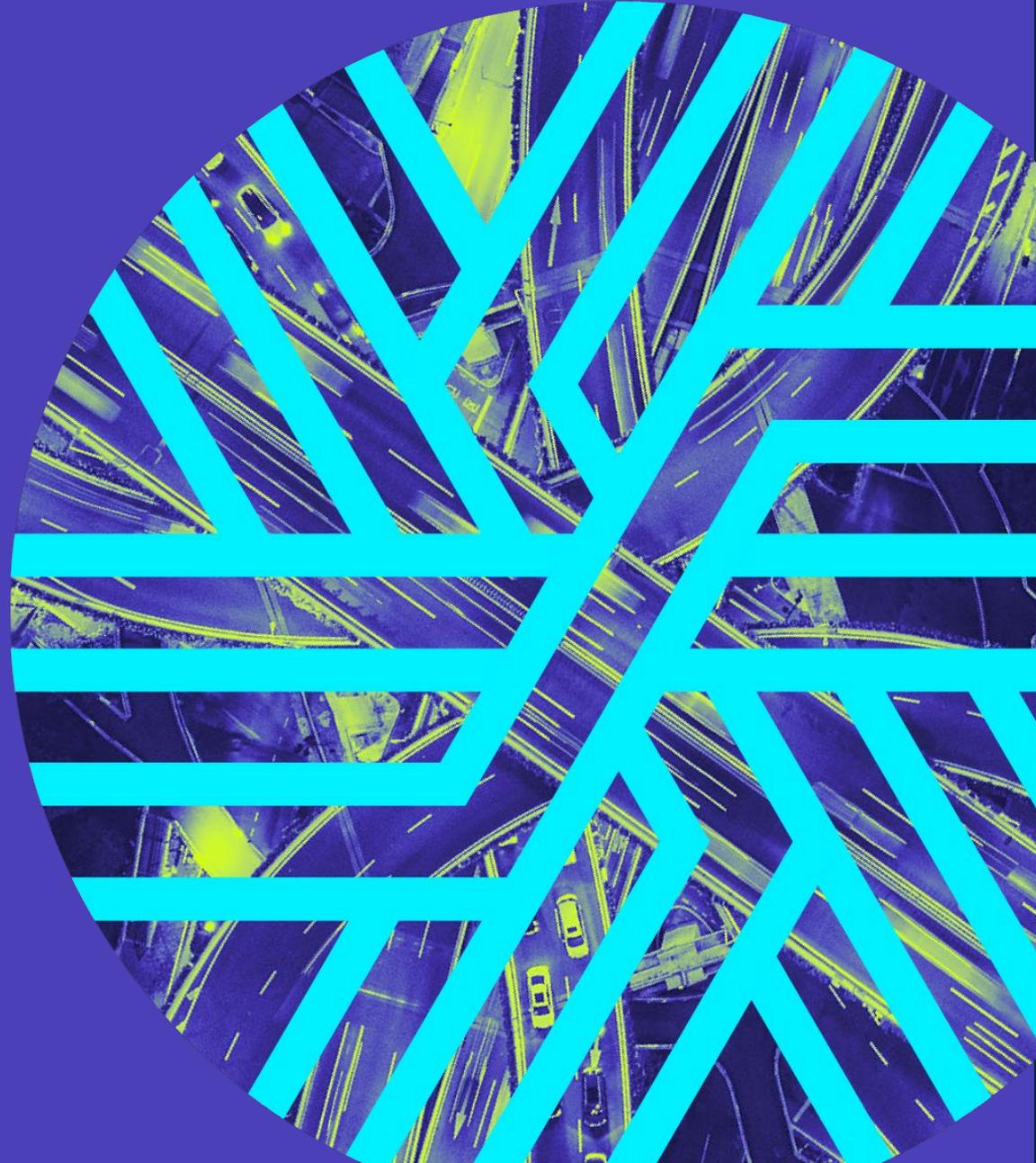# E-Mobility Europe – Mass deployment of smart charging

