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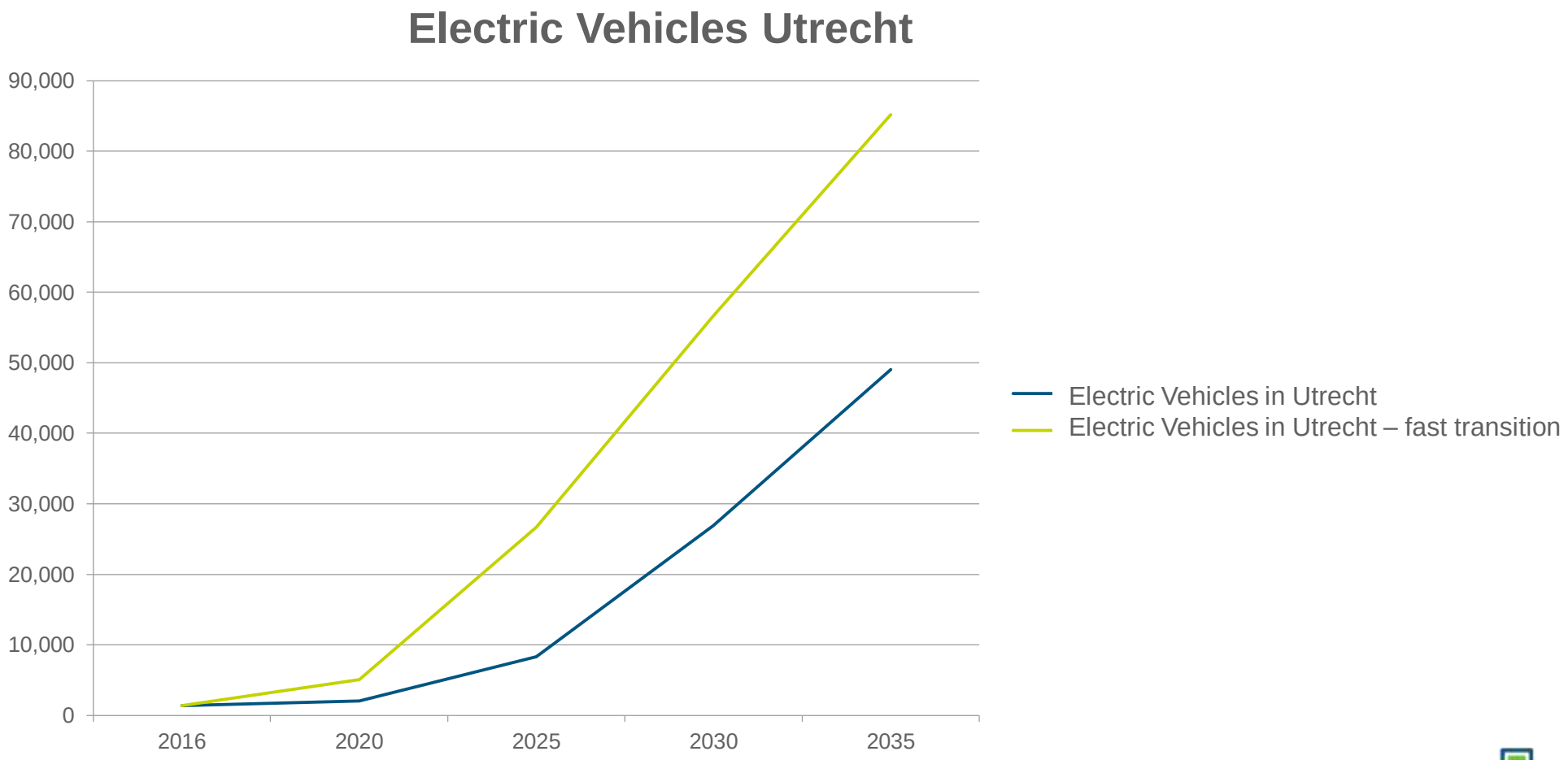
Different cities, different stories. With similarities and differences. All to learn from.

Short intro on How are public authorities steering public (smart) charging?

Gertjan Geurts, project leader Smart Charging/V2G & Congestion, City of Utrecht (NL/EU)

his project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101056874.

