to public chargers for the convenience, control and the opportunity to save money.

In the UK, the significance of UX in home charging apps has grown substantially alongside the adoption of EVs themselves. In 2023, nearly 315,000 new electric cars were registered in the UK, a 16.5% market share.¹ This growth, despite the absence of consumer incentives for EV purchases, demonstrates how consumers are naturally choosing to shift towards electric mobility.

For many (but not all) EV owners, home charging is part of the daily routine. Charging at home allows EV owners to benefit from substantially cheaper per-kW pricing, especially if taking advantage of off-peak or smart 'time of use' tariffs. A charging app you use every day therefore needs to be not only efficient and intuitive, but ideally integrate wherever possible with other smart home systems you may own for optimised energy use. The UX of these apps therefore plays a crucial role in supporting the transition to EV adoption and enhancing the overall experience of owning an EV.

This report delves into the current state of UX for home EV charging apps in the UK, based on an analysis of public user reviews and feedback to identify strengths, weaknesses, and areas for improvement.

Our aim is to provide insights that can lead to better app design and, ultimately, a more satisfying EV ownership experience. As the market grows and user expectations evolve, understanding and addressing these UX challenges is key to supporting the broader adoption of EVs in the UK.

¹ Figure from Electrive, 8 January 2024:

<https://www.electrive.com/2024/01/08/nearly-28000-new-electric-cars-registered-in-the-uk-in-2023/>

Approach and scope

AUTHOR'S NOTE

As with our last report, our intention here is not to single out any particular provider for praise or criticism; our focus is on the market as a whole and how it is meeting the needs of the end user. So after the initial discussion of star ratings, we won't include specific examples from our cohort of apps. If you are the provider in question, feel free to reach out for some more bespoke feedback!

For our last review of the public charging space, we deliberately shied away from the top-rated apps and instead chose our sample based on network coverage to provide a more accurate reflection of the average user experience. (Thank you again, ZapMap.)

However, despite our best efforts we weren't able to find similarly reliable data for home charging market share. Instead we turned to recent 'best of' lists compiled by publications and websites (like one by CarWow) to get a feel for the brands users are most likely to choose.

BP Pulse and Pod Point are perhaps the notable absences, excluded to prevent overlap with our last report.

THE SAMPLE

Our final sample set, in no particular order.

- 1 **Indra**
- 2 **Ohme**
- 3 **Wallbox**
- 4 **EVBox**
- 5 **Rolec**
- 6 **EO**
- 7 **MyEnergi**
- 8 **Hypervolt**
- 9 **Easee**
- 10 **Andersen**

We gathered 2,062 public reviews across both iOS and Android and used GPT-4 to sift through, analyse and search for common themes, UX issues and jobs-to-be-done.

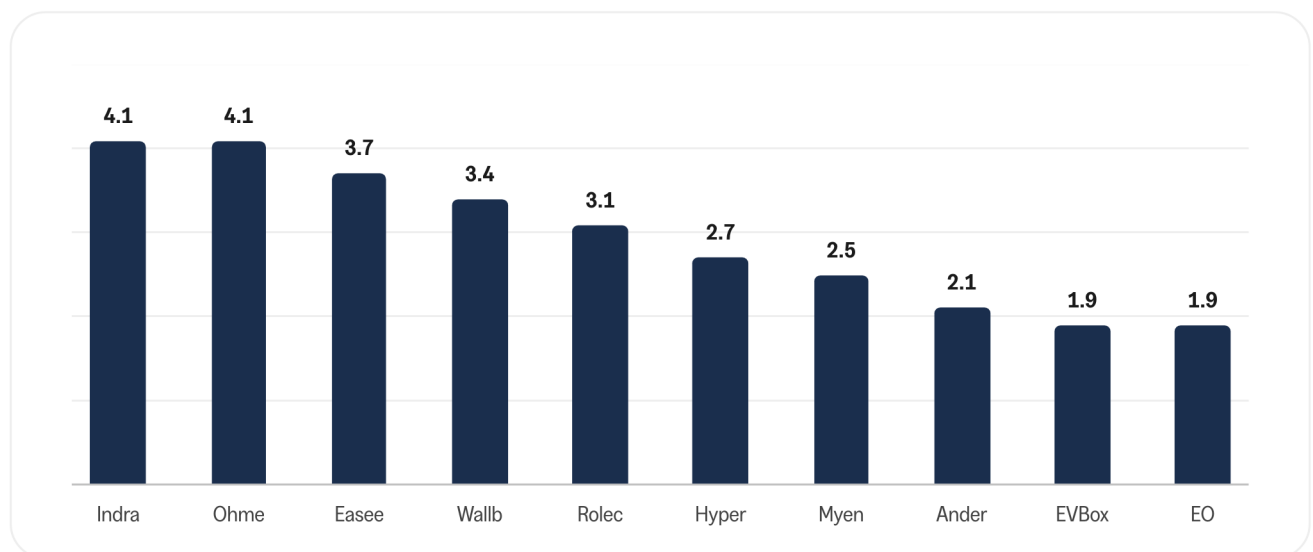
Sample drawn from recent 'best of' home-charger lists (e.g. CarWow). BP Pulse and Pod Point excluded to prevent overlap with our previous report. Ratings and reviews referenced are correct as of 15 January 2024.

