POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL CONFERENCE 2022

30 November
1 December, 2022
Brussels, Belgium

#POLIS2022

Innovative solutions for electric user-centric charging infrastructure

1E. CHANGING GEARS: ACCELERATING THE UPTAKE OF ELECTROMOBILITY

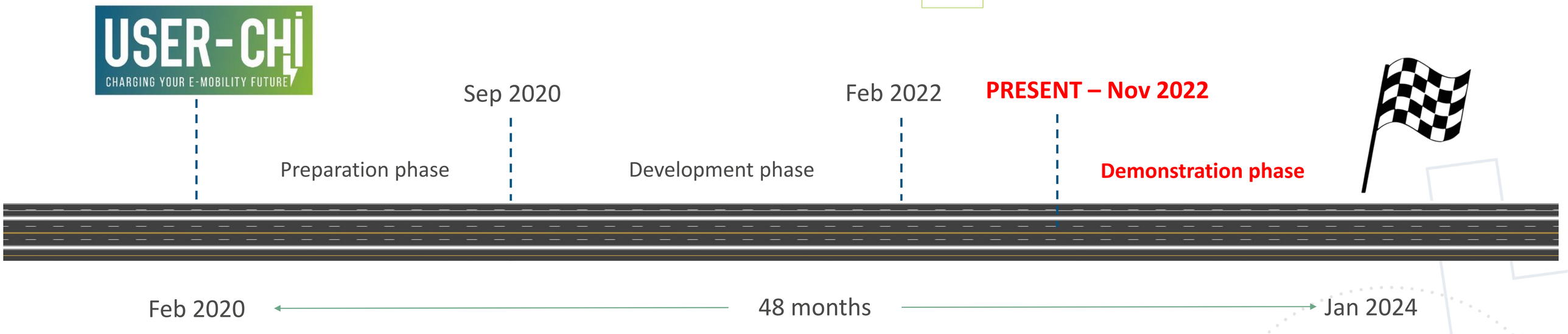
Marion Pignel, Project Officer, Eurocities

USER-CHI
CHARGING YOUR E-MOBILITY FUTURE

The Project

USER-CHI is an industry-powered, city-driven and user-centric project which will co-create and demonstrate smart solutions around 7 connecting nodes of the Mediterranean and Scandinavian-Mediterranean TEN-T corridors to boost a massive e-mobility market take-up in Europe.

- ✔ Duration: 2020-2024
- ✔ Budget: 17M€
- ✔ 24 partners
- ✔ Coordinator: etra I+D



Our Partners

24 partners from 6 countries

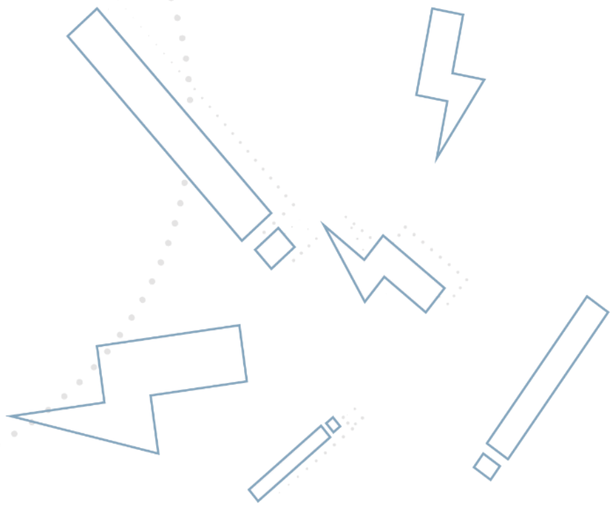
A balanced team of complementary organisations covering the overall value chain of the project: research centres, technology providers and end-users.