14 October 2025

Meeting Document F&SC-09-09
9th F&SC cluster meeting, 14th October 2025
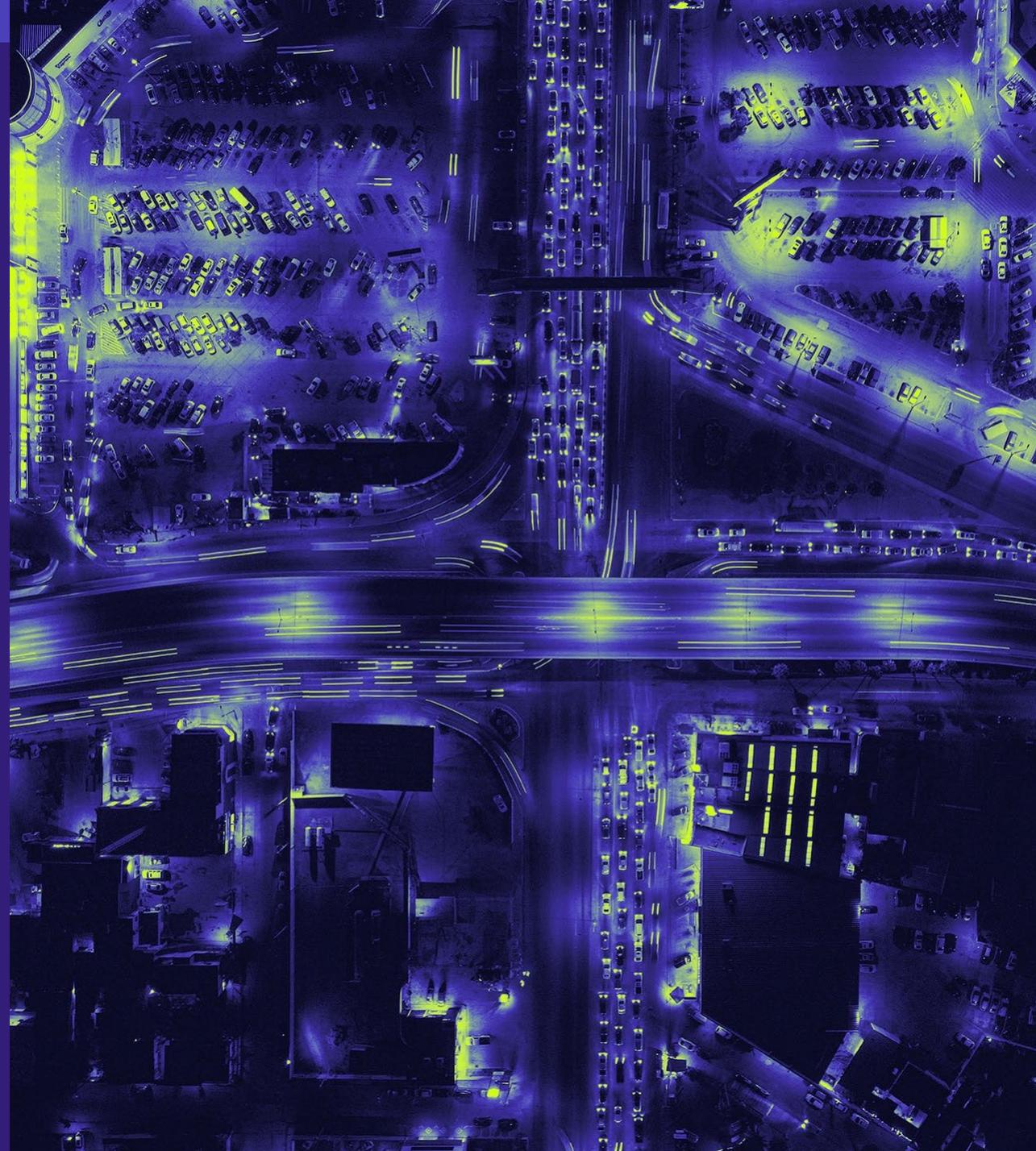
# Our Aims for Today

1. Overview of EU regulatory framework

2. Remaining hurdles

3. Enabling policy framework for smart charging

# Introduction to E-Mobility Europe

# Uniting Europe's Electric Vehicle Ecosystem to Make 2035 a Success

E-Mobility Europe (formerly AVERE) brings together Europe's EV ecosystem – vehicles, infrastructure, the supply chain, digital services, users, and more.

