



Improving the EV charging experience within cities and for longer trips: the eCharge4Drivers project

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eCharge4Drivers in a Nutshell



Call identifier: H2020-LC-GV-2018-2019-2020

Topic: GV-10-2017 “Demonstration (pilots) for integration of electrified L-category vehicles in the urban transport system”

EC funding: 14,424,526.39 €

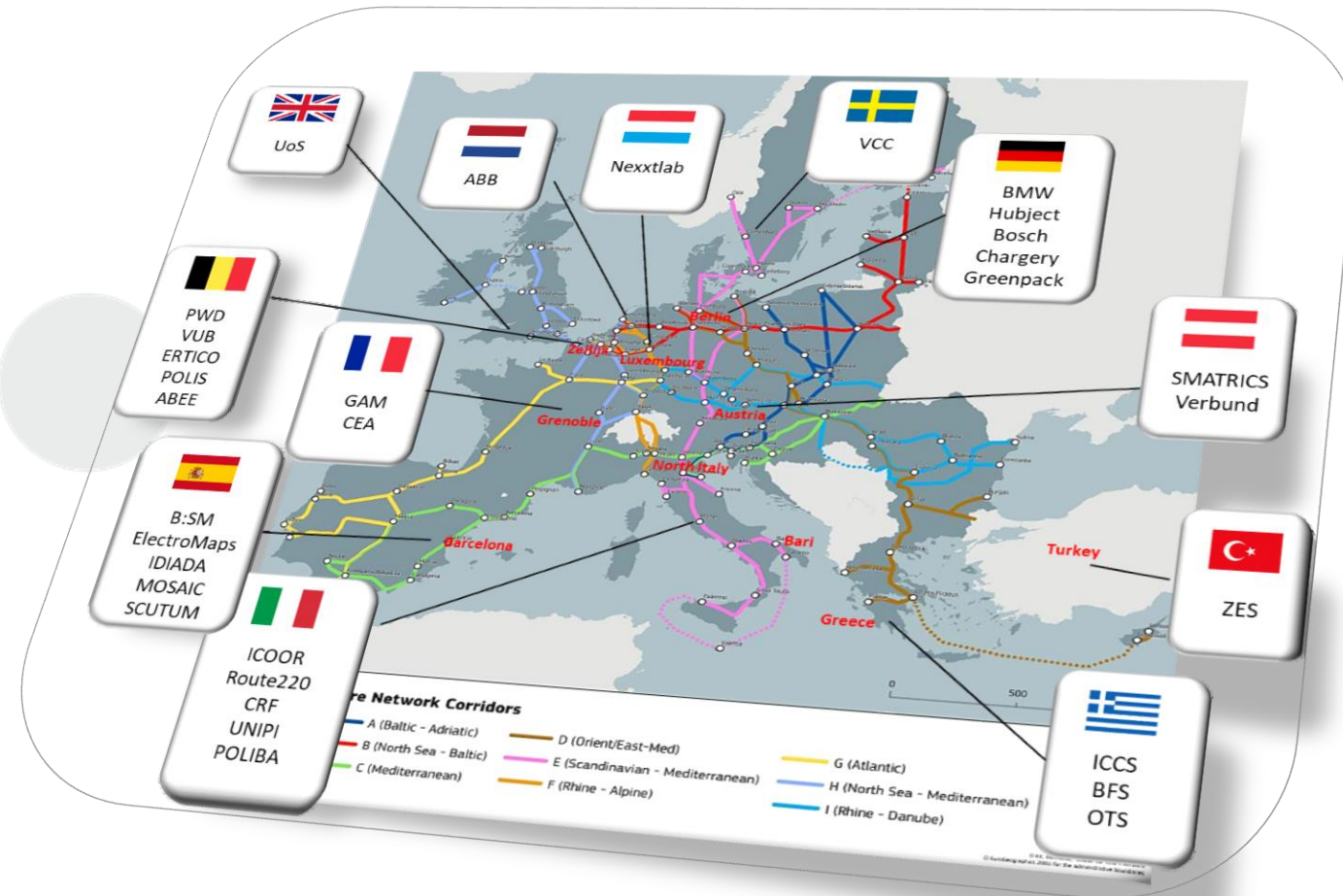
Duration: June 2020 – May 2024

12 countries - 32 Partners – 10 demonstration areas

SCOPE:

