

# **SCALE**

## Smart Charging ALignment for Europe

15-06-2022

# Why is SCALE needed? Fit for 55 package

**SCALE**

**SCALE will increase the necessary growth of renewable energy production**



**SCALE will reduce the need and costs for grid reinforcements**

**SCALE will unlock the rapidly growing battery potential of BEVs to provide flexibility and balance the grid**



# Goals of SCALE 2Zero - Mass deployment conditions

**SCALE**

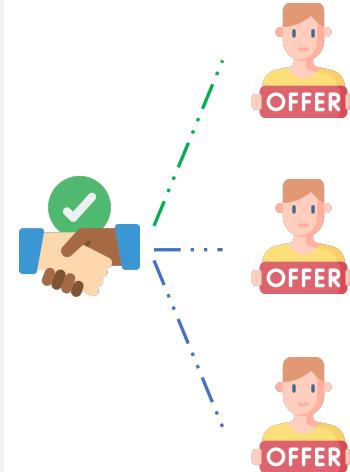
**Maximize the plug-in rate and participation via a user-centric charging eco-system**



**Prepare the mass-market uptake of V2X**



**Users and fleet operators have complete flexibility to choose suppliers**



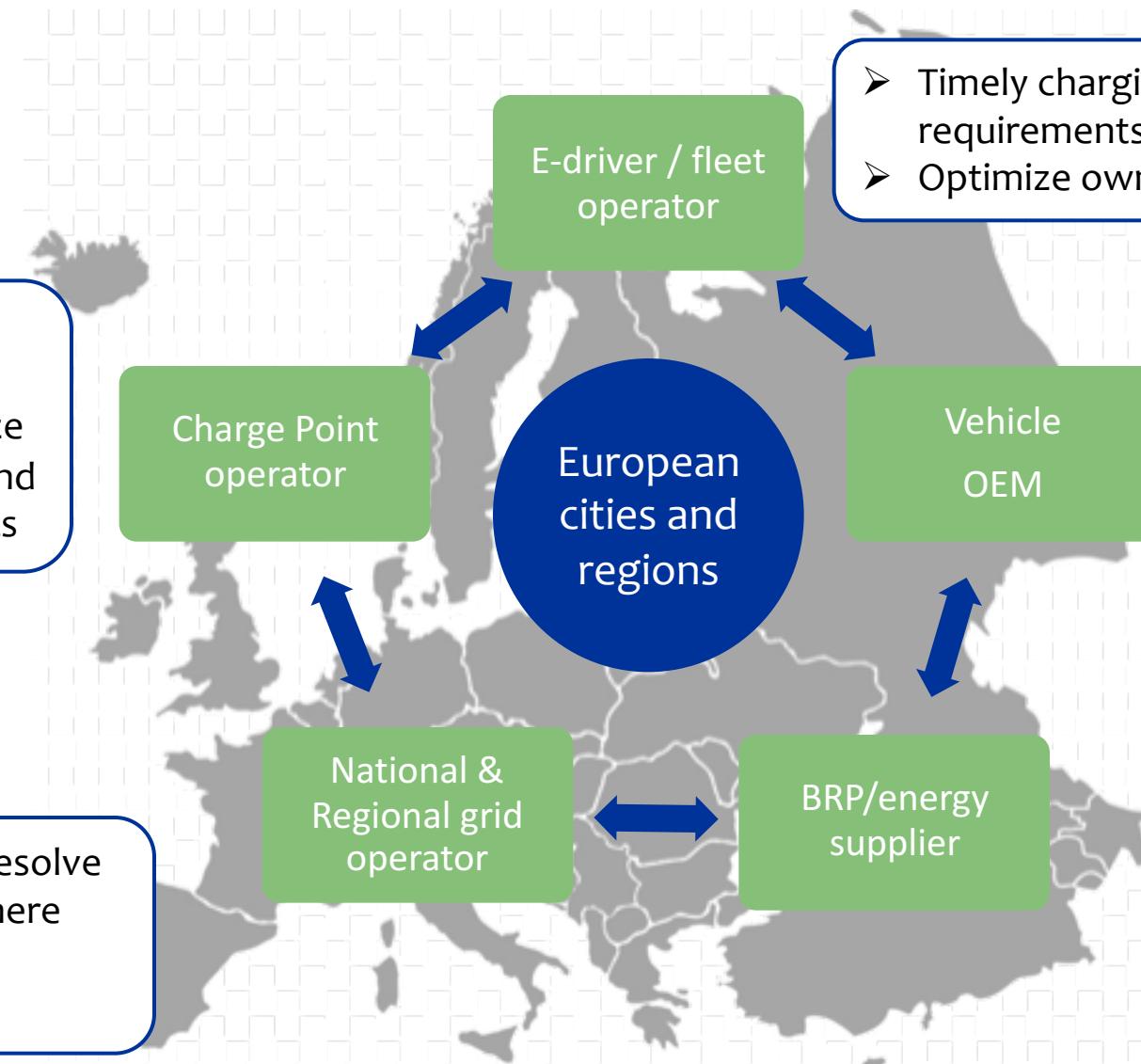
**Making sure that everyone with every vehicle, can smart V2G charge EU wide**



