Consumer Experience at Public EV Chargepoints

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Background to the survey

Purpose

To inform EVA England's response to 'The consumer experience at public electric vehicle chargepoints'

Responses

1,216 current EV drivers participated in the survey, with 1,025 participants from England.

Results

Highlighted key interventions in payments, roaming, open data, pricing transparency and reliability.

Method

Online survey that ran from 22 February 2021 to 19 March 2021.

Offering a voice to electric vehicle drivers in England.

Profile of respondents

Vehicle type

96% Battery Electric Vehicle (BEV) drivers and 4% Plug-in Hybrid (PHEV) drivers

Gender identity

91% of participants identified as male, with 7% (75 drivers) indicating they identified as female

Age

45-54 age group accounted for 31% of survey responses; 55-64 at 23% and 35-44 at 21%.
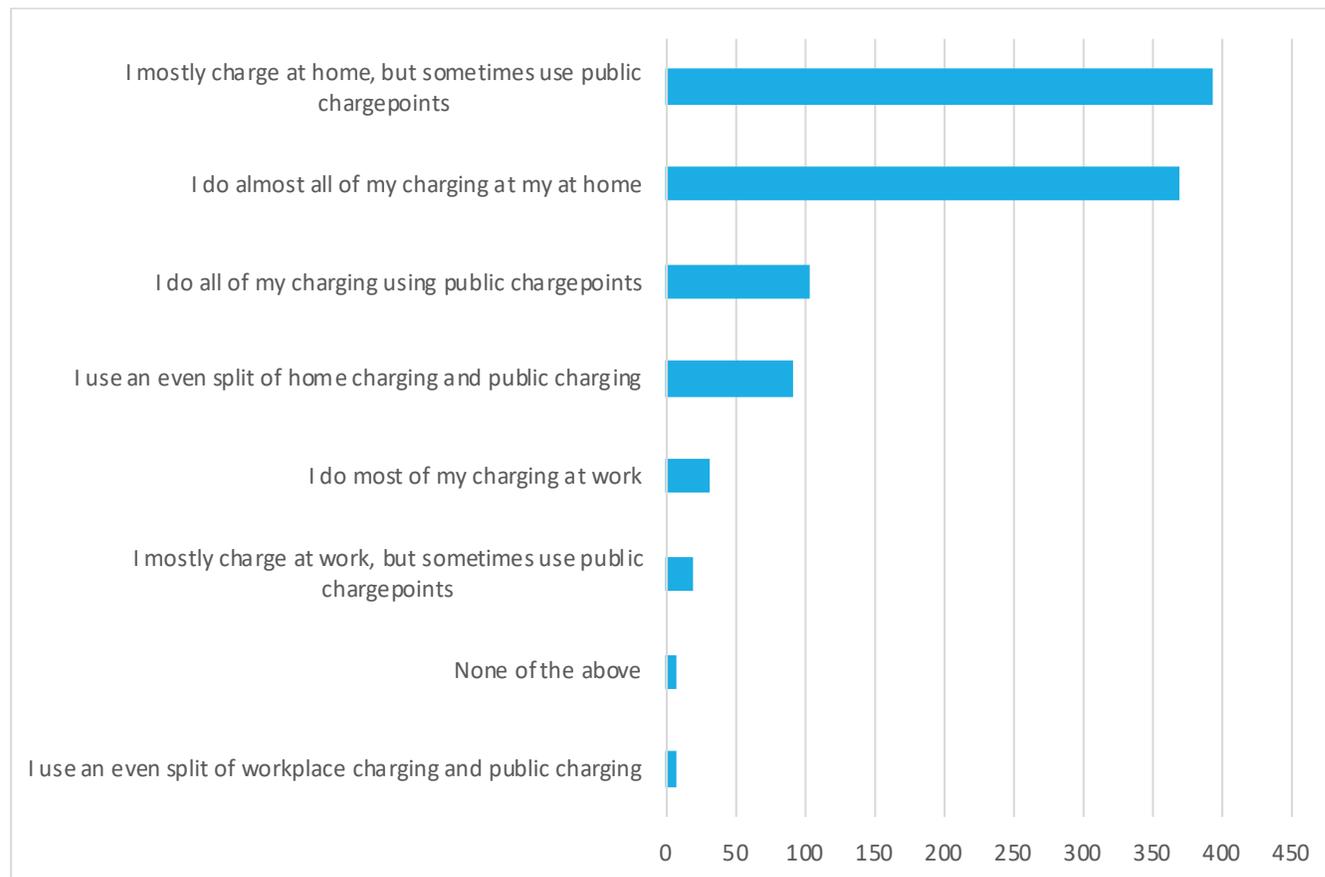
Area