We advocate progressively for a 2035 Europe that has delivered decarbonisation and growth together through its e-mobility transition, seizing the opportunities for both its citizens and industries.

E-Mobility Europe is positive about Europe's 2035 future, but realistic about the challenges to tackle. We advocate for a full e-mobility ecosystem built in Europe and globally connected.

## OEMs

ALBEMARLE  FLEXIS

gm  LUCID

NIO  Polestar

RIVIAN  SBD  smart

BOTREE  TESLA

TRATON  VOLVO

XPENG

## Fleet Operators

amazon  Enterprise Mobility

Uber

## Infrastructure

adstec Energy  ALFEN POWER TO ADAPT  AMPECO  AmpSociety  BUSINESS REGION GÖTEBORG

guru CHARGE  ZEPLUG  circontrol  DIGITAL CHARGING SOLUTIONS  ELINTA CHARGE  EEVEE MOBILITY.COM

EVA .GLOBAL  eco movement  FASTNED  Gireve powering new mobilities

HUBJECT  Iberdrola  IONITY  Last Mile Solutions  metergram embrace the possible

optimile  POWER 2 DRIVE | EUROPE  Plugsurfing  RECHARGE  Spirii

SUNGROW  TSG  VESTEL  VINCI AUTOROUTES  uprise

VISA  wallbox  wevo  WIEN ENERGIE  zunder Charging Hero

# Active policy advocacy dialogue in Brussels

- Position papers, events, policy dialogues and outreach with EU decision-makers

# Partner of EU-funded research projects on smart charging

- Supporting EU-funded research projects with Communication and Dissemination activities
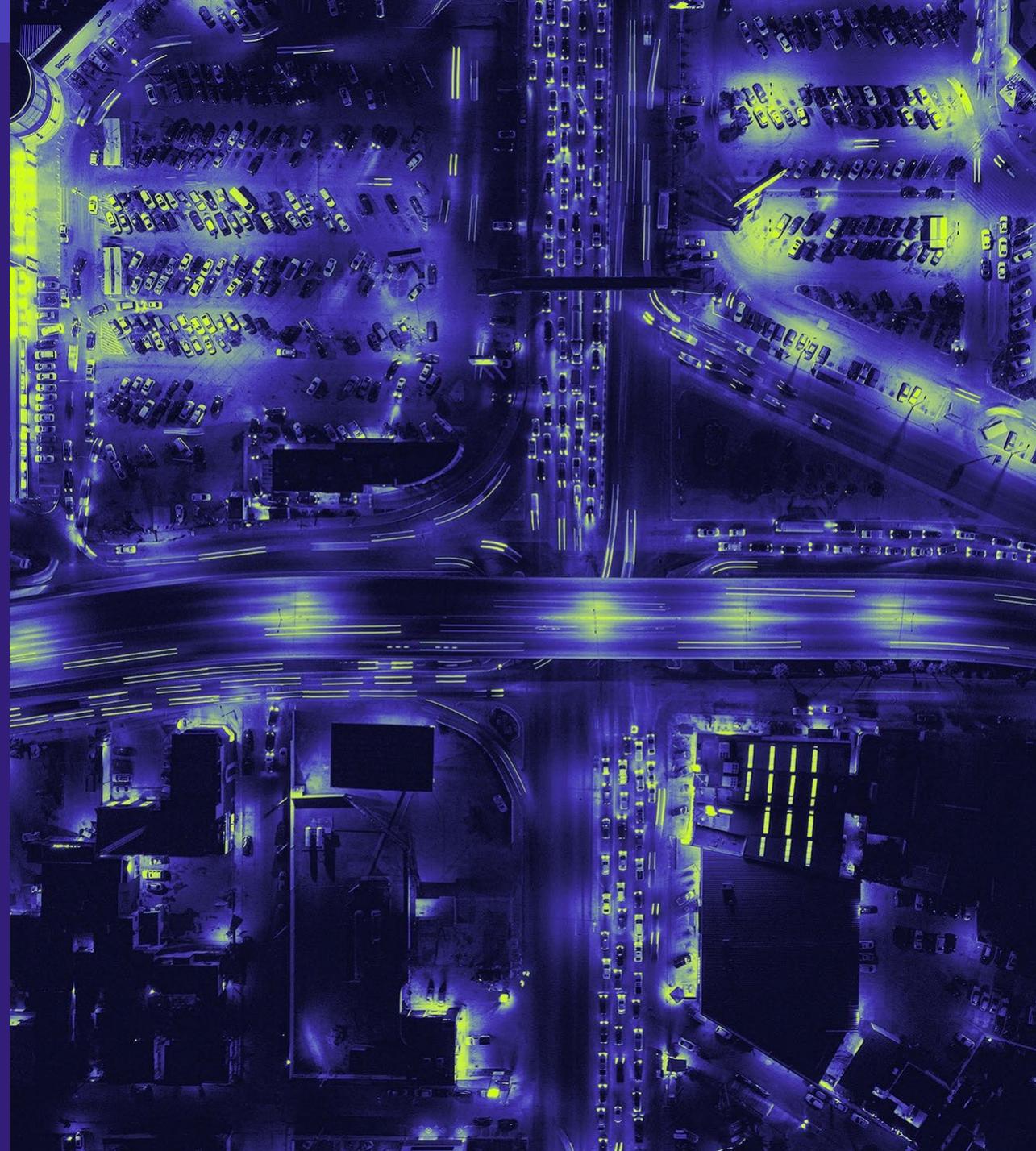