App store ratings

Our first insights come from the star ratings left by reviewers on the Apple and Google Play stores.

The average, weighted rating for all apps across all stores is a lowly 2.9, though as with public chargers there is a wide range between the leaders and the laggards. EVBox and EO at the bottom of the table have less than half the average rating of Indra and Ohme at the top:

FIG. 1 · COMBINED WEIGHTED RATING, BY BRAND

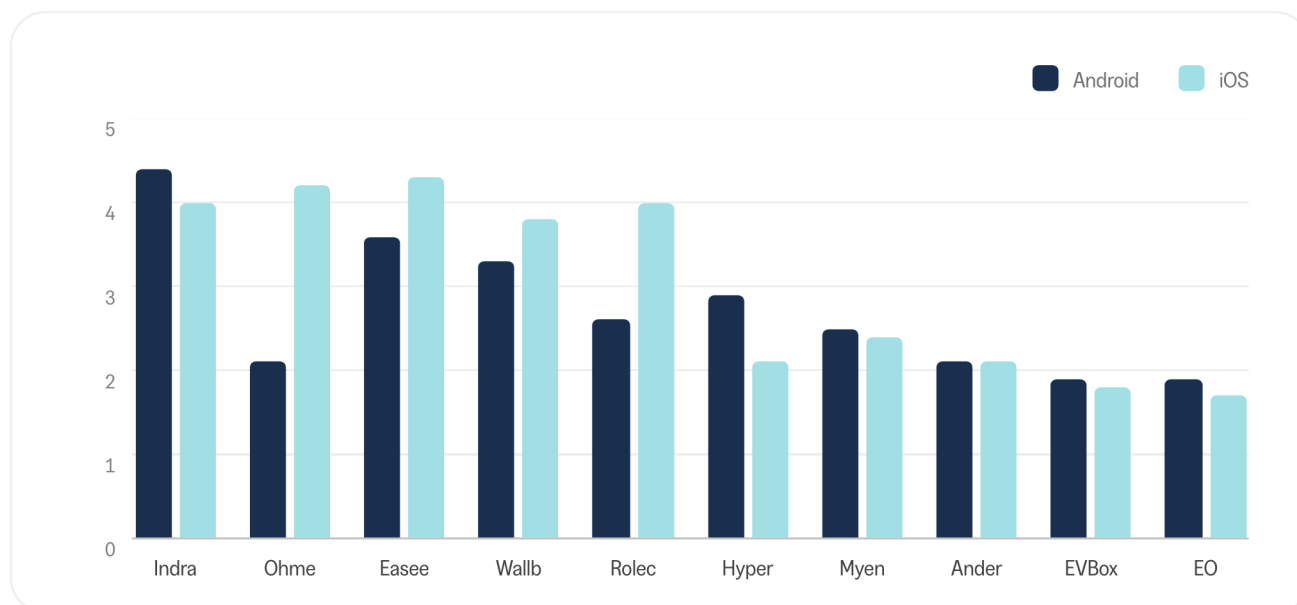


Weighted average reviews for the ten charging apps across Google Play and Apple stores, out of 5. The weighted average across all apps is 2.9. Correct as of 15 January 2024.

The split between Android and iOS

We also noticed in a few cases a stark difference between Android and iOS, with Ohme and Rolec standing out as offering markedly better experiences for Apple iPhone users than Android.

FIG. 2 · AVERAGE RATING, SPLIT BY PLATFORM



Average reviews for the ten charging apps split by Google Play (Android) and Apple (iOS) stores, out of 5. Correct as of 15 January 2024.

TAKEAWAYS

- The average rating of the top UK charging apps is a poor 2.9 out of 5.
- This average hides a wide range from 4.1 at the top to 1.9 at the lower end, suggesting a wide experience gap between brands.
- The experience gap between iOS and Android is notable in a few cases, especially Ohme and Rolec.

Insights from user reviews

Ratings give us a fast, high-level view of customer feedback, but the real insights are found within the reviews themselves.

AUTHOR'S NOTE

Following our last report there was some discussion about the validity of using reviews for a study like this, with some good points raised that they tend to skew negative.

However, we believe reviews are a valuable resource for assessing experience at scale. With a 'rising tide lifts all boats' mindset, a focus on improving the experience of those having the hardest time is no bad thing.

Therefore it is valid to draw conclusions, mindful of the strengths and weaknesses of the data source.

Executive summary (TL;DR)

What are the top insights from the dataset as a whole?

1. Users frequently encounter frustrating app crashes and connectivity issues.
2. There is a notable dissatisfaction with the delay and inaccuracy in data display, particularly regarding charging status and history.
3. The potential for cost savings is the primary benefit users see from charging apps, and so they appreciate it when scheduling is easy and apps integrate well with electric tariffs or other parts of the connected home (e.g. solar panels).

Special mention: hardware quality

Whilst it's not fully in scope for our review of their companion mobile apps, it is worth noting for the overall user experience that the physical hardware of chargers often receives positive feedback for reliability and build quality.

"Great when it works, but keeps crashing."

— iOS user

It's disappointing to see the build quality of mobile apps not keeping pace with the industrial design of the charger units themselves. Crashes and bugs, particularly those affecting the stability of the connection to the charger, are the most common complaints.

It is also interesting to note that the accuracy and reliability of data displayed is as important for home charging as for public or destination chargers in our prior review. Users expect information to be conveyed to them quickly and accurately, with a low tolerance for delay or inaccuracy.

The opportunity to save money shines through as the primary benefit users perceive from these apps, linked to the benefits of home charging as a whole.

When everything goes right

Before we focus more on potential for improvement, it's worth noting the strengths in our cohort as praised in user reviews. This also helps us to understand more about user motivations and context when providing feedback.

Across the reviews, users were found most commonly to praise:

- **Remote control features:** convenient remote monitoring and control of EV charging.
- **Simplicity and perceived user-friendliness:** users appreciate when they find apps to be straightforward and easy to navigate.
- **Customer service:** good customer service and responsive support are seen as crucial for a positive experience.

"The team has worked their magic and by the end of the day the app and hub are working beautifully together."

— iOS user

In crafting or assessing a value proposition, it's important to link features to perceived 'gains': how the user benefits when everything goes right.

As might be expected, **minimising costs** by matching charging schedules according to energy tariffs was the most frequently mentioned.

When things go wrong

On the flip side, what are the most common pain points users complain of when reviewing EV home charging apps?

- **App crashes and bugs:** app crashes and technical glitches are frequently mentioned and represent a major source of overall user dissatisfaction.
- **Scheduling issues:** users face problems with setting and saving charging schedules.
- **Incompatibility:** issues arise with certain car models and older charging units, preventing some users from making the most of all app and hardware features.

"No matter what I try, the app crashes every time I try to use a schedule that actually saves me money."

— iOS user

It's perhaps unsurprising that feeling the benefit in your pocket is the main gain users note when everything works as it should: these apps being instrumental in users taking advantage of cost savings through time-based energy tariffs. What is probably most notable is the banality of the elements praised. Getting the basics right goes a long way.

And when the basics aren't met, this is the primary source of complaint. As per our top insights, the overall stability of the apps is the biggest pain point users experience: being able to see data from your car and take advantage of the expensive hardware you have purchased. And with scheduling charges being the route to the primary perceived benefit of home charging, issues here are felt very strongly.

Top UX / UI design issues

Our cohort of apps get praise when the UX/UI is perceived as smooth and easy to use. However, as you will have gathered from the range of user reviews, not all apps are getting this right all the time.

So, what are the most common points of friction in the user experience?

1. **Confusing interfaces:** users struggle with apps when they find the interfaces to be cluttered, slow or "ugly" ("ugly" being a direct quote).
2. **Data delays:** the lack of real-time information and delays in data display are common frustrations.
3. **Unreliable performance:** as mentioned before, app crashes and instability significantly hinder the user experience.

As a design agency, we wanted to drill down into that first point a little further. Exactly what was it that made an interface confusing or "**ugly**"?

- Poor navigation and overly busy layouts in the app interface hinder users from completing tasks effectively.
- Poor presentation of data and lack of clear and useful data visualisation, sometimes with data appearing incorrect, unclear or missing altogether.
- Overcomplicated settings and functions like charge scheduling could be more intuitive. Several reviews imply users are resorting to hacks and workarounds to achieve their goals — for example entering dummy tariff data, or overriding the app using the phone's master OS controls.

It's also worth noting that issues are often felt after app updates are rolled out, suggesting difficulty adapting to sudden changes to interfaces users may have become used to, combined with bugs not found prior to an update's release.

"The amount of charge is not shown in real-time, with the data appearing a few hours or days later or perhaps not at all."

— Android user

The link between a user interface and the overall experience is strong.

Whilst app crashes aren't a UI issue per se, how an app handles problems and provides information and guidance to the user in the UI (so-called 'failing gracefully') can make a big difference.

Being clear about what information is being displayed, and what this means to audiences with differing levels of experience with EV technology, would be appreciated, along with making sure data visualisations are used to really add value to the UX.

Aligning the UI closer to user jobs-to-be-done may alleviate some of the frustrations as tasks become easier or more intuitive. And of course, if your app is perceived as 'ugly' there is little to be done save a full makeover! (We can help with that.)

User requests and questions

In reviews, customers often call for features they miss or appreciate in other apps they use. Similarly, they might ask questions which give an insight into what they are struggling with.

Looking at the data through this lens, we see similar themes recurring as before. The top themes for questions and requests were:

1. **App connectivity and stability issues** — 22 mentions
2. **Charging data accuracy and real-time display** — 14 mentions
3. **User interface and usability** — 12 mentions
4. **Compatibility with devices and EV models** — 9 mentions
5. **Energy tariff integration and cost calculation** — 9 mentions
6. **Scheduling and charger control via app** — 8 mentions

The full list of the most common question and request themes is shown overleaf.

TAKEAWAYS

The building thread here should be obvious. Whichever way we look at the data, the same picture emerges: users ask for reliable and accurate information, easier scheduling, and for setup and connectivity to be reliable.

The motivation to save money using off-peak tariffs shines through once again, with the added detail of wanting the app to reflect the user's own tariff information for accurate costings.

Alongside this, good old-fashioned frustration when apps offer poor UX/UI design, and things don't work as they are expected to. To paraphrase a famous Steve Jobs quote, "It just needs to work."