38% live in a suburban area, 33% rural and 28% urban.

Offering a voice to electric vehicle drivers in England.
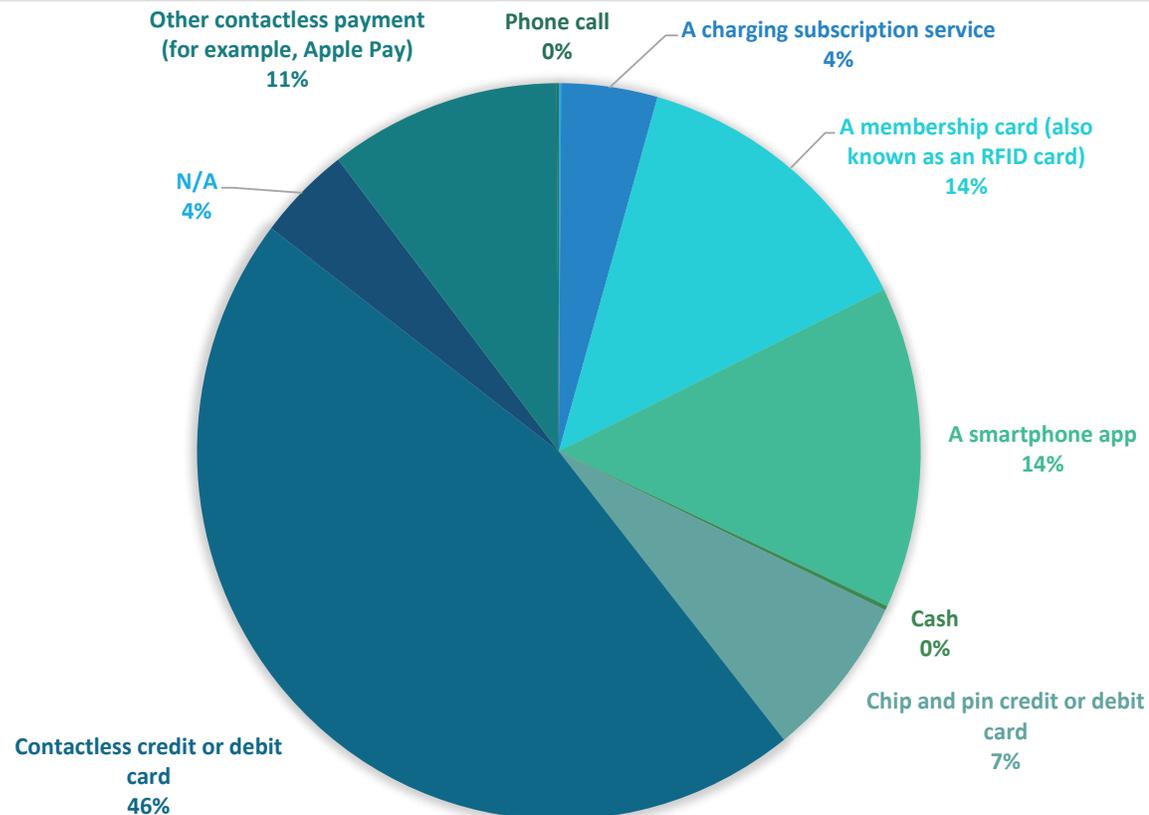
Charging patterns

- 91% have access to off-street parking (driveway, garage, etc.)

- Drivers mostly charge at home

- **92% of EV drivers in England use public EV charging at sometime or another**

Making it easy to pay

- Contactless credit or debit card was deemed the easiest method – 46% of participants (472 drivers)

- Followed by a smartphone app (145), a membership (RFID) card (137) and other contactless forms of payment such as, Apple Pay (106).

Easiest payment method

- Other contactless payment (for example, Apple Pay) 11%
- Phone call 0%
- A charging subscription service 4%
- A membership card (also known as an RFID card) 14%
- N/A 4%
- A smartphone app 14%
- Cash 0%
- Chip and pin credit or debit card 7%
- Contactless credit or debit card 46%

Roaming

- 87% of survey participants would welcome the ability to use one smartphone app across all public chargepoint networks

- 71% would welcome the ability to use one RFID card across all public chargepoint networks.

Preference of a smartphone app roaming solution

No
13%

Yes
87%
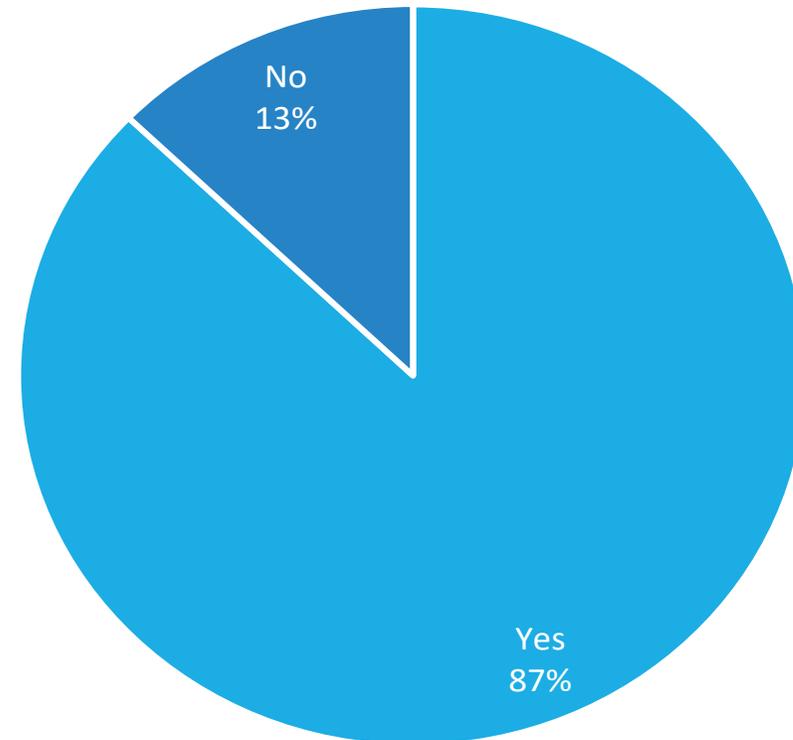
Opening up data

- 83% of participants primarily use a website or app (such as, Zap-Map) to locate public chargepoints, while 17% indicated they primarily used their vehicle's onboard map