Flexible energy systems Leveraging the Optimal integration of EVs deployment Wave

# EUregulatory framework

# Legislation Incentivising E-Mobility and V1X/V2X

## CO2 Standards for Cars and Vans

Targets:
- 55% CO2 emission reductions for new cars and 50% for new vans from 2030 to 2034 compared to 2021 levels
- 100% CO2 emission reductions for both new cars and vans from 2035

## Batteries Regulation

Battery regulation enhances consumer information through a Battery Passport, providing details on battery manufacturing, BMS data, carbon footprint, and due diligence.

## Renewable Energy Directive

OEMs must provide real-time access to key in-vehicle data (battery health, charge, capacity, location) to EV owners, users, and authorized third parties.

## Euro 7

Environmental data and performance metrics, including EVP, OBM, OBFCM systems, and battery health, should be accessible to the vehicle user and displayed inside the vehicle.

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EU REGULATORY FRAMEWORK

# AFIR and EPBD – enablers for a dense and harmonised charging network

•AFIR introduces fleet- and distance-based targets for the deployment of recharging points

•EPBD introduces pre-cabling and recharging points deployments in residential and non-residential buildings with differentiated targets for new, renovated and existing buildings

•All recharging points have to be smart and for recharging points in buildings, bidirectional where appropriate.

# Standardization under AFIR

### Adoption of Standards by the European Commission

The European Commission is empowered to adopt **Delegated acts** about **technical standards for aspects such as the communication exchange in the EV recharging sector**, ensuring uniformity, efficiency and interoperability

