



L'ENERGIA CHE TI ASCOLTA.

# **DSO role in the Electric Mobility mass roll-out**

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# DSO as enabler of EVs mass roll-out

An extensive deployment of charging points by Enel to support electric mobility rollout in Italy



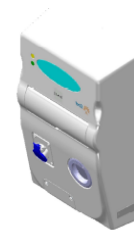
## AC Charging station solutions



Fast Charge for highways **43 kW**



Quick Charge for cities **22 kW**



Slow charge for private and fleets premises **3.3 kW**

ENERGY fee



+

SERVICE fee



+

GRID fee



INFRASTRUCTURE fee



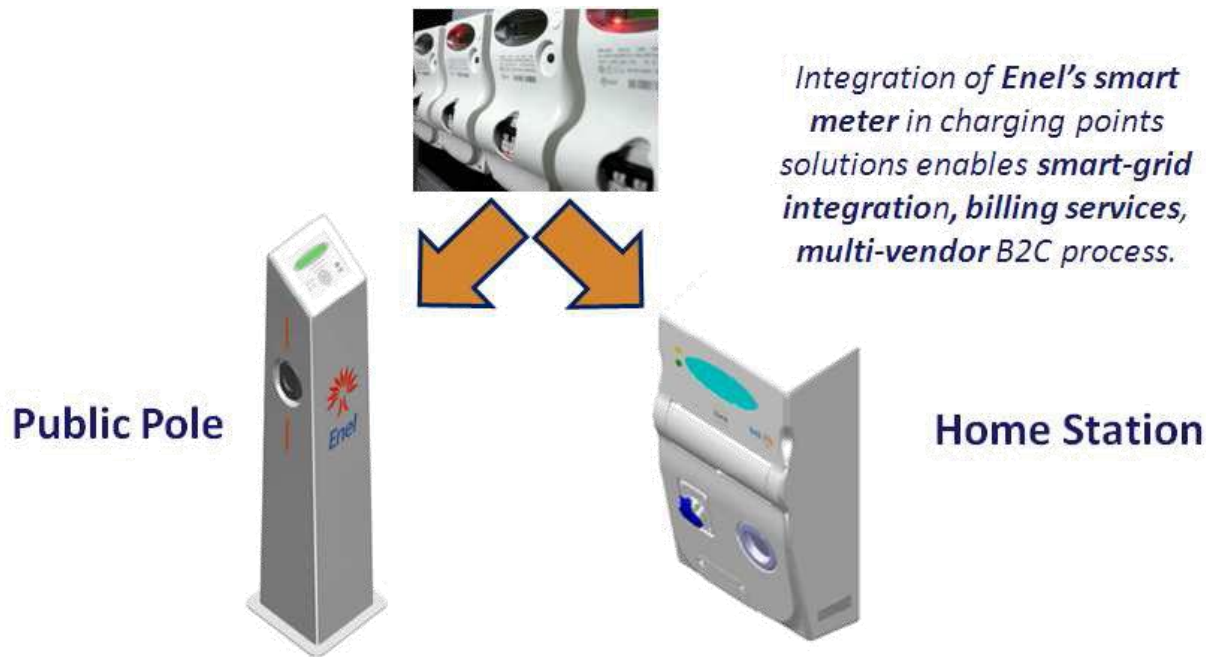
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Lowering EV customer charging fee with no mark-up over infrastructure

# The EV recharging infrastructure

A **smart charging infrastructure** made of two building blocks  
a field equipment with **smart metering capabilities**



to provide **certified measures** and to enable **multivendor access**

# The EV recharging infrastructure

a real-time operation and management of infrastructure to provide **B2B and B2C services** and to support **smart charging**

**Enel**  
Distribuzione  
Benvenuto A242348

Home

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Mondo

Nazioni	Disp.	Ric.	Man.	Tot.
Spagna	295	10	0	305
Italia	737	374	0	1111

Tot. 1032 384 0 1416  
Tot.Mondo 1032 384 0 1416

**Cruscotto**

- 123.206 ricariche effettuate
- 1.503.279 kWh erogati
- 1.838.510 Kg risparmiati