- 98% of respondents believed that having access to real-time data ahead of a charging event would save them time.
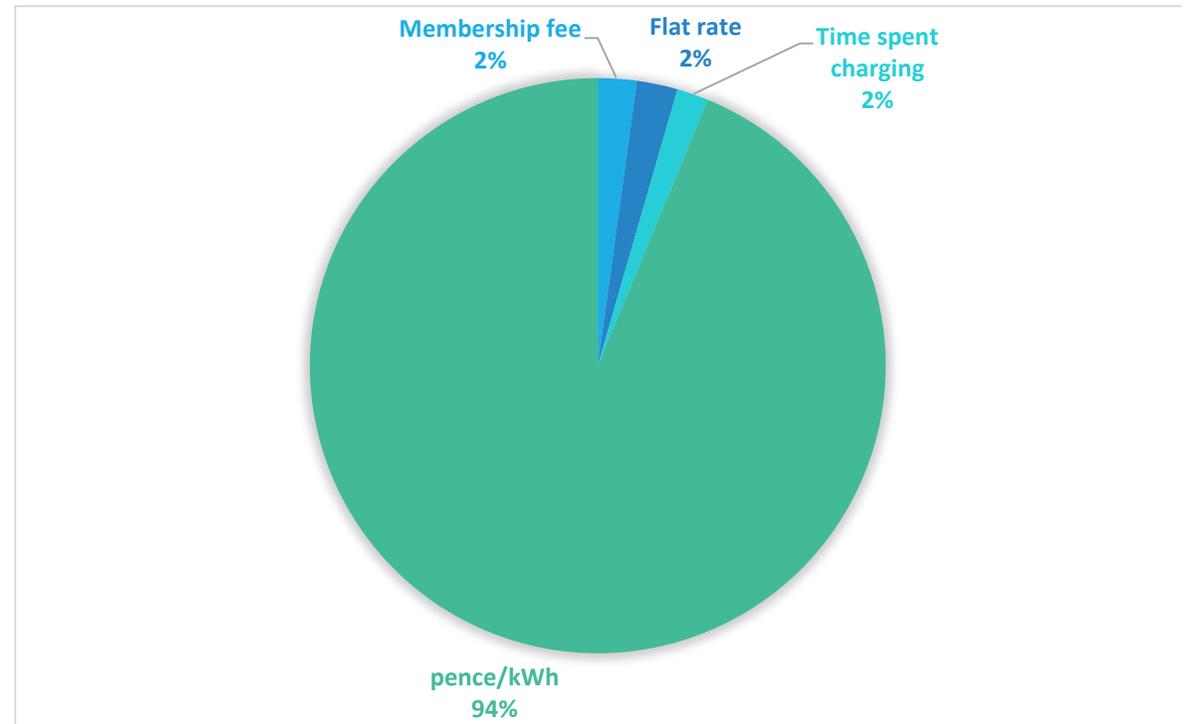
Having real-time information would save me time