5 demo sites + 2 replication cities

- Barcelona
- Berlin
- Budapest
- Rome
- Turku
- Florence
- Murcia

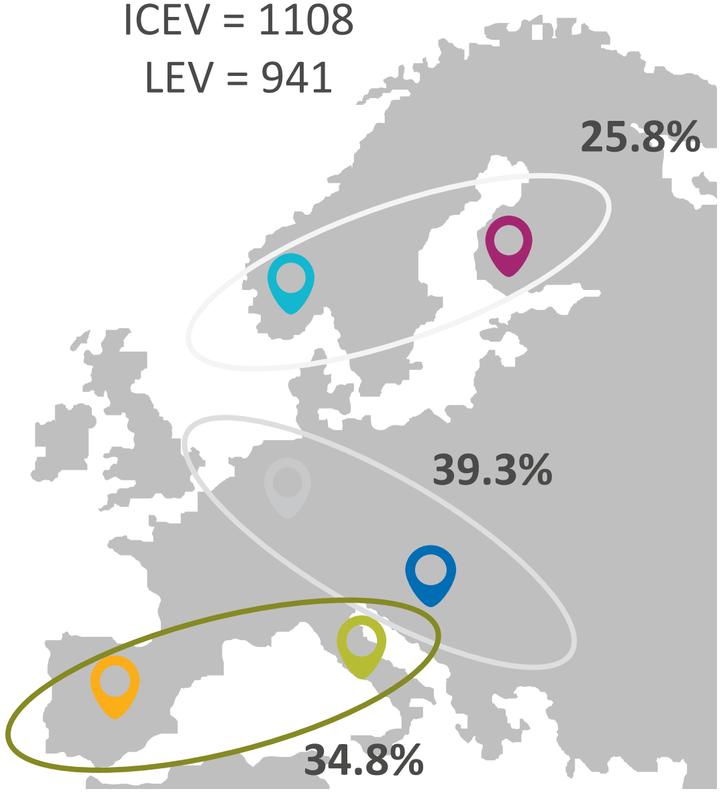
The Objectives

1. DESIGN OPTIMISATION OF CHARGING NETWORKS WITH A USER-CENTRIC APPROACH
2. DEPLOYMENT OF AN INTEROPERABILITY FRAMEWORK AND PLATFORM
3. SCALABLE INFRASTRUCTURE ROLL-OUT BY MEANS OF SMART GRID INTEGRATION
4. DEVELOPMENT OF INNOVATIVE AND HIGHLY CONVENIENT CHARGING SYSTEMS
5. DEMONSTRATION OF NOVEL BUSINESS AND MARKET MODELS
6. LEGAL AND REGULATORY RECOMMENDATIONS FOR MASSIVE EV DEPLOYMENT



MAIN RESULTS OF THE USER-CHI SURVEY – SAMPLE DESCRIPTION

Total sample
EV = 688
ICEV = 1108
LEV = 941



A survey performed in six EU countries (Finland, Hungary, Germany, Italy, Norway and Spain) from 21st of July to 31st of July (2020)

Finland
EV=54
ICEV=176
LEV=103

Germany
EV=169
ICEV=188
LEV=165

Hungary
EV=117
ICEV=271
LEV=167

Italy
EV=134
ICEV=113
LEV=232

Norway
EV=72
ICEV=202
LEV=100

Spain
EV=142
ICEV=158
LEV=174

THE EV driver's Opinion - EV vs charging infrastructure

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EV satisfaction

4.4

Mean of EV

4.4

Mean of ICEV

Rate your satisfaction with the use of your vehicles

Charging experience satisfaction

3.9

Rate the adequacy of the charging points used:

4.0

Rate the suitability of the plugs

3.6

Rate the waiting time

3.8

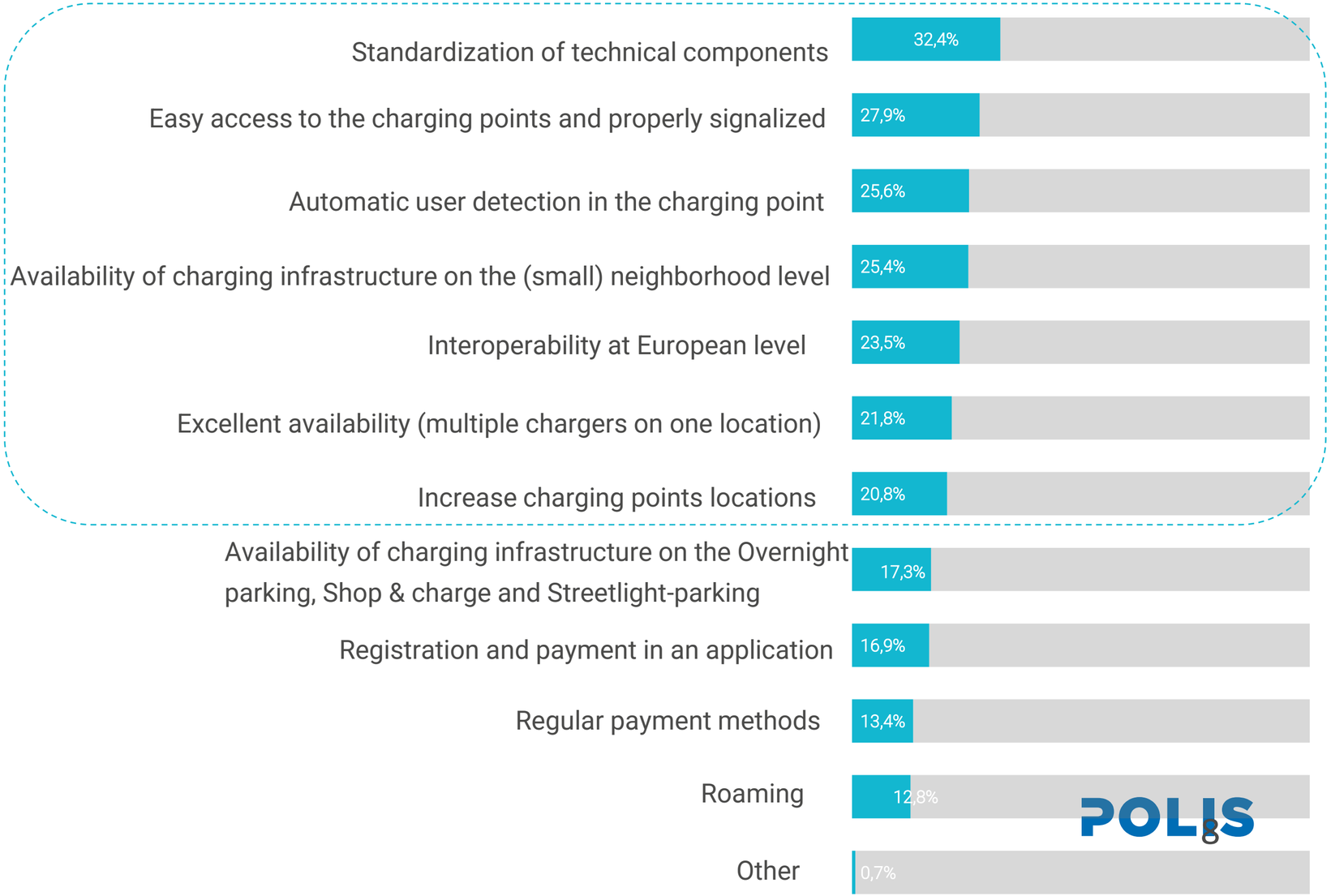
Rate the quality of information you receive about your charge