FIG. 3 · QUESTION THEMES, WITH COUNTS AND EXAMPLES

Most common questions and requests

Theme	Count	Example questions
App features and functionality	6	"Any plans to add in electricity tariff charges, so you track home charging costs?" "When are you updating the app to provide useful functionality?" "Why does the app not have many functions?"
Security and authorisation (locking charger)	4	"How do I lock the charger via the app to prevent unauthorized use?" "Why does the app not allow me to lock the charger or change its settings?" "Is it possible to store settings locally?"
Software updates and improvement requests	4	"Why hasn't the app been updated in a long time?" "Would this be a fairly simple update / improvement?" "What the process when the latest software won't update please?"
Integration with home energy systems	3	"How does the app treat solar power for charging?" "If you have a battery then your consumption history data will be wrong and useless. Can this be fixed?" "Why does the app not offer any smart home integrations?"
Third-party service integration	3	"Why does the app not integrate with third-party services?" "Do you have any plans to link to Skoda, or potentially link up with their App to have smarter communication between car and charger?" "When will the API for Mazda mx30 be developed?"
Data privacy and security concerns	2	"Why does every flipping company want my data so they can sell and/or lose it to hackers?" "Why is the Wi-Fi password field length limited in the app?"
Charger offline issues	2	"Why is the charger showing as offline in the app?" "Why is the charger frequently losing connection and needing rebooting?"
Miscellaneous queries	16	"Why there is no manual button to turn off the charger?" "Would love to see more options like don't start charging until batteries are at least XX%, otherwise fantastic app!"

Table summarising question themes with counts and examples. Source: qualitative review sample, this report.

Jobs-to-be-done and user needs

What can we learn about the user's jobs-to-be-done (JTBD) from our review?

Whilst the primary-level job may well be:

Charge my car at home

Reviews referred to a number of other secondary and related jobs, which are listed overleaf, arranged in the order of a typical user journey.

We have ranked the jobs according to Dan Olsen's ranking methodology:

- **Satisfaction** is ranked on a 7-point scale, where 1 is "very dissatisfied" and 7 is "very satisfied."
- **Importance** is ranked on a 5-point scale, where 1 is "not important" and 5 is "very important."

This allows us to spot areas of opportunity, i.e. where is the user being underserved?