**Mapa** | Satellite

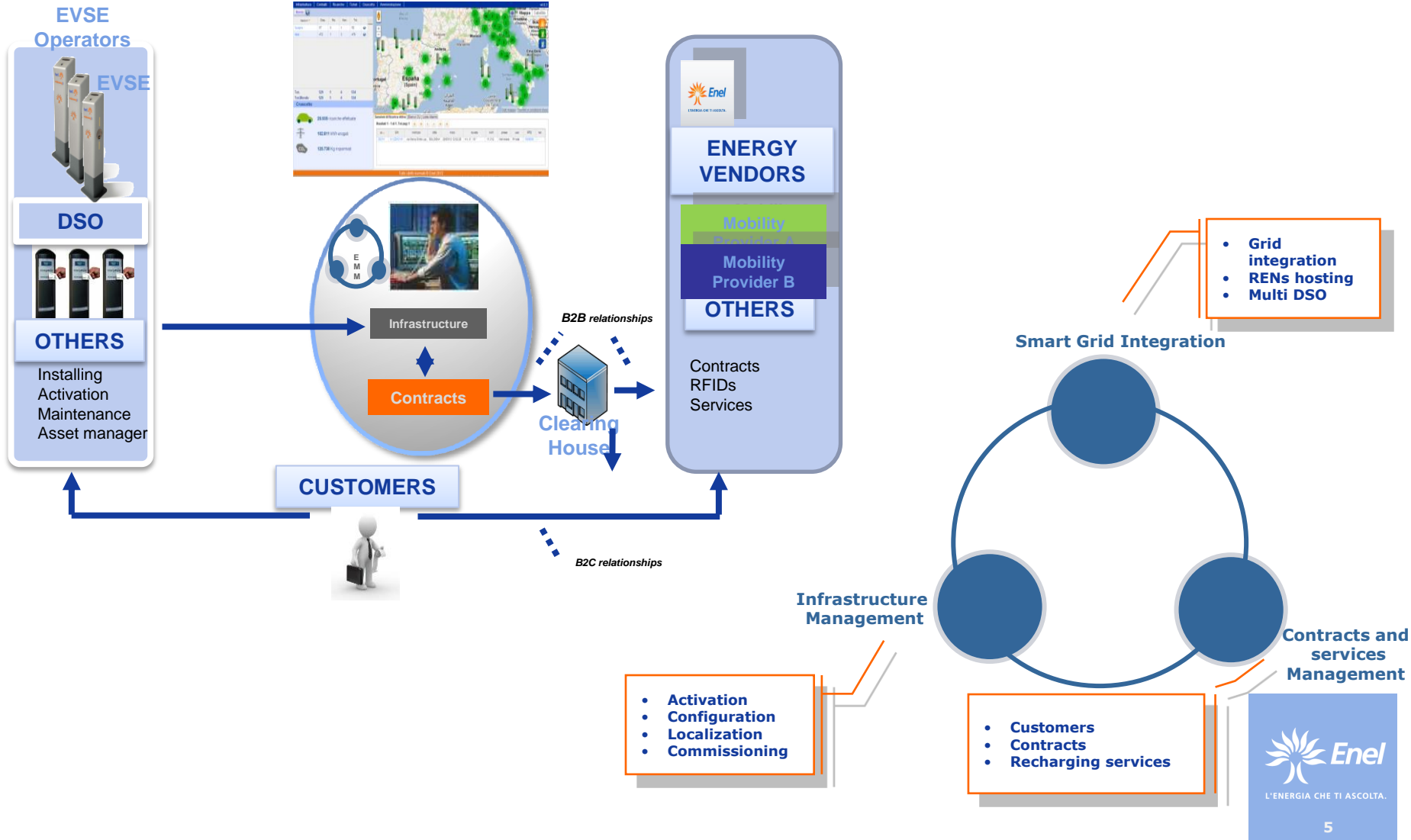
Map showing EV charging stations across Europe with numerical indicators on markers.