THE CHALLENGE

Support the accelerated deployment of EV charging infrastructure in Europe by ensuring **user satisfaction**

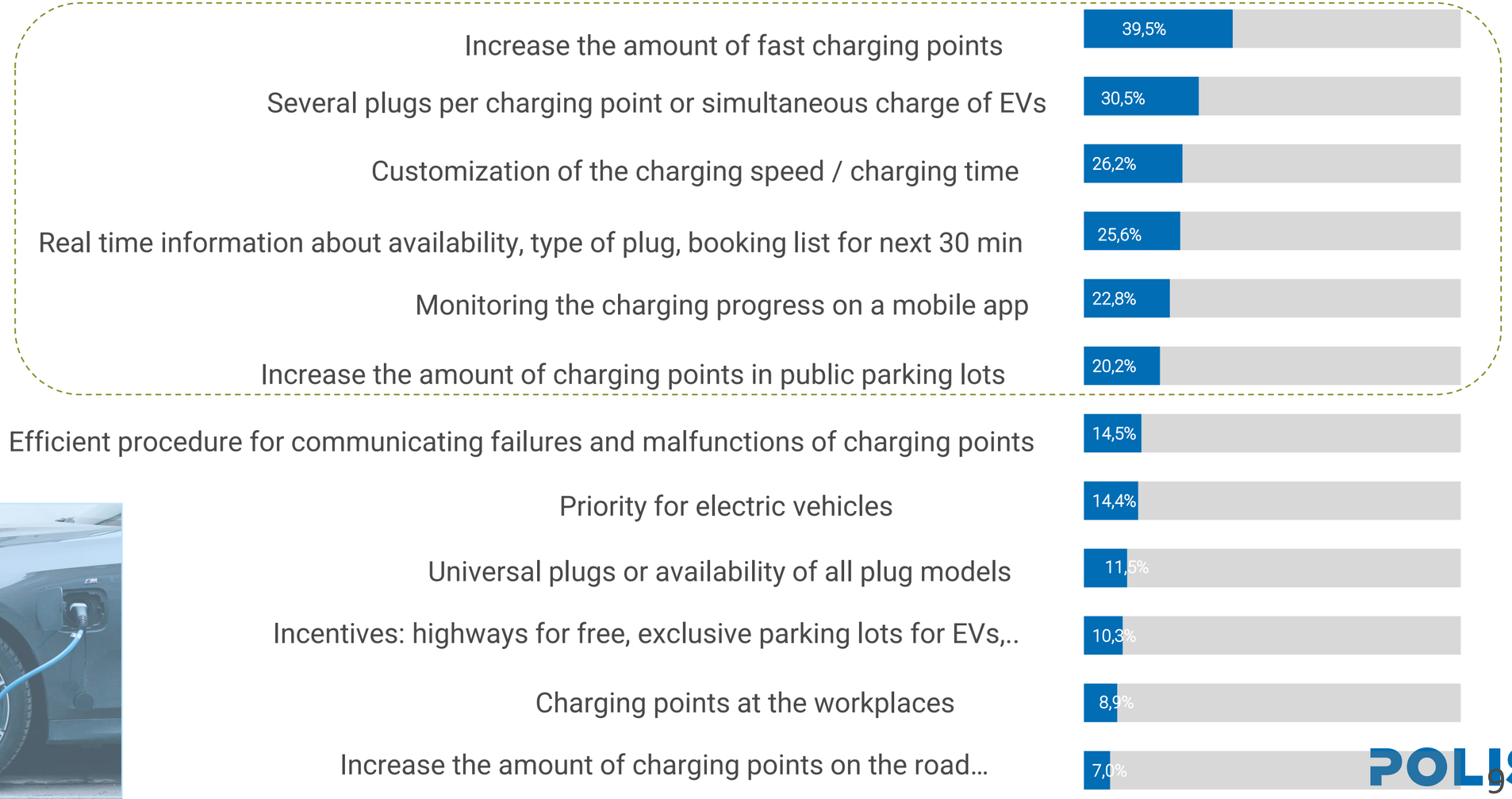
MAIN RESULTS OF THE USER-CHI SURVEY

Thinking in a new generation of charging stations: which are your expectations regarding features they should have?



MAIN RESULTS OF THE USER-CHI SURVEY

How to improve the charging process?



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How to transform the challenges into opportunities?

Access and information are key areas of focus to make electric vehicle charging work for users

Users ask for standardisation and interoperability among charging points, at European level

Users wish to see the widespread fast charging, and increased information on the charging process and charging point availability

Users desires services at charging points in urban areas and TEN-T network, such as mobility hubs

The decision of where to locate the new charging points in cities and TEN-T corridors is also key for success

Innovative charging systems such as “wireless charging” should be tested to maximise the user experience of the EV drivers

USER-CHI products

CLICK- Charging location and holistic planning kit

Stations of the future handbook

eMoBest – e-Mobility replication and best practice cluster

INFRA – Interoperability framework

INCAR – Interoperability, charging and parking platform

SMAC – Smart Charging tool

INSOC – Integrated solar DC charging for Light Electric Vehicles (LEVs)

INDUCAR – Inductive charging for e-cars

Product roll-out

- **CLICK-** Charging location and holistic planning kit
- **Stations of the future** handbook
- **eMoBest** – e-Mobility replication and best practice cluster
- **INFRA** – Interoperability framework
- **INCAR** – Interoperability, charging and parking platform
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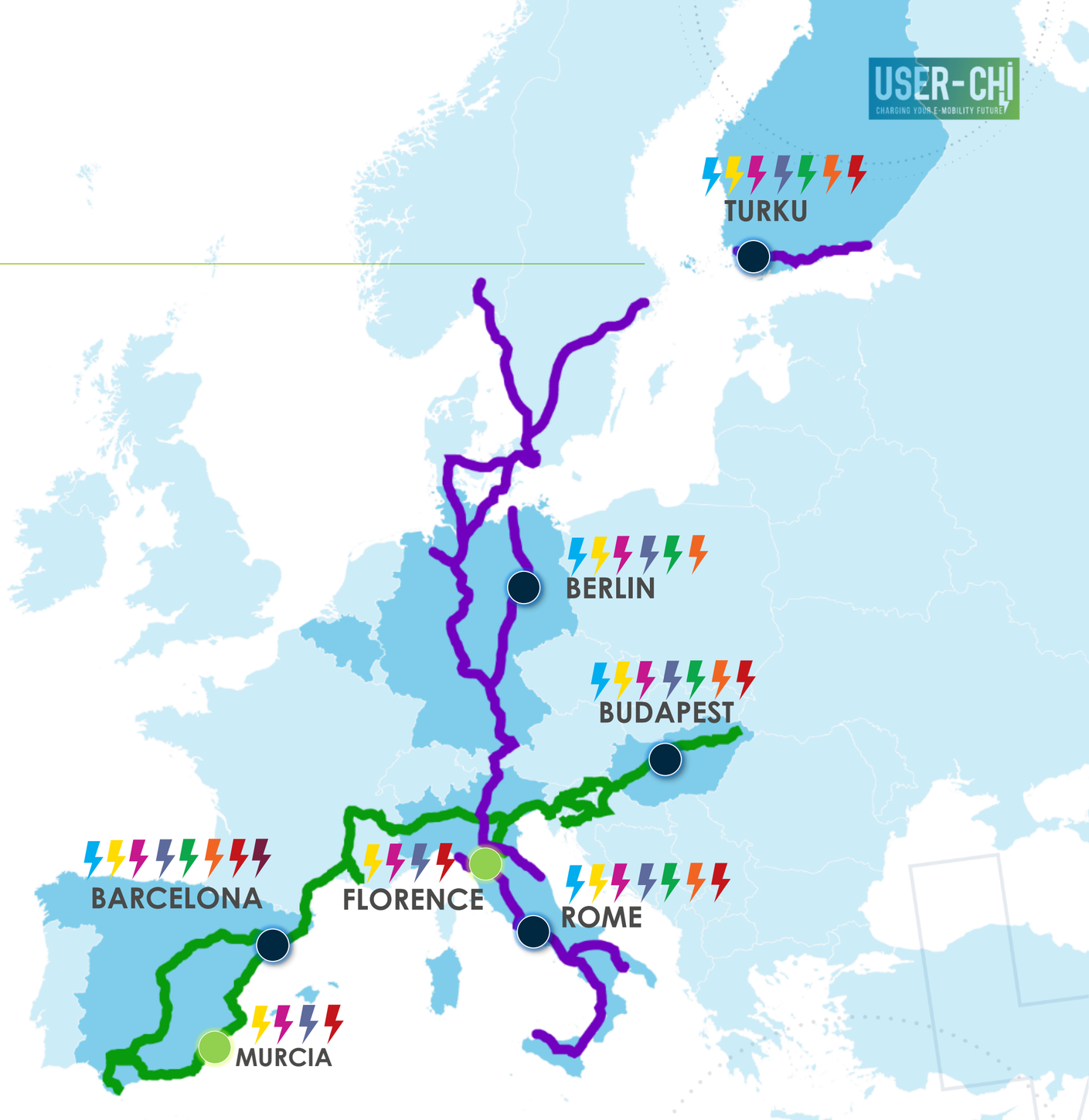
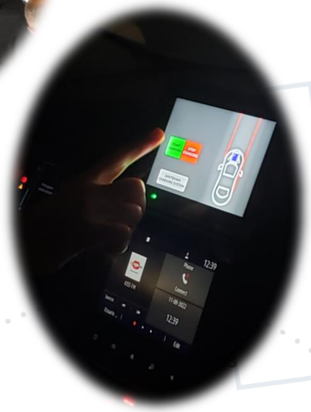