FIG. 4 · IMPORTANCE AND SATISFACTION, BY JOB

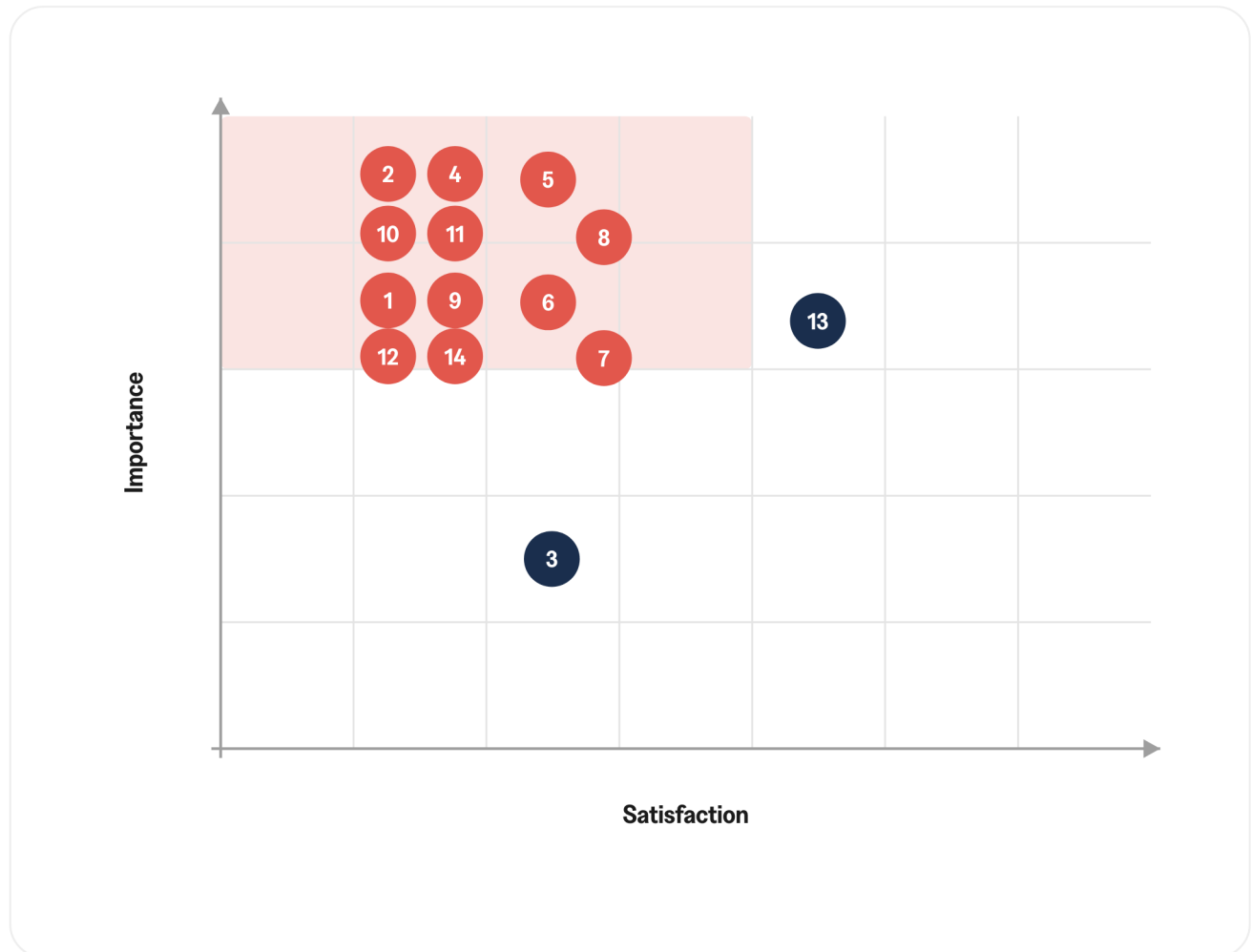
Jobs mentioned in user reviews

#	Job / task	Imp.	Sat.	Notes
1	Set up app and charger	5	2	Critical for initial use but often fraught with issues.
2	Integrate app with connected home systems	4	2	Important for overall buyer satisfaction; problematic due to integration issues with car systems and solar energy setups.
3	Customise app settings	3	3	Users desire more flexibility and ease of use.
4	Connect to charger	5	2	Critical for app functionality; often problematic due to connectivity issues with the charger.
5	Schedule charging sessions	5	3	Critical for primary user gain; affected by connectivity and reliability issues.
6	Control charging remotely	4	3	Valued feature, occasionally unreliable.
7	Monitor energy and charging usage	4	3	Important for tracking; hindered by data inaccuracies.
8	Manage charging sessions	5	3	Essential but inconsistent.
9	Access and analyse historical data	4	2	Highly desired but often lacks depth, accuracy and reliability.
10	Manage charging costs and tariffs	5	2	Critical for primary gain, but often let down by poor execution.
11	Update app and firmware	5	2	Critical but often problematic.
12	Troubleshoot app and charging issues	4	2	Complex and frustrating due to instability.
13	Manage overall energy consumption	4	5	High satisfaction when functional; important for cost- and environmentally-conscious users.
14	Implement security features	4	2	Important but issues are often encountered.

Fourteen jobs mentioned in user reviews, ranked by satisfaction and importance. Satisfaction is scored on a 7-point scale, importance on a 5-point scale (Dan Olsen's ranking methodology).

By mapping the jobs onto a matrix as below, we can more easily see that the vast majority of these jobs are considered 'underserved' (high importance / low satisfaction):

FIG. 5 · IMPORTANCE VS SATISFACTION



Importance (vertical) plotted against satisfaction (horizontal) for the fourteen jobs in Fig. 4. The shaded region is the underserved quadrant (high importance, low satisfaction); blue marks the two adequately served jobs (3 and 13).

"If you click to create a schedule, it doesn't do anything. Adds nothing over old web interface at the moment."

— Android user

From this analysis, we should conclude that the vast majority of home EV charging jobs-to-be-done are being underserved by our charging app cohort.

Only **customising the app settings** and **managing overall energy consumption** are considered to be rightly served considering their implied priority.

Our charging brands should note the risk here that a competitor or comparator service will insert itself as a superior solution to the user job-to-be-done. To illustrate this, reviews would occasionally point to previous web-based solutions: demonstrating how the 'tool' for the 'job' may change, but the job remains constant. A new solution that better meets user needs will be quickly adopted.

On a societal level, if the highest-level mobility 'job' is being served poorly by EVs, it could slow EV adoption from other mobility solutions, i.e. internal combustion engines (ICE).

We should note that extrapolating importance and satisfaction in this way isn't an exact science and should be followed up by more detailed and specific studies. But as a 'smoke test' it should ring alarm bells for our app providers. The underserved quadrant is the danger zone for one's own customers, but a competitor will see this as their area of opportunity.

Conclusion

Concluding this analysis of the UK's home EV charging apps reveals a significant opportunity for improvement. In each category, a very similar story emerges, with issues of **reliability**, **user interface design**, and **integrations** with various other connected home devices and systems.

Despite the growing adoption of electric vehicles, the user experience offered by these apps is often falling short of expectations according to users' own testimony.

The data clearly indicates that users are seeking more than just functionality; needing not only reliable, accurate and trustworthy apps but also ones that are aesthetically pleasing and intuitive to use.

Key areas for immediate design improvement include:

1. Enhancing app reliability and the accuracy of data display, ensuring users have access to trustworthy and up-to-date information.
2. Improving compatibility across different EV models, smartphones and charging units to provide a reliable, consistent user experience.
3. Simplifying and refining scheduling features to make them more intuitive and dependable.
4. Adapting and improving the user interface to support the user experience, fail gracefully and add value through clear and innovative data display.

It is disappointing to see how **underserved** the majority of user jobs-to-be-done are, and this would be a worthwhile starting point for further UX research and development.

It's evident that paying attention to these areas can significantly elevate the user experience, aligning it more closely with the evolving needs and expectations of EV owners. As the EV market continues to expand, the companies that prioritise and excel in these aspects of user experience could gain a substantial competitive edge.

We look forward to revisiting this space in a future year.

WORK WITH US

Are you one of the charging providers we featured in this study — or perhaps you are unhappy to be left out? Either way, if you'd like a more detailed report with insights and recommendations specific to your app, we'd be happy to oblige. Drop us a line at wearesystematic.com/contact, find us on LinkedIn or email hello@wearesystematic.com.

About the author



Ed Roberts

PARTNER & CHIEF STRATEGY OFFICER

Ed Roberts leads strategic direction at We Are Systematic across its work in regulated and operationally complex sectors. His focus is how design decisions carry commercial and increasingly legal consequences for the businesses that ship them. He writes regularly on the business of strategy and design in complex industries.

ed@wearesystematic.com · [linkedin.com/in/ed-roberts-49272b33/](https://www.linkedin.com/in/ed-roberts-49272b33/)

About We Are Systematic

We Are Systematic is a UK-based strategic UX consultancy. We do strategy-first, evidence-based design work for organisations building safety-critical, regulated or operationally demanding products: automotive and mobility, IoT and AI products, financial systems and energy infrastructure. The throughline across our work is that the surface most users interact with is the smallest visible part of a much larger system, and the design decisions on that surface carry consequences far beyond aesthetics. Our job is to reduce the risk in those decisions: to help teams get the high-stakes ones right before they are expensive to change.

UK EV home charging apps: state of UX review is our read on the digital experience wrapped around charging an electric car at home. It is the second in a series of mobile-app UX reviews related to the EV experience, applying the same evidence-based discipline our team brings to regulated, operationally complex products.

This report draws on large-scale qualitative analysis of public app store reviews — 2,062 across ten home-charging apps — supported by the GPT-4 language model with multi-layered human QA. Any interpretive errors remain our own.

SECTORS

Automotive and mobility · IoT and AI · Financial services · Energy and electrification

CAPABILITIES

Product strategy · UX/UI design · User research · Rapid prototyping · Proposition testing · Product optimisation

CONTACT

wearesystematic.com

hello@wearesystematic.com



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