Sessioni di ricarica in corso | Eleno CU | Lista Allarmi

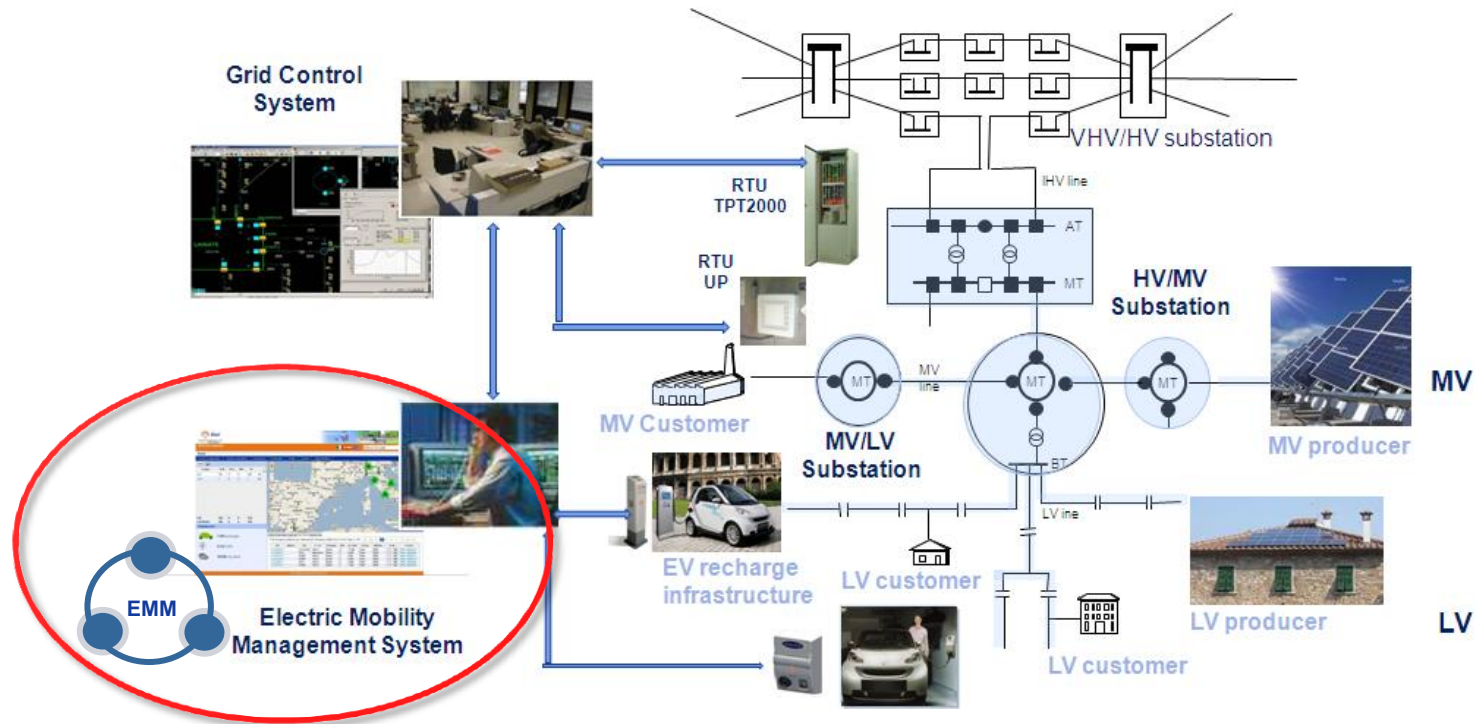
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ID	S/N	indirizzo	città	inizio	durata	kWh	presa	uso	RFID	tar.
102022	N.11ZP22M	Carretera de Armi	Granada	04/04/13 19:17:00	1152 h, 54', 22"	9,490	Schuko	Privata	1000092	-
105712	N.11ZP22M	Calle Montejaque	Malaga	10/04/13 17:41:50	1010 h, 29', 41"	15,929	Schuko	Privata	1000097	-
107550	N.12ZP22M	-	Barcellona	13/04/13 16:51:50	939 h, 19', 39"	1,232	Schuko	Privata	1000095	-
111059	N.12ZH22M	Via Marsigli 32	TORINO	18/04/13 16:42:40	819 h, 28', 50"	2,847	SCAME	Privata	1707223	-
111646	N.12ZH22M	Via P. Nenni 2	MANTOV	19/04/13 13:54:10	798 h, 17', 19"	2,775	SCAME	Privata	1304927	-
111985	N.11ZP22M	Tarassa	Barcellona	20/04/13 13:24:50	774 h, 46', 37"	1,077.38	Schuko	Privata	1642018	-