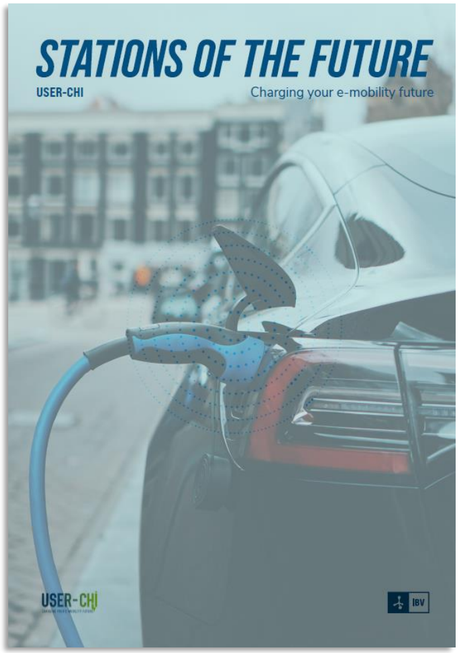
NOW HAPPENING – DEMONSTRATION PHASE



WHAT'S NEXT?

Peer-learning visits



E-mobility podcast

Stations of the Future – Handbook
Webinar on 12 December

THANK YOU!

Connect with us

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Innovative solutions for electric user-centric charging infrastructure:

eMobility in Rome & USER-CHI Project

Session 1E. CHANGING GEARS: ACCELERATING THE UPTAKE OF ELECTROMOBILITY.

mobilità ROMA

Ing. Fabio Nussio
Head International Co-operation & Innovation

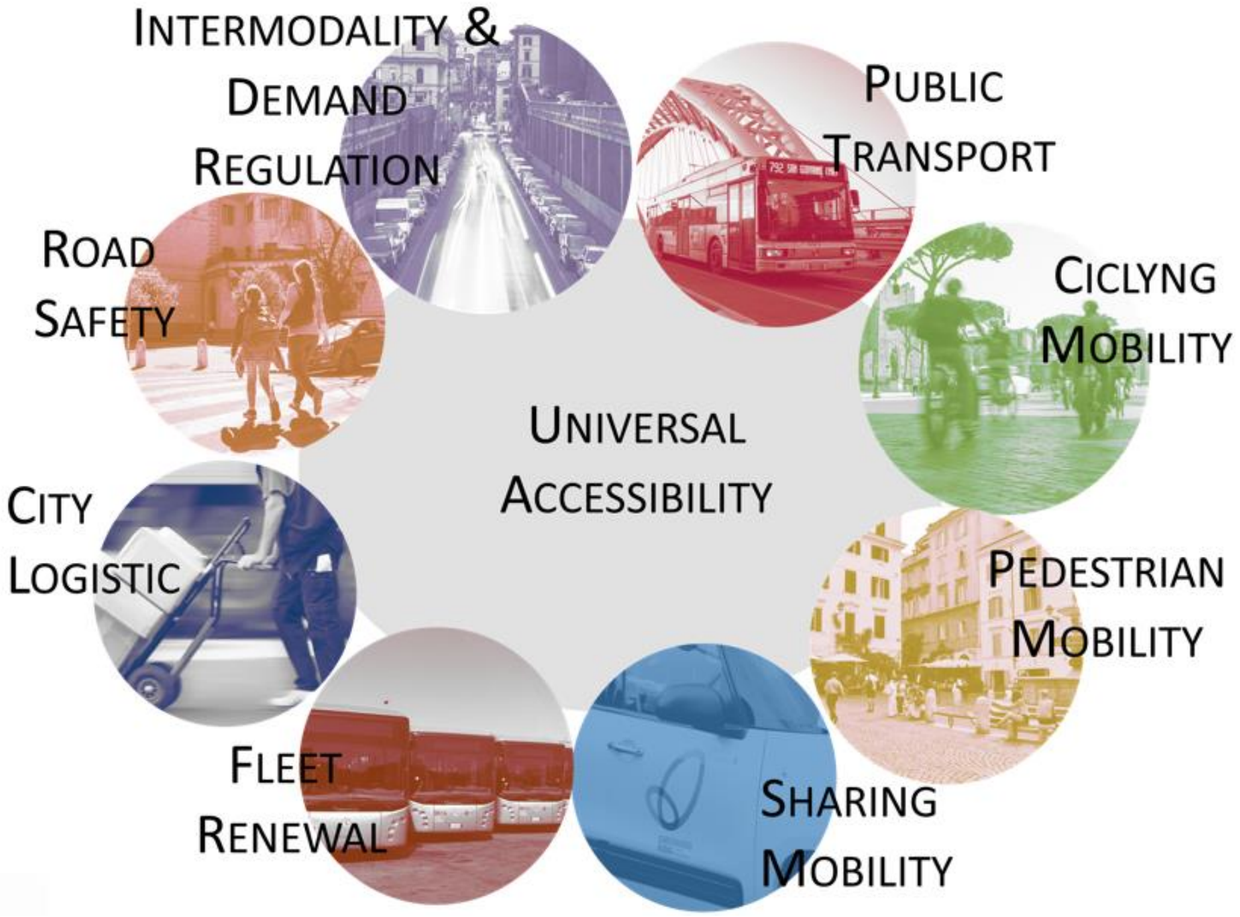
The approved SUMP for Rome (February 22, 2022).