### Benefits of standardization and protocols

- Gives drivers easy **access to charging points all over the EU**
- Ensures that new services such as **Smart-charging, Plug & charge and V2G** can be implemented
- Provides **certainty for stakeholders** involved in the recharging process (no lock-in effect, freedom of choice of service providers, etc)
- Guarantees **products can be used in other EU countries** without modifications
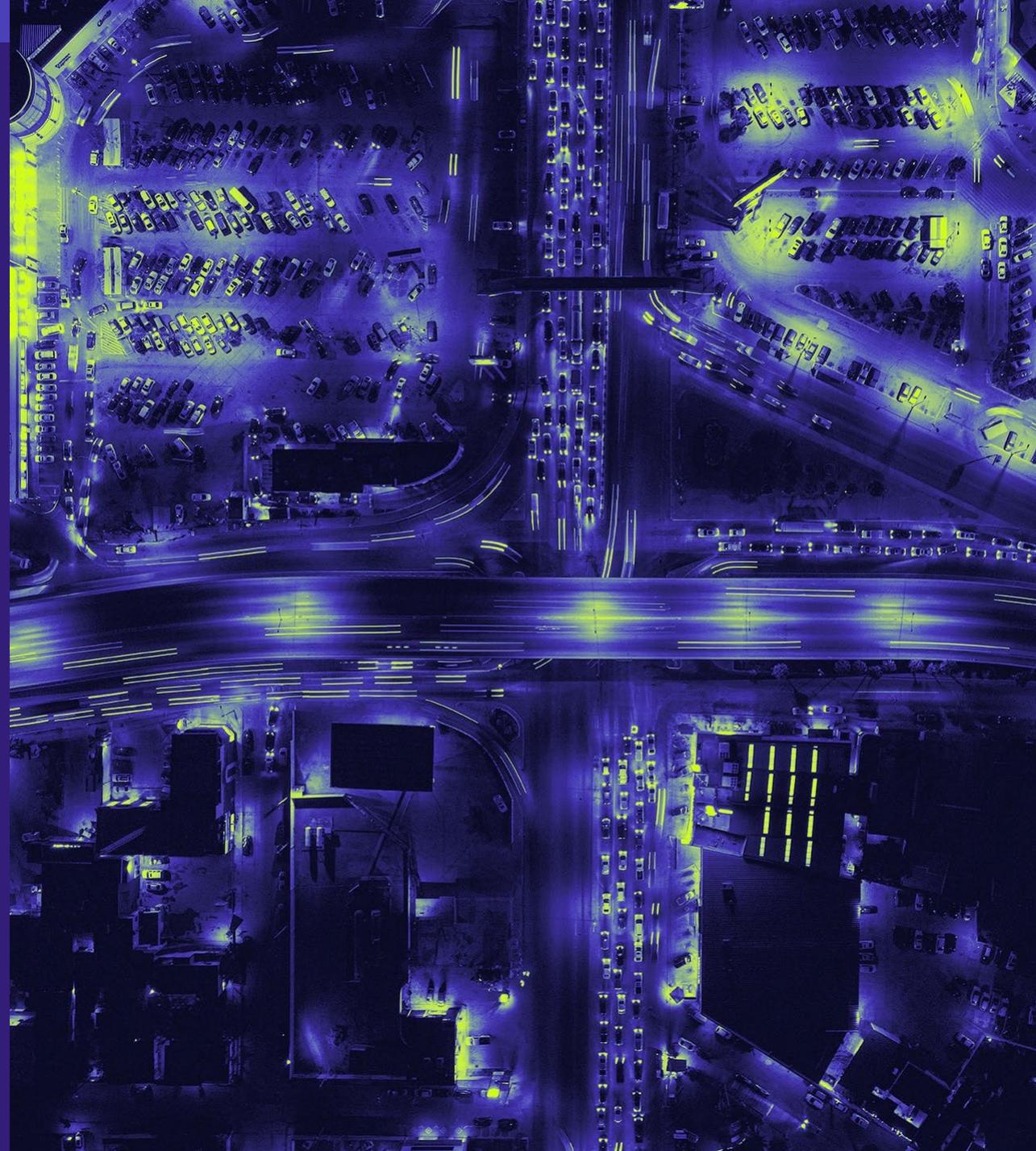
### Opportunity to Implement OCPP and OCPI

The regulation provides an opportunity to utilize **widely accepted open protocols** like OCPP and OCPI, facilitating the adoption of existing industry practices for recharging infrastructure.