Yes   No

Pricing transparency

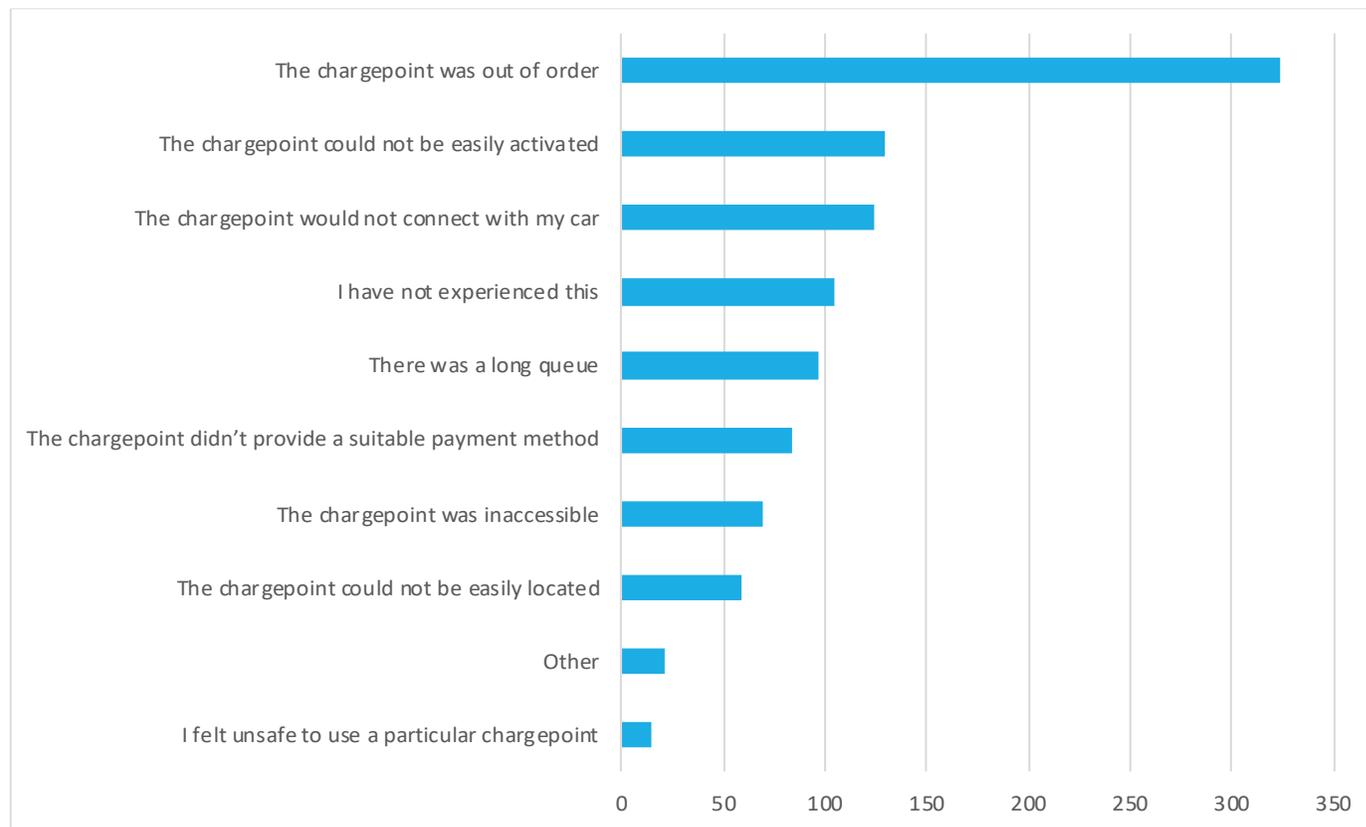- 94% indicated that a charge for electricity used (pence/kWh) was the preferred payment metric.

Preferred pricing metric

Membership fee 2%
Flat rate 2%
Time spent charging 2%
pence/kWh 94%

Reliability

- Relatively straightforward to locate public chargepoints.

- Not enough chargepoints at a given location.

- Chargepoints typically not in good working order.

- Issue of charge being 'ICE-d' or blocked by a non-electric vehicle

Reasons to walk (or drive) away from a charge.

Reason	Value
The chargepoint was out of order	~325
The chargepoint could not be easily activated	~130
The chargepoint would not connect with my car	~125
I have not experienced this	~105
There was a long queue	~95
The chargepoint didn't provide a suitable payment method	~85
The chargepoint was inaccessible	~70
The chargepoint could not be easily located	~60
Other	~20
I felt unsafe to use a particular chargepoint	~15

(Axis: 0, 50, 100, 150, 200, 250, 300, 350)

A reliability standard

- 99% of drivers believe that chargepoint operators should be required to meet a certain threshold of reliability

- 93% of drivers believed that a 99% reliability standard would be fair.