Overcome the present **“traffic approach”**

towards **“Plan for people”** with:

- **Multimodality, fleet renewal** & reduction of private car ownership
- **Safety levels increase** for PT and road traffic
- **Public transport capacity increase**
- Soft & sharing mobility increase
- **Less congestion and atmospheric & acoustic pollution - CO2**

MAIN COMPONENTS



Strategic lines for e-mobility in Italy and in Rome

In Italy the law 134/2012 and the «National Plan for the Charging Point Network of the electric vehicles» (PNIRE) defines the development strategic lines according to the European Directive 2014/94/EU in order to guarantee the access to an adeguate number of vehicles until 2020.

The **Electric mobility plan for Rome** is designed according to this strategic lines and to Urban SUMP

The plan defines charging point needs in the public areas. It includes an action plan to support the private investments in Fuel distributors, Parking lots and garages, Private buildings defining its rule.

The structure of the plan is based on:

- A high power charging point network (50 kW) along the main roads
- A set of medium power charging points (22 kW). The planning of these points is based on the main destinations of the town

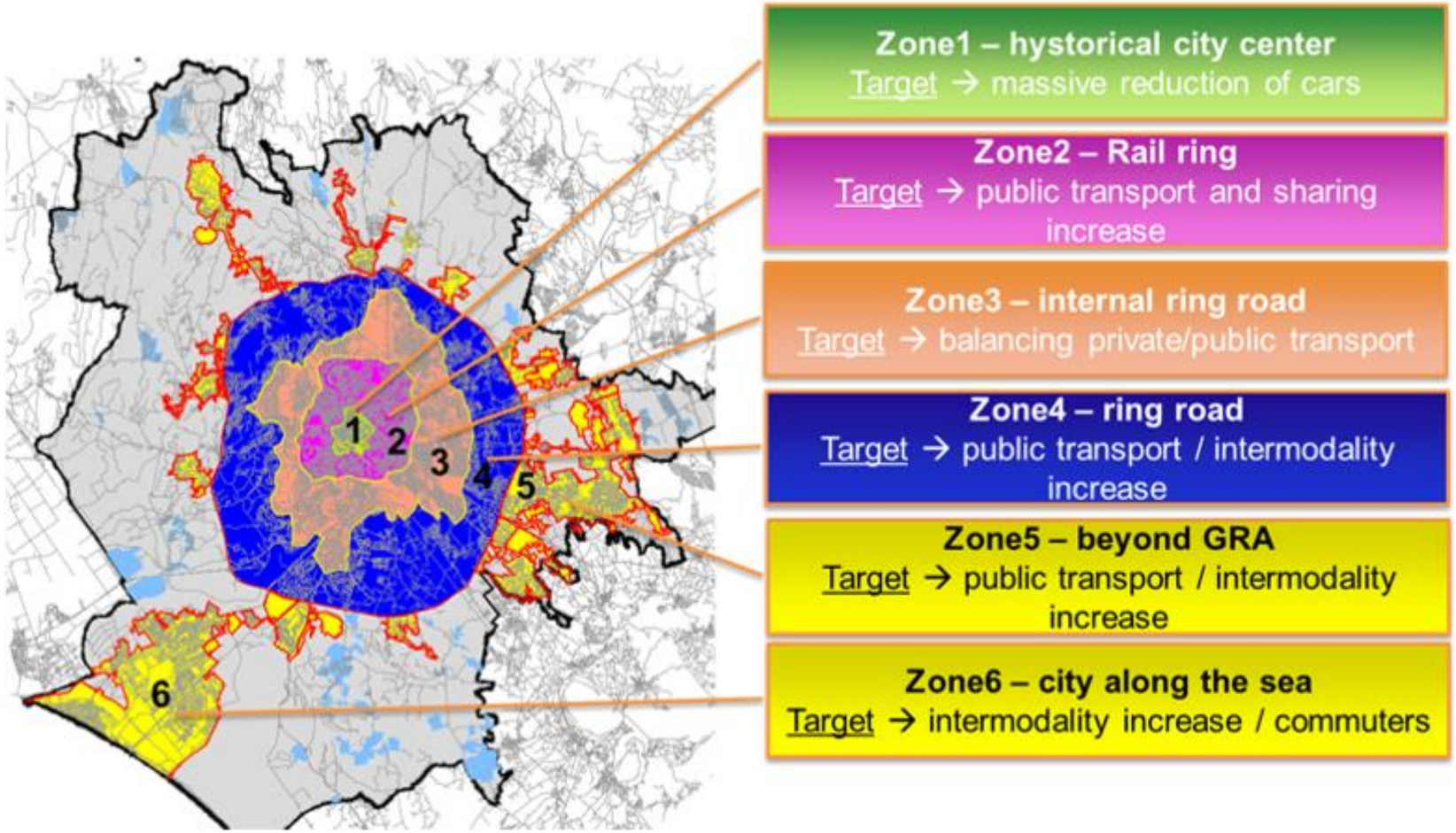
SUMP: Demand Management Policies

City zoning in 6 areas with increasing constraints to private mobility

The number of charging areas is shared in the 6 zones according to the number of employees of each area.