eCharge4Drivers aims to improve the Electric-Vehicle charging experience in urban areas and on interurban corridors towards promoting e-mobility concept and making it more convenient for users to go green by **developing and designing user-centric and interoperable charging solutions.**

Different e-mobility maturity level



Strategic objectives



O-1: Understand the user needs so that the project charging solutions and services substantially **improve the user charging experience**

O-2: Develop and demonstrate **user-friendly and cost-efficient charging stations** for passenger vehicles and LEVs

O-3 Deploy and demonstrate **innovative charging solutions** for on-street residential charging for passenger vehicles (mobile charging service, charging points on lamp posts) and **standardised battery swapping stations** for LEVs

O-4: Design and demonstrate smart charging strategies and systems serving diverse objectives and unlocking several business opportunities

O-5: Enable and demonstrate **interoperability of end-to-end communication** and provision of **enhanced information to the EV users**, before, during and after a charging session

O-6: **Accelerate the deployment** of charging infrastructure and other charging services **in a sustainable and user-centric way**



eC4D solutions towards Challenges



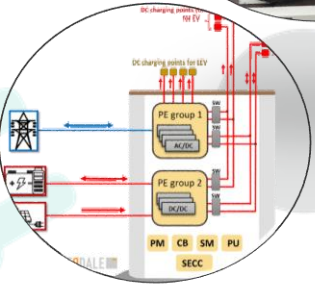
User-friendly & modular CS with enhanced user interfaces



Enhanced Booking Service & routing service



Multi-outlet DC CS for (L)EVs supporting V2G functionality



Smart charging services



Battery Swapping Stations for LEVs



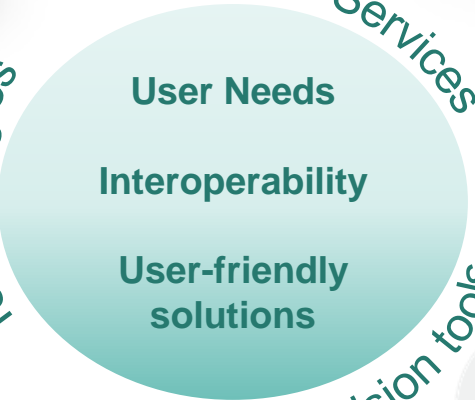
Charging location planning tool



Mobile charging service for passenger vehicles



Incentives schemes & tariff structures



Technologies

Services

Decision tools

Demonstrations overview



Topic Demonstrated	Metropolitan areas						Nationwide long-distance trips			
	Barcelona	Grenoble	Berlin	Luxemburg	Zellik	Bari	Austria	Northern Italy	Greece	Turkey
User-friendly, low- and high-power charging stations for passenger vehicles and motorcycles supporting ISO 15118 Plug & Charge	X	X			X	X		X		X
Upgrades of high-power charging stations to support ISO 15118 Plug & Charge and OCPP							X		X	
Back-ends supporting ISO 15118 Plug & Charge	X		X		X		X	X	X	X
Low-power DC charging stations supporting ISO 15118 Plug & Charge					X					
Enhanced route planners	X					X		X	X	X
Enhanced booking service	X	X	X	X	X	X		X	X	X
Enhanced information during charging	X				X	X		X	X	X
Smart charging services	X	X		X	X					
Mobile charging service		X	X							
Charging points on lamp posts		X								
Battery swapping stations for LEVs	X		X							
New tariff schemes	X	X	X		X	X		X		
Incentives	X		X	X	X	X		X		