Need for a reliability standard

No
1%

Yes
99%
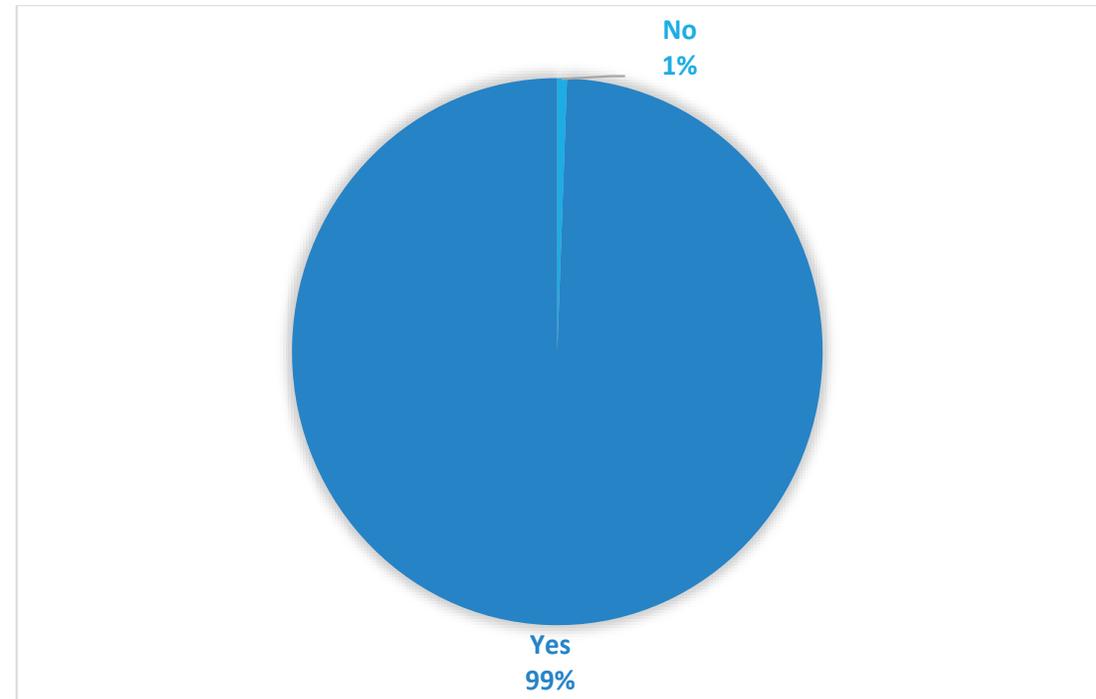
Weatherproofing and signage

- 69% of survey participants agreed or strongly agreed that they preferred to use chargepoints located under some type of roofing or covering.