Up to now **28 lots for 1120 recharging unit** were presented by the following proposers:

- 15 lots: EnelX
- 4 lots: Be Charge
- 1 lot: Axpo Energy Solution
- 3 lots: On Sharing
- 5 lots: Acea Innovation



Charging infrastructures for boroughs: December ‘21

Municipio	Colonnine Pre-Piano				Colonnine Piano		TOTALE (al 31 12 2021)		
	Auto	Moto	Van Sharing	Auto (Fast)	Auto (Pole)	Auto (Fast)	Auto (Pole + Fast)	Moto	Van Sharing
I	35	3	1		50	2	**87**	**3**	**1**
II	30	7	-		62	5	**97**	**7**	**-**
III	4	-	-		11	11	**26**	**-**	**-**
IV	-	-	-		23	4	**27**	**-**	**-**
V	-	-	-		23	2	**25**	**-**	**-**
VI	-	-	-		6	5	**11**	**-**	**-**
VII	9	2	-		55	15	**79**	**2**	**-**
VIII	14	-	-		31	14	**59**	**-**	**-**
IX	16	-	-	4	66	8	**94**	**-**	**-**
X	4	-	-		56	2	**62**	**-**	**-**
XI	2	-	-		19	2	**23**	**-**	**-**
XII	-	-	-		14	7	**21**	**-**	**-**
XIII	6	-	-		8	-	**14**	**-**	**-**
XIV	-	-	-		12	-	**12**	**-**	**-**
XV	4	-	-		11	3	**18**	**-**	**-**
Totale	**124**	**12**	**1**	**4**	**447**	**80**	**655**	**12**	**1**

European R&S project in e-mobility

USER-CHI project: Rome demonstration-site
Promoting private-public investments and innovative solutions, implementing Citizens e-Mobility Stations to offer several charging solutions together with other associated services

Rome cluster composition and partner contributions

The Rome cluster within USER-CHI includes **Roma Servizi per la Mobilità** (RSM) that represent the city and leads the deployment of the demonstration activities in Rome, supported by:

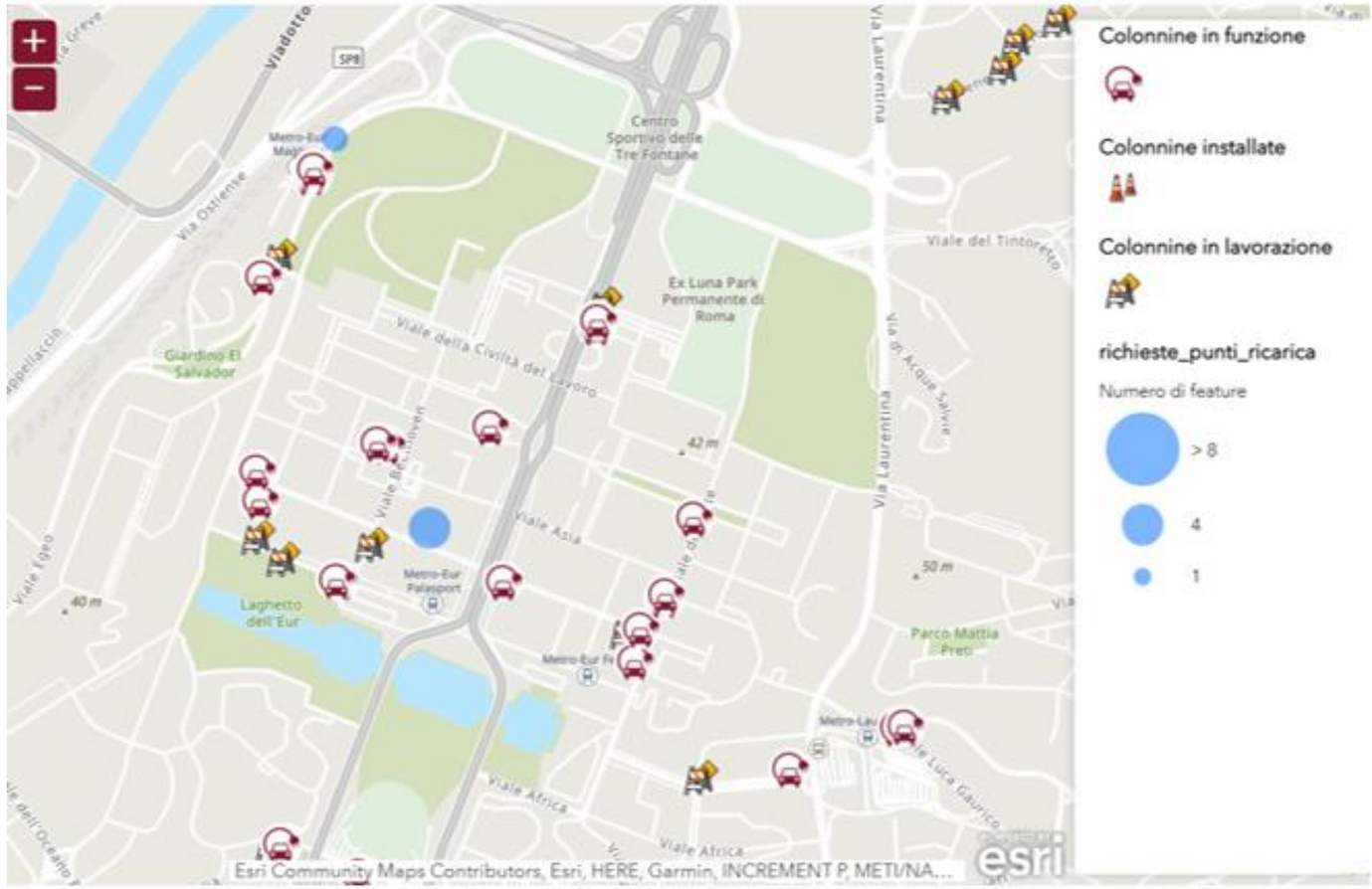
- **Enel X Way**, technically supporting the demonstration activities and providing technical skills and knowledge for the successful design and implementation of Citizens e-Mobility Stations
- **DSI**, providing strategic vision and execution capacity, specifically on the Citizens e-Mobility Station
- **ENEA**, especially supporting the integration of EVSE with smart grid and RES