# Standardization is about speaking the same language



SCALE Horizon Project: Short Read - Stakeholder Analysis of smart charging ecosystems - https://scale-horizon.eu/?jet_download=5732
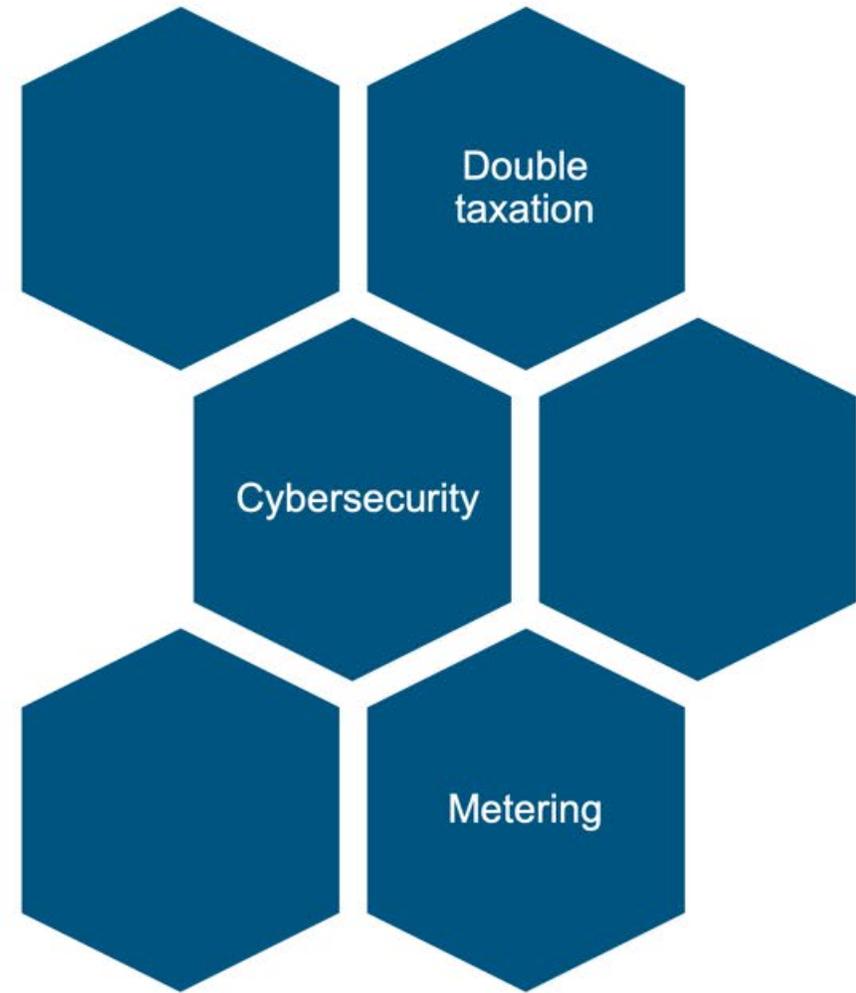
# Remaining hurdles

# Remaining Hurdles

- **Double taxation** on energy for bidirectional charging discourages V2G technology by adding extra costs without using the energy fed back to the grid.

- Ensuring robust **cybersecurity** for V2G integration in the EU is vital, requiring harmonised regulations, secure data management, and adherence to EU cybersecurity frameworks to protect against potential grid disruptions and cyber-attacks.

