

ETREL



PLANNING AND DEPLOYMENT OF CHARGING STATIONS

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*e-mobility and charging infrastructure planning: the
role of Public Authorities and strategic visions for
tomorrow*

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Development and manufacturing of e-CS for private and public use



Counselling in e-CS infrastructure planning phase

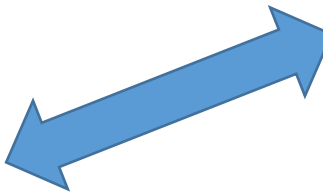
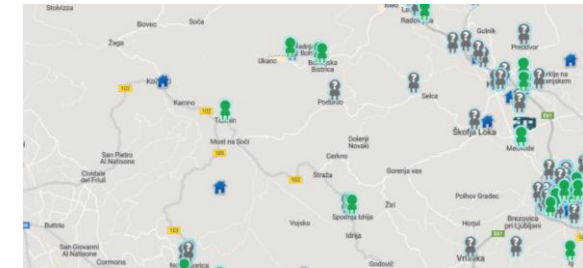


Support at e-CS installation and control system integration phase

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ICT solutions in the field of e-mobility

Roaming solutions



**E-CS infrastructure
management centres**



**Mobile apps for
e-v users**

Publicly accessible e-CS

Private surfaces:

- Parking garages
- Shopping centres...

Public surfaces:

- Parking lots
- Parking garages ...

E-CS infrastructure planning and development - different approaches and motives of public and private sector :

- Defining needs for e-CS
- Defining locations
- Financing installation ...

Development of infrastructure should be in accordance with needs of e-v users and trends in e-mobility.

Plans for developing publicly accessible e-CS infrastructure

Local communities should have a long-term development plans:

- Defining needs: number, localisation (diffusion) of e-CS.
- Defining macro locations: existing and planned parking spaces at public and private locations → plans of private investors should be also taken into account.
- Defining types of e-CS (power) at certain location according to the expected duration of parking.

In the planning phase the local community should communicate and cooperate with private investors. Planning should aim at even territorial distribution of e-CS.

Roles of PAs

Long-term planning of e-CS infrastructure development (number, type, location) → could influence the existing municipal spatial plan/require changes or amendments.

Cooperation with the electricity distributors → provision of energy infrastructure needed for public e-CS (connection to the public network).

Communal infrastructure: traffic regulation, communications, connections to e-CS → consider the envisaged final number of e-CS.

Installation and financing → own funding, subsidies, concessions (public-private partnership).

Multiple dwellings → regulation of legislation (energy payment, parking) → necessary amendments to the Construction Act, Housing Act, the Rules on management of multiple dwellings ...

Role of PAs is not only in providing infrastructure but also in providing the conditions for its installation: it is necessary to actively promote e-mobility (awareness and information raising, workshops, test drives with e-Vs...)

Recommendations for public e-CS

Compliance with legislation:

- Combo 2 Type 2 or Combo 2

Light e-V charging (bikes, scooters, quadricycles):

- separate, cheaper plugs

Integration into control centres (communication):

- remote control of operation
- roaming option → enabling the use of e-CS to as many users as possible
- the possibility of charging the charging service
- controlling the power of charging in accordance with the connection power or the needs of the power system and / or the electricity market (consumption adjustment)

Interoperability

Two aspects of interoperability:

- Infrastructure aspect: unification of connectors → charging station – EV (guaranteed by compliance with Directive 2014/94/EU on the establishment of an alternative fuels infrastructure).
- Business aspect: connecting e-mobility actors in order to facilitate roaming and access to information on e-CS.

Business level requires appropriate ICT support on the side of e-mobility service providers (who have concluded contracts with vehicle users) and charging infrastructure managers:

- to verify the validity of the user's contract (authorization of the charging and booking of the e-CS),
- to charge the charging service,
- to provide information to e-V users.

Interoperability– role of PAs

Interoperability requires unambiguous identification of e-mobility actors:

- The assignment of identification tags to actors must be introduced at the national level.
- The competent ministry must establish a body that will assign the ID number to individual actors.
- Providing information to users on the locations, characteristics and availability of CS must be centralized and easily accessible:
 - An appropriate database must be introduced at (inter)national level.
 - The competent ministry must introduce an organized and comprehensive database as soon as possible → data are provided by the operators of the charging infrastructure, and used by providers of e-mobility and other services in transport, public administration ... (through them e-V users).
 - The competent ministry must include services in the field of e-mobility in the standard classification of activities.