CLICK product and information website of the Mobility Agency RSM

The RSM site
https://romamobilita.it/it/muoversiaroma/elettrico constantly updates the map of the plants in relation to the level of construction

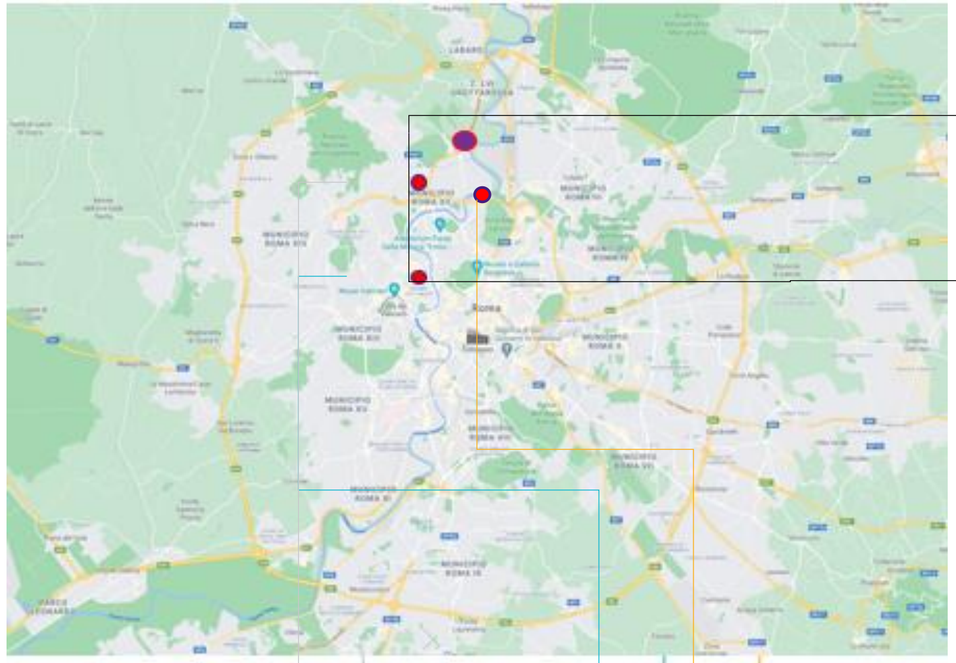
The georeferenced information is superimposed on the map in order to facilitate the matching of supply and demand for charging systems.

RSM is evaluating possible synergy with **CLICK product** (*Charging location and holistic planning kit*) for charging points planning, cooperating with VMZ (partner of User-Chi consortium)



Rome: INCAR & SMAC – Integration & Deployment

INCAR – Interoperability, charging and parking platform, SMAC – Smart Charging tool
Kick-off mid-November 2022. November 2023 to be integrated with INCAR



1 V2G HUB
Enel X Way Via Flaminia Lab (site ready)

3 EV ultra-fast charging station
Enel X Way Via Flaminia Parking Space

2 Intermodal Exchange HUB
Multiple sites

Existing facilities:

- 1 JuicePole AC 22kW (**Enel X Store Corso Francia**)
- 1 Fast DC 50kW + 2 JuicePole AC 22 kW (Near by Metro **Conca d'Oro**)
- 1 JuicePole AC 22kW (**Viale Giulio Cesare –** Near by Metro **Ottaviano**)

Insoc Product and micro mobility:

INSOC – Integrated solar DC charging for Light Electric Vehicles.

Urban and Suburban Bus and metro terminal: sharing services and Charging stations
Charger to be integrated with INCAR – Demo from september 2023

WHAT'S NEXT?

Peer-learning visits in Rome: January 17-18, 2023

Thank you for your attention!

Roma

For questions:

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