2025: 25.000 EVs 21%
2030: 55.000 EVs 44%



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Plan charge infrastructure 2030

► **Kaart:**
Verbeelding van het plan laadinfrastructuur 2030:

Personenvervoer

= 5.700 openbare laadpalen (11kW) (naast 30.000 private laadpunten)

= 460 kortparkeer snelladers bij winkels en sport-voorzieningen (50-180kW)

= 60 hoog vermogen stations langs de ring (350kW)

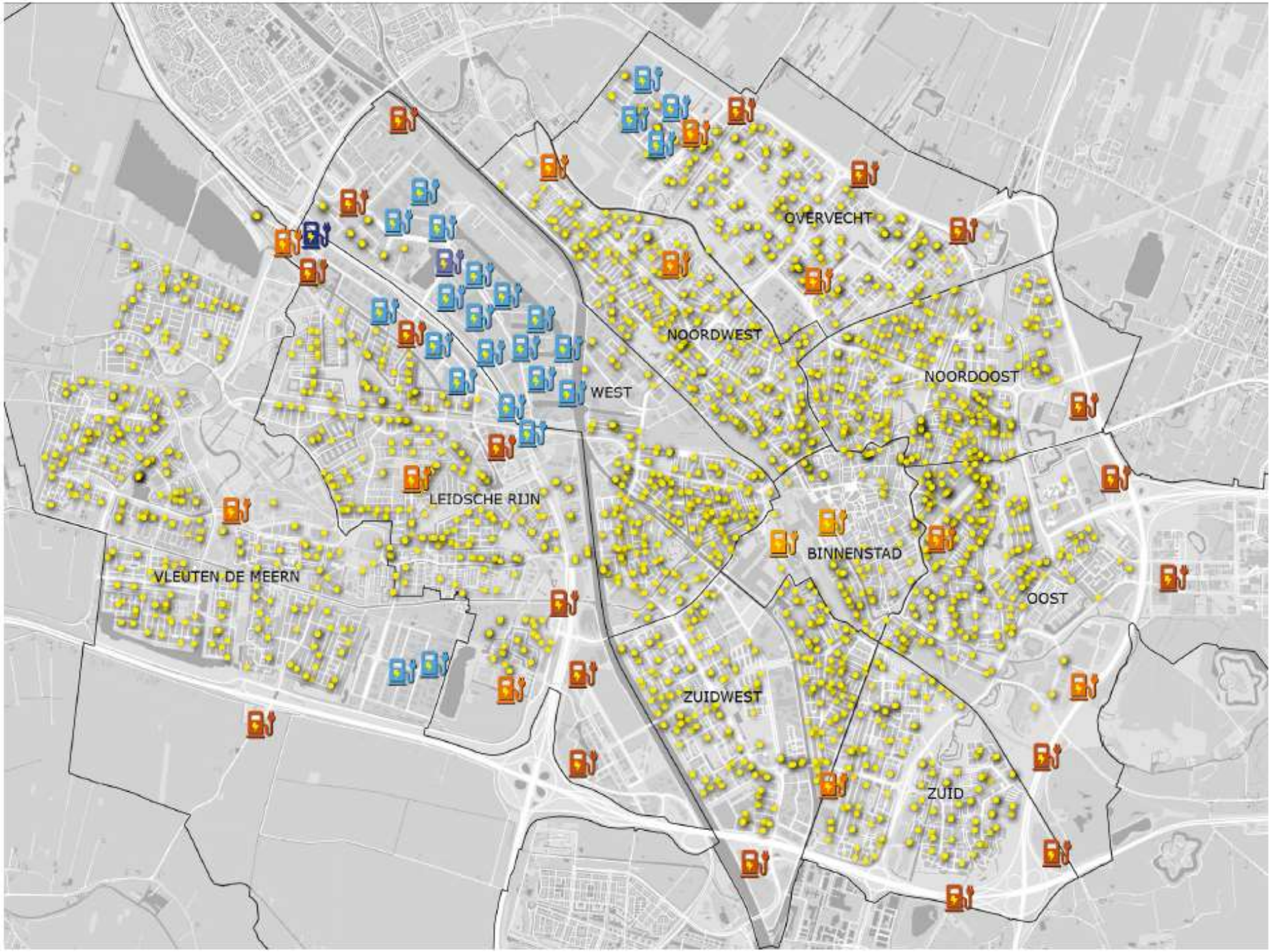
= 10 snelladers voor taxi's bij de bufferplaatsen

Logistiek

= 330 DC depotladers voor vrachtwagens (50-150kW)

= 2-4 DC laders voor vrachtwagens bij truckparking (50-150kW)

= 58 ultrasnelladers voor vrachtwagens (500-1500kW)



Bi-directional Ecosystem City of Utrecht

Objective: To develