

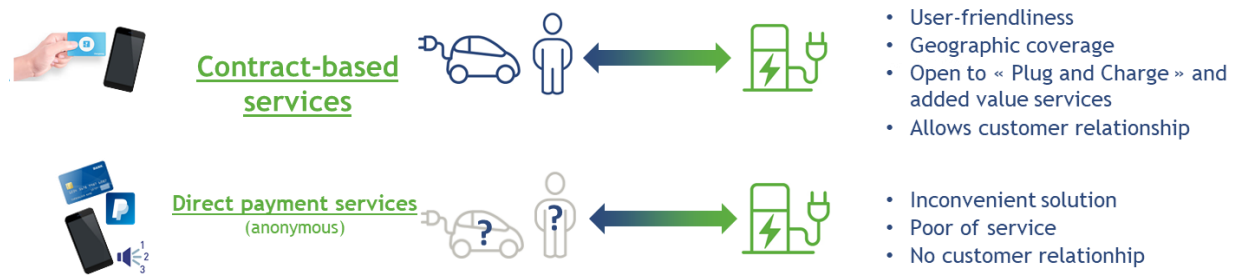
In the e-Mobility market, it is essential to grasp precisely the definition of the market players

- The **Charge Point Operator (CPO)** manages the charging equipment on the B2B side.
- The **e-Mobility Service Provider (EMP or eMSP)** provides EV drivers access to public charging plus other value-added services on the B2C side while interacting with CPOs on the B2B side.

How could an EV driver access a public charging service?

There are 2 ways of accessing a public charge point:

1. Pay as You Go: an end user interacts directly with the **CPO** in an anonymous way, typically via a credit card.
2. Contract-based subscription with an **EMP** typically via an RFID card and/or a mobile App.



The Alternative Fuels Infrastructure Directive (AFID) which should be implemented by all member states, mandates that all charge point operators offer customers ‘ad hoc’ access to their chargers. This provision means that all existing and future public charge points must be accessible with or without a pre-existing contract.

However, such an “ad hoc access” should only be seen as a “minimum requirement” or a stepping stone necessary to promote the e-Mobility market. It is in no way should be interpreted as the goal since it is not structured to satisfy customer needs in the long term due to the following:

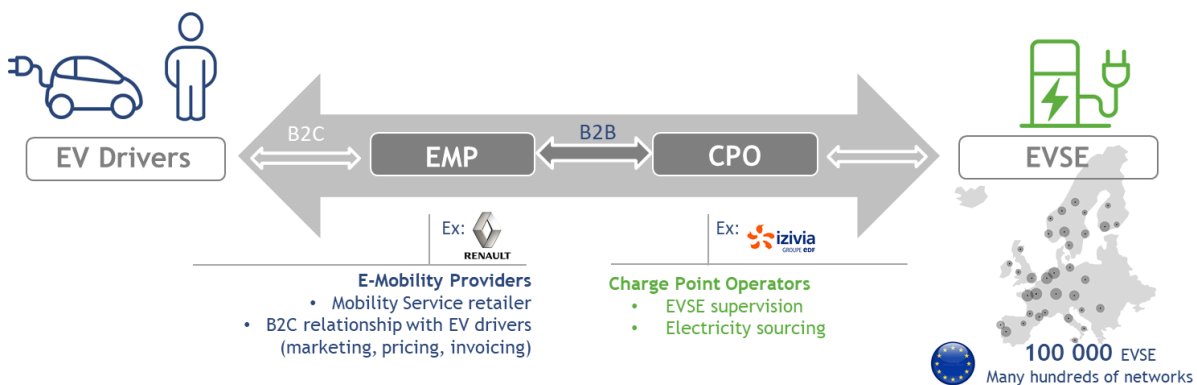
- « Direct payment » services are rarely used because they don’t offer any added-value services (booking, real-time & remote follow-up, etc.), and apply only to a specific customer journey per network.
- On the contrary, “contract-based” services, marketed by global e-Mobility Service Providers provide user-friendly digital services accessible through a dedicated App, ensuring a seamless access to a pan European network. all that using only one invoice.

As stated recently by the British Renewable Energy Association (REA): “*Whilst ensuring ad hoc access is an important move towards improving the customer experience, it is only a first step towards an interoperable system and does not result in a seamless experience of charging between networks partly due to the diversity of possible implementations. It also does not address the potential value-added services that shared communications and information between. CPOs can bring, or set up the charging network for full engagement with future energy sector products and services. Energy security, cyber security, mass EV uptake and smart charging are also issues that may be enhanced by ‘going beyond ad hoc’ that were raised in the interview process*”

Contract-based charging services paves the way for an open market of innovative e-mobility services

As mentioned above, in a contract-based framework, CPOs and EMPs have their distinctive roles to play. In a way, CPOs are wholesale operators whereas the EMPs act as retail operators. A CPO can sometimes act as an EMP, but the value of a roaming model is that **any third party EMP could enter in business relationship with any CPO**, eventually benefiting EV end users. Roaming is where an end user accesses a third-party CPO charging infrastructure with an existing contract. This is only possible amongst interoperable networks where the EV driver is then **free to sign up to any EMP of the market** without discrimination and still enjoy a maximum of charging point access.

The relationship between CPOs and EMPs is illustrated as below:



This interaction model is often used in various industries (telco, railways, highways, etc) where roaming of services is used on a daily basis. **This market organization is the only set-up which would promote a fair and open competition among market players by unbundling infrastructure and services.** It is the only way for an open market of e-mobility services in Europe to emerge.

In this model, a roaming platform like GIREVE links up EMPs and CPOs for them to do business together by providing important B2B data exchange and collaborative services. Of course, it's fundamentally up to both parties to choose their preferred framework, be it a third-party platform or a direct partnership via a technical connection.

As a public transport authority, what should I expect from my selected operator to manage my charging network?

The requirement which must be clearly set out in any public tenders is two-fold:

- As stated by the AFID, and in accordance with each member state's regulation, all operators are required to offer "ad hoc access" services
- Apart from that, an **open charging network** is also required, meaning any third-party service provider would be able to access your charging network by entering into a roaming agreement with you or your CPO.

This double requirement will allow any end user to choose freely the preferred option for EV charging while avoiding a "lock-in" situation where the EV driver has no other options but to sign up to the sole operator on the market.