# EMM system as multi-tenancy e-mobility IT platform



# Smart-Grid integration of EV charging infrastructure



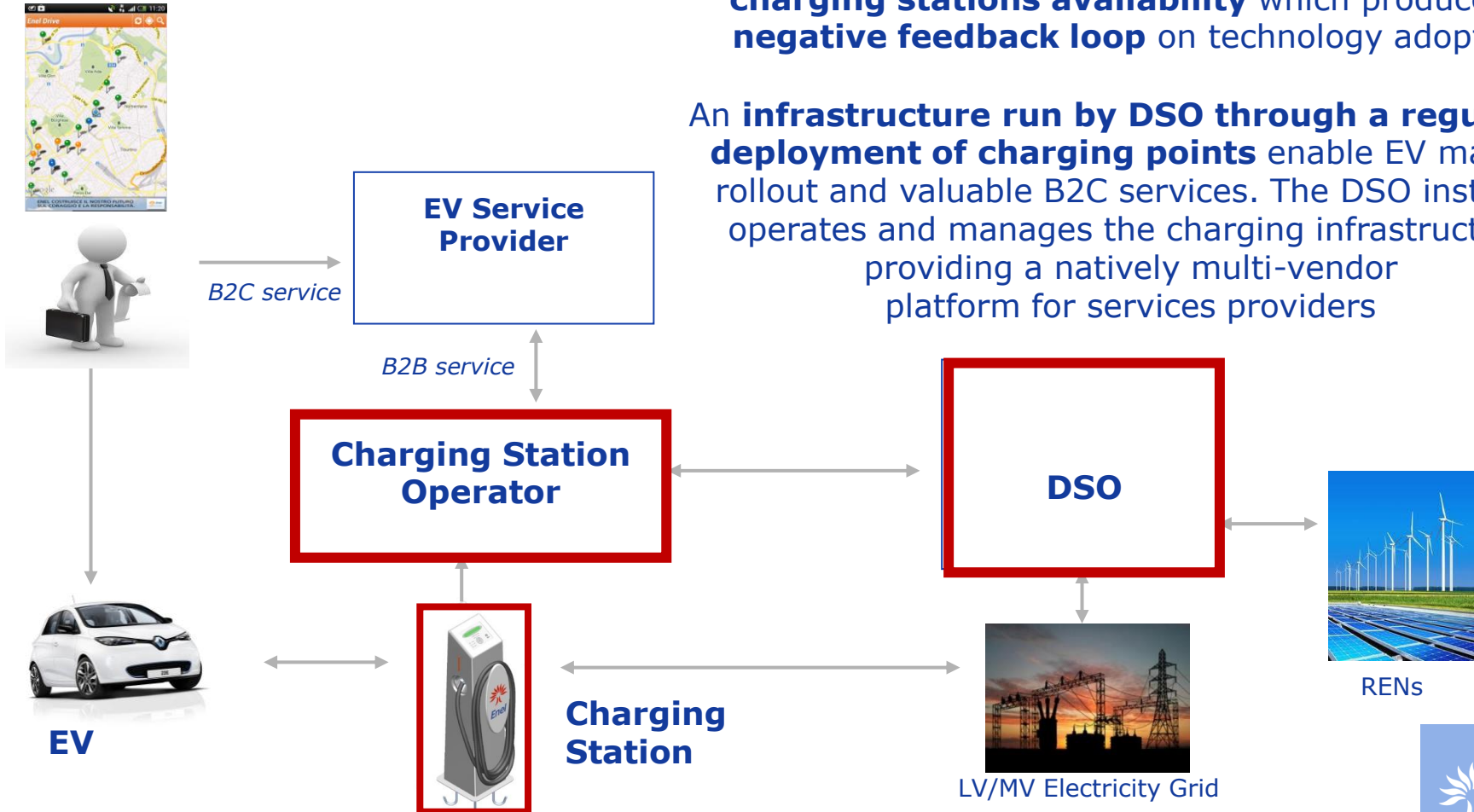
The charging infrastructure is designed to be fully integrated in the **electricity distribution grid**, monitoring that the charging profiles are compliant with DSO constraints and using EVs as dynamic loads to implement, improve and secure a GHG-free energy value chain.



