

Potential pain points and potential solutions for consumers

Pain points
Lack of reliable or accessible information and misconceptions around EVs

Potential solutions
Communication campaigns on benefits of smart charging

Potential solutions
Promotion of trusted information sources on smart charge points

Potential solutions
Introduction and promotion of time-of-use tariffs

Reasons for starting the consumer journey:

- ✓ Purchase of an electric vehicle (EV) by a household
- ✓ Providing charge points for employees or a company fleet
- ✓ Replacing a charge point
- ✓ Providing charge points at commercial or residential properties

LEGEND

Pain points

Potential solutions

Business focus

INFORMATION AND AWARENESS STAGE

Consumer awareness of smart charge points is typically limited, and mainly affected by advertising and word of mouth. Consumers do not particularly distinguish between 'smart' and 'non smart' charge points.

Business focus
Businesses with important transportation operations tend to be more knowledgeable.

INFORMATION AVAILABILITY

Consumers typically start with generic online searches for information, and use consumer advice websites and social media. Effective marketing and advertising, combined with up-to-date and accurate information supports decision making.

Business focus
Commercial consumers favour more formal sources for information such as charge point manufacturers, government, consultancies, news outlets, internal intelligence, and energy suppliers.

INTEREST AND MOTIVATION

EV owners typically see private (e.g. home) charging as essential, because of the convenience and energy cost-savings it affords. Environmental concerns and the operational cost savings are common drivers of a consumer's overall electro-mobility journey.

Business focus
Businesses are more likely to pay attention to the specific features of smart charge points. They particularly value charge scheduling and data access. Corporate social responsibility, decarbonisation targets and reputation all influence the adoption of EVs.

PURCHASE AND INSTALLATION STAGE

By this stage, consumers have usually committed to purchasing a charge point. Customers will have different requirements and expectations, which will affect the final decision on product type.

Business focus
For larger commercial deployments, the installation and connection process is often where delays and high costs occur.

PRODUCT CONSIDERATIONS

Charger Speed:
Nearly all domestic consumers will select slow charge points. Businesses may require a more powerful charge point for larger vehicles or when charge points are shared. Higher capacity charge points come with higher cost and installation complexities.

Charger Features:
Consumers value different features. Certain 'smart' features are now a requirement for private charge points (<50kw). Charger aesthetic can also be an important factor.

Business focus
For businesses installing multiple charge points, the availability of public charge points may influence the number and type of private charge point they install.

SPACE

The availability of space is a key factor in the decision to purchase a private charge point. For businesses it will also influence the decision on the number and type of charge points installed. For domestic and commercial consumers, land and property ownership situation can create installation challenges.

POWER AVAILABILITY

Business focus
The availability of power is usually only an issue for non-domestic consumers who are installing multiple and/or high powered chargers. To set up new grid connections or upgrade existing ones can be time consuming and costly.

COST AND FINANCING OPTIONS

Cost is a consideration throughout the journey, although costs related to power connection and installation might not be known until later on in the process.

The installation cost for private consumers has generally not been prohibitive and government grants are available for some.

Business focus
The Workplace Charging Scheme (WCS) offers business support towards the upfront costs of purchase and installation. Grants are also available for landlords.

USE STAGE

Once up and running, the way charge points are used varies depending on the type of charge point and the type of EV user. Certain domestic consumers are more engaged with smart features, although others prefer to 'set it and forget it'.

Business focus
While most businesses value the access to charging event data, the way businesses interact with smart charging depends on the business type and the EV's operational characteristics. Businesses with 24/7 operations are less likely to be able to use off-peak charging.

Pain points
Space limitations

Pain points
Lack of support from DNO and/or local authority

Pain points
High connection costs and long lead times for installation

Pain points
Lack of suitable financial instruments or incentives available to support investment

Potential solutions
Create database of certified compliant charge point models and manufacturers

Potential solutions
Financial support for replacing old charge points with new smart charge points

Pain points
Charge points shared by employees or fleet vehicles can create access issues

Pain points
Current use of smart charging functionality is limited

Potential solutions
Training on smart functionalities provided by installers when fitting the charge point

Pain points
Challenges related to maintenance and repair

Potential solutions
Clearer and stronger market incentives to engage with off-peak charging