- Successful bidirectional charging relies on accurate electricity **metering**, but high precision standards and delayed EU legislation complicate its rollout, necessitating timely implementation and MID-certified meters for V2G integration.
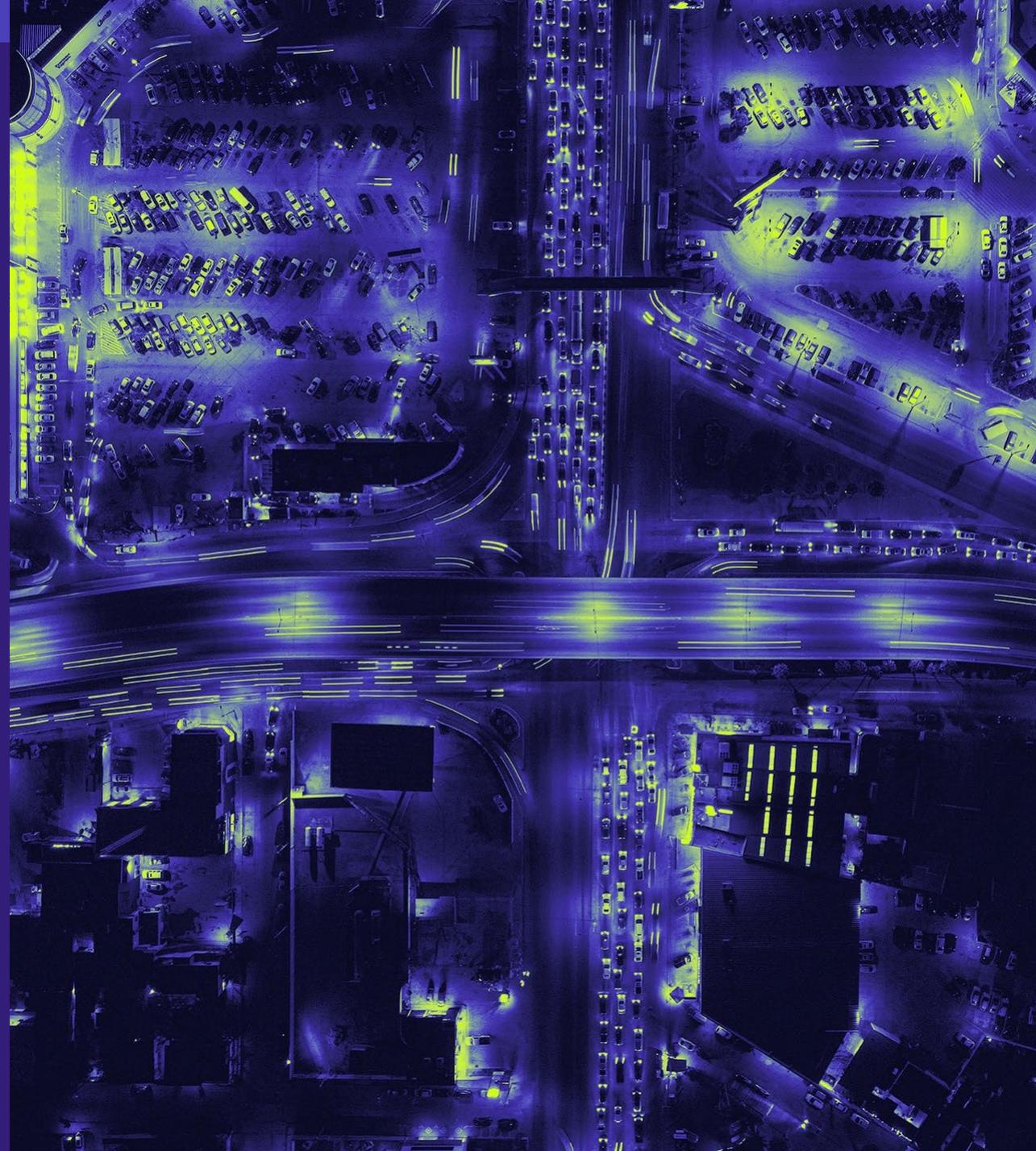
Double taxation

Cybersecurity

Metering

E-Mobility Europe

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# Enabling policy framework for smart charging

# Policy recommendations enabling mass deployment of smart charging

- Endorse a legislative framework that supports EV demand

- Regulatory harmonisation on the def.s of smart charging and its functionalities

- Require smart charging in tenders for new EV infrastructure

- Introduce incentives to participating consumers, incl. the prevention of double taxation

- Accelerate the rollout of smart meters

# Policy recommendations enabling mass deployment of smart charging

- Enhance grid data transparency

- Harmonise communication standards and protocols

- Accurate price signals for electricity consumed in EV charging

- Foster collaboration in the EV ecosystem, incl. regulatory authorities

# Thank you for your attention!

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