# SCALE charging vision for Europe

*Enable a smart charging eco-system benefiting all relevant actors*

**SCALE**



- Seamless charging and of vehicles
- Load balancing to optimize the charge point power and utilization of charge points

- Grid services and resolve congestion and where possible avoid grid upgrades

- Timely charging to meet user's mobility requirements
- Optimize own energy consumption

- Seamless charging and of vehicles and battery management for an optimal mobility experience

- Load balancing to optimize the charge point power
- Use of flexibility of BEVs

# Functionalities of SCALE

**SCALE**

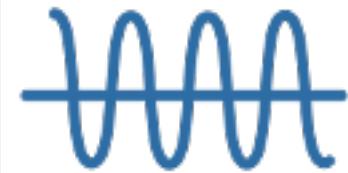
**Interoperability &  
standardization throughout the  
charging ecosystem**



**Data (incl. price) transparency  
and availability**

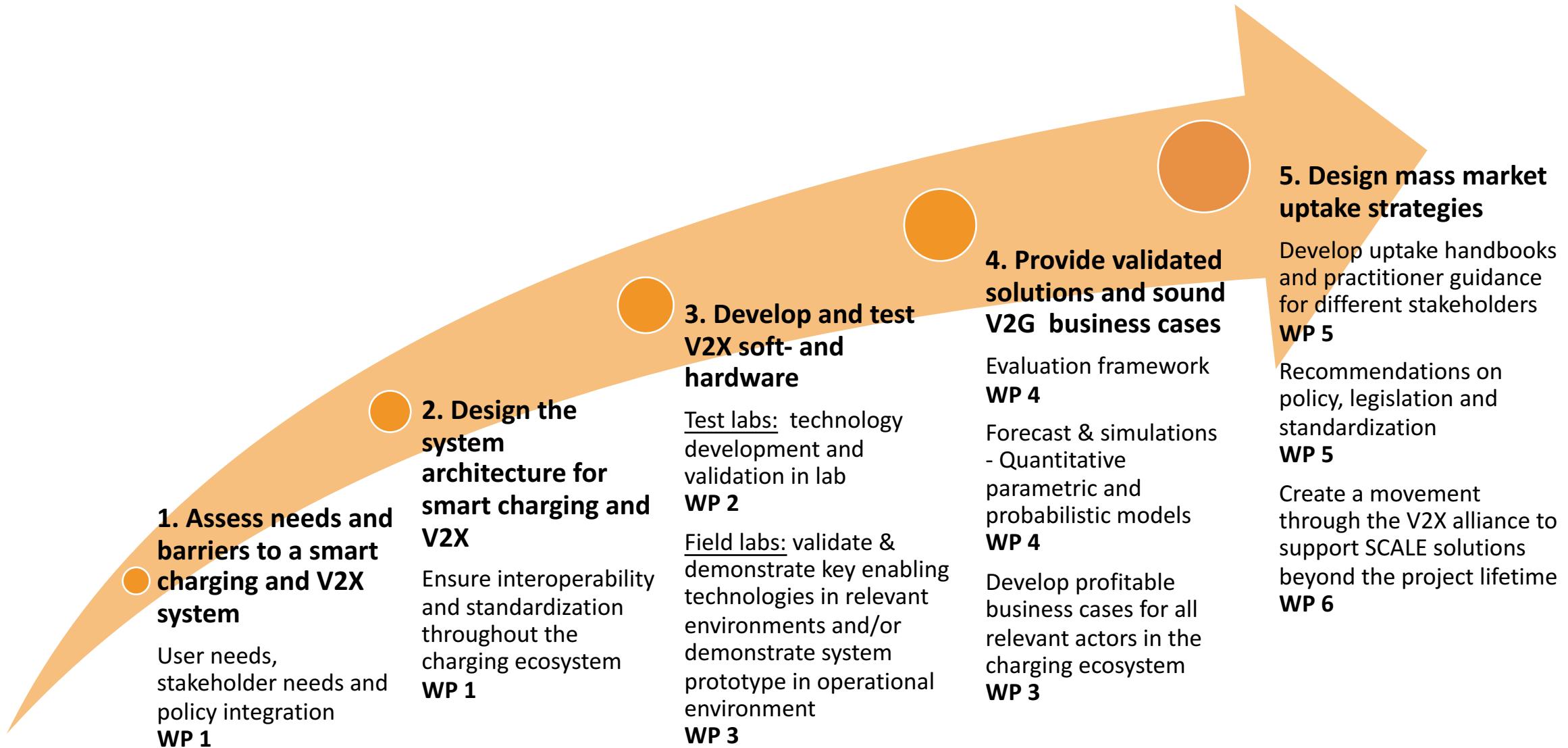