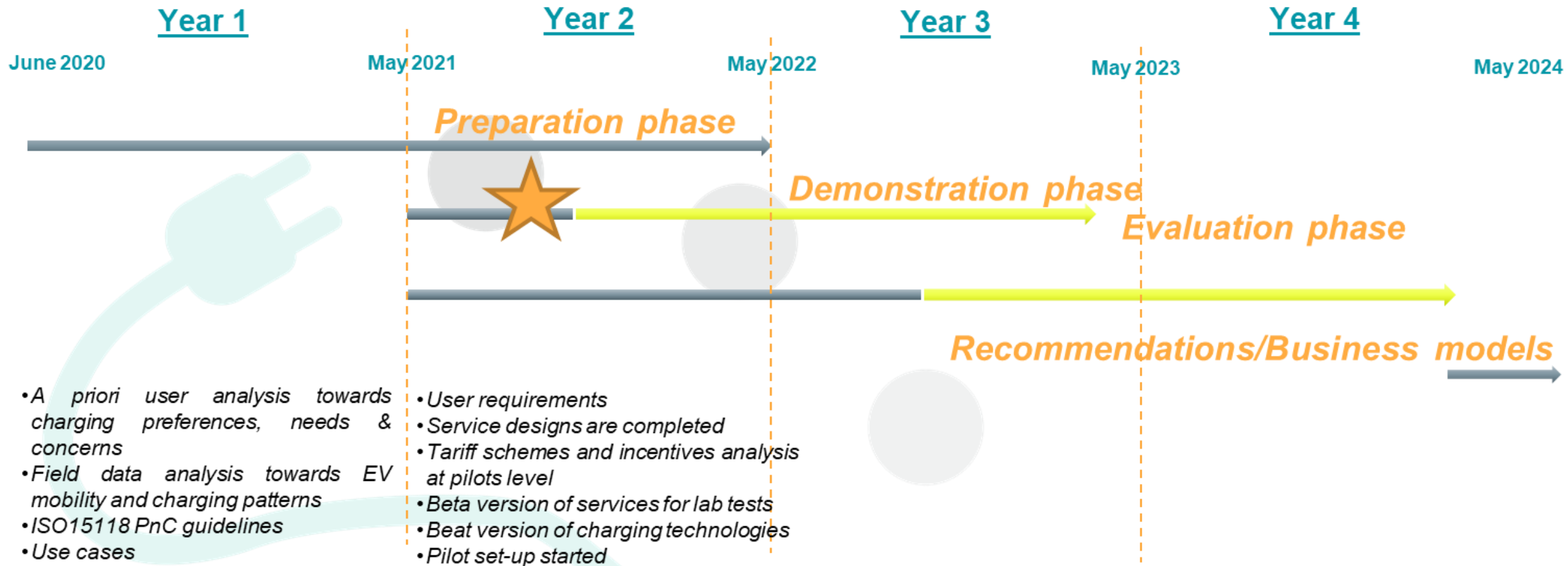
User survey towards charging concerns and preferences



- Main reasons for choosing an EV: **environmental friendliness, energy efficiency and low operating and maintenance costs**
- **Home parking/home charging**: between 73% and 88% of the respondents and parking duration is **approximately 12 hours**
- Duration of charging sessions varies between **45min. – 3h at slow chargers** and between **30min. – 1h for fast chargers**.
- At most demonstration sites, a small number of charging points has a high **occupancy (variation 9% and 32%)**
- **User preference** towards **fast charging and smart charging** - willing to pay more for fast charging solutions.
- **Most EV drivers were male**. It is recommended to actively **work on strategies to involve women in the e-mobility evolution**



Project progress and plan



Thank you!



[@Charge4E](https://twitter.com/Charge4E)



[eCharge4Drivers](https://www.linkedin.com/company/eCharge4Drivers)



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