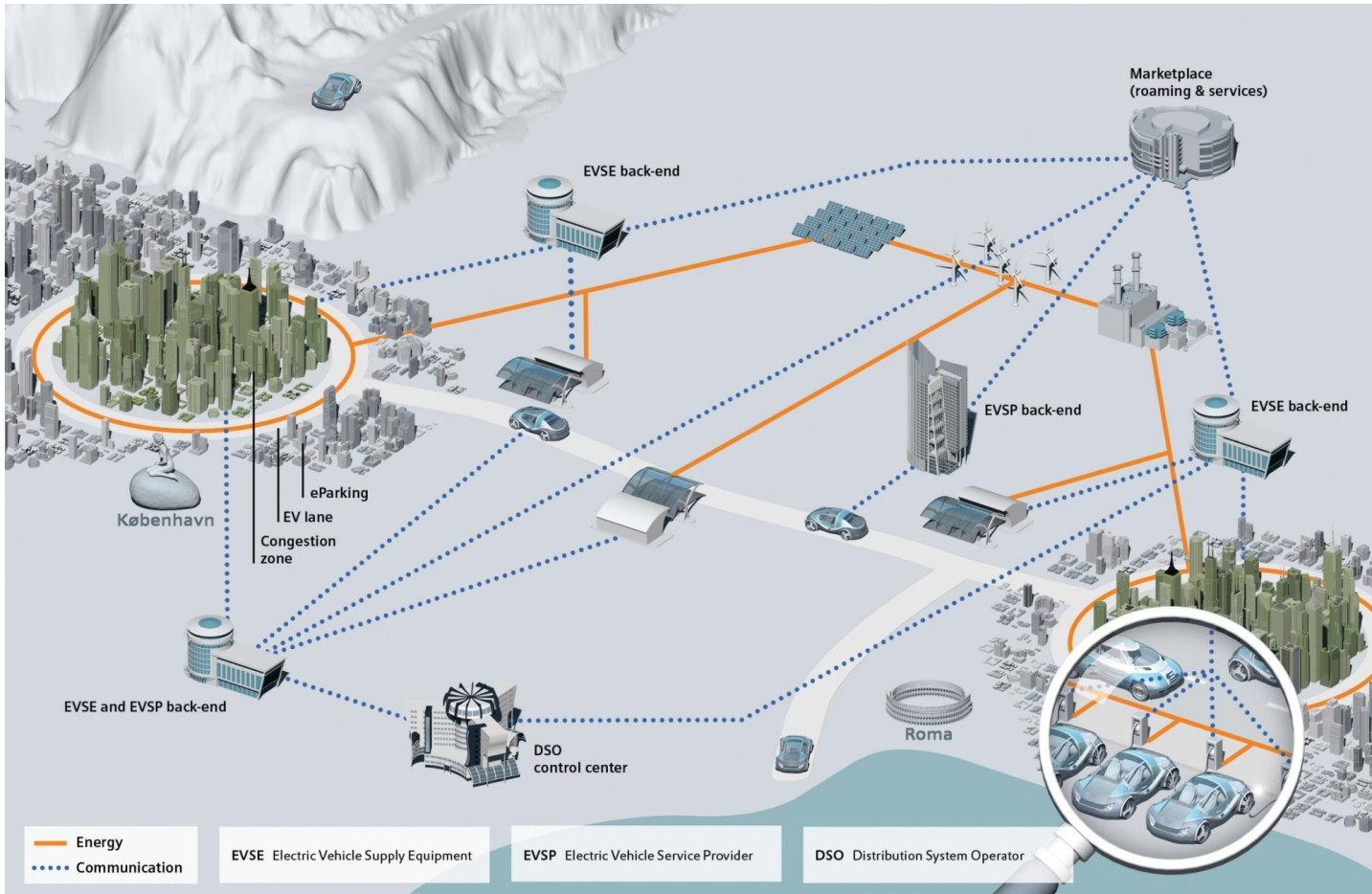
# Business models for charging infrastructure deployment

EV mass rollout is currently endangered by the “chicken-egg” issue between **EVs diffusion** and **charging stations availability** which produces a **negative feedback loop** on technology adoption

An **infrastructure run by DSO through a regulated deployment of charging points** enable EV market rollout and valuable B2C services. The DSO installs, operates and manages the charging infrastructure providing a natively multi-vendor platform for services providers



# DSO role at European level







**Thank you for your kind attention**