- In general, drivers perceived a lack of signage along motorways, A-roads, at Motorway Service Areas (MSAs) and destinations.
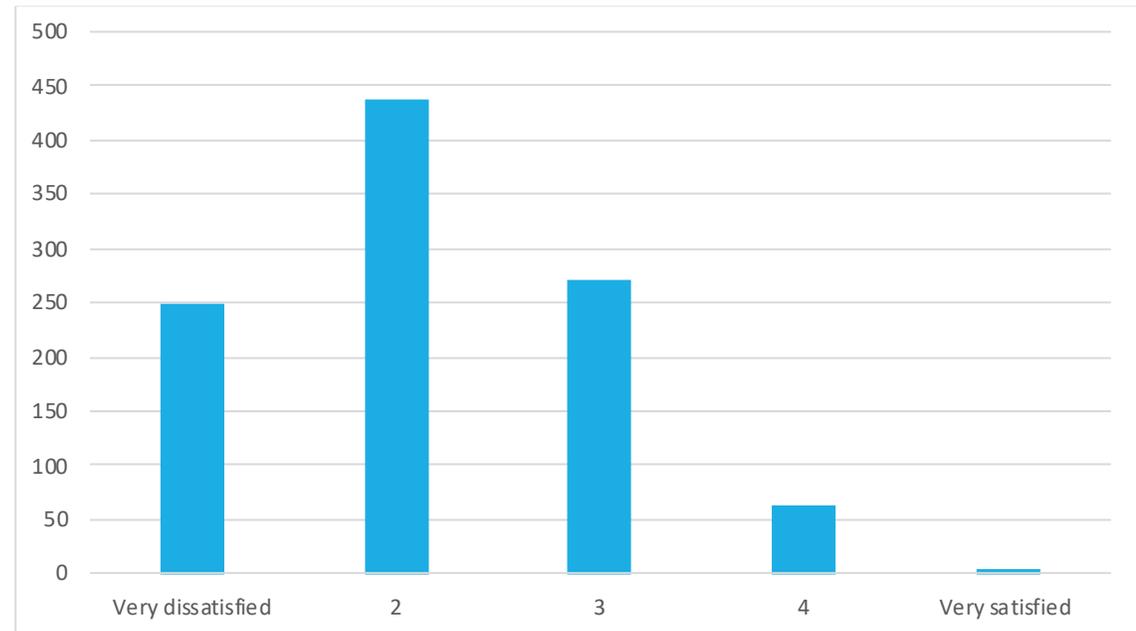
There is clear signage along A-roads that let me know where I can find a chargepoint.
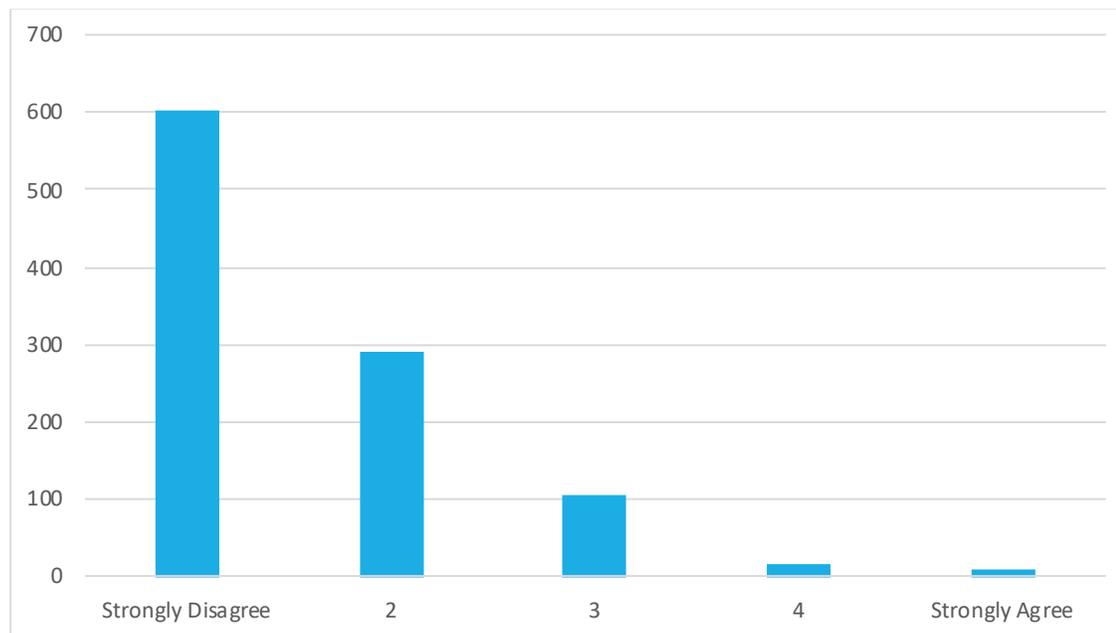
General satisfaction

- Average rating of 2.16 out of 5

- Most frequent ranking was a 2 out of 5

- Represents a benchmark by which future improvements can be compared

General satisfaction with public EV charging

Key recommendations

- Chargepoints should offer a choice between three standardised payment methods: 1) A contactless credit or debit card 2) A 'universal' RFID card 3) A smartphone app

- Charge Point Operators should enable roaming and allow for drivers to use one app or RFID card on all networks

- A minimum amount of data must be made open in a standardised format to EV drivers.

- All prices for electricity sold at EV charging sites should be stated in pence/kWh

- 99% reliability standard should be set, and 24/7 helpline made available

- Standardised signage should be increased in terms of both number and visibility both at the site of the chargepoint as well as on a range of approach roads.