**Frequency control & power  
quality**



**Congestion management**



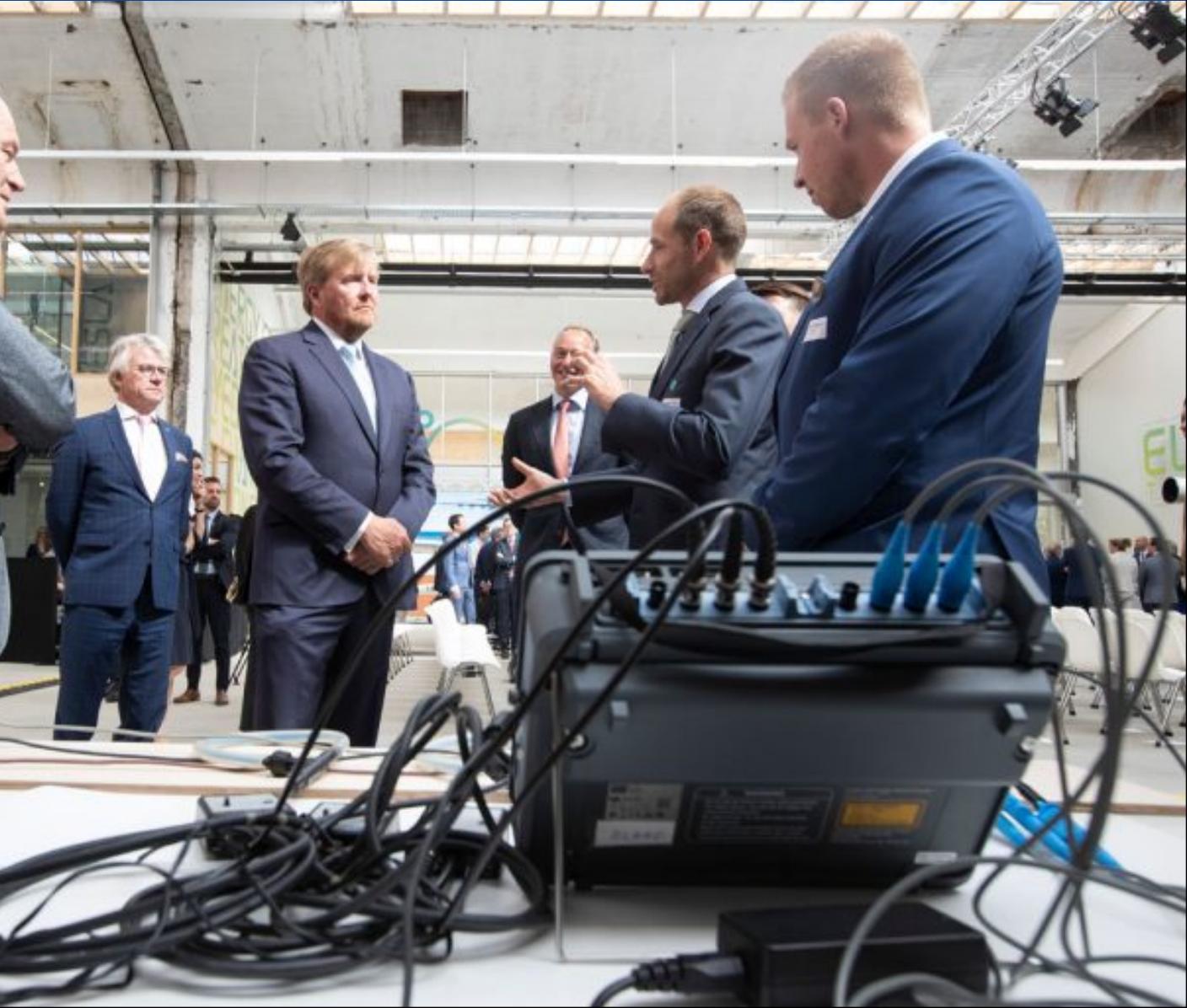


## Innovation clusters



# Testing

**SCALE**



# Innovations

SCALE



## OEMs



RENAULT



SONO MOTORS



## E-mobility fleet & software

WE DRIVE SOLAR

CURRENT

EMOBILITY  
SOLUTIONS



enervalis

dbh  
Serviced Office

## Research & knowledge institutes



CHALMERS  
UNIVERSITY OF TECHNOLOGY



FIER  
Automotive & Mobility  
CERTH  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



R.I.  
SE



RUPPRECHT CONSULT  
Forschung & Beratung GmbH

Trialog

bayern innovativ

## Cities & associations



AVERE  
The European Association  
for Electromobility



POLIS  
CITIES AND REGIONS FOR TRANSPORT INNOVATION

## DSOs & TSOs



ENEDIS  
L'ÉLECTRICITÉ EN RÉSEAU

EQUIGY  
crowd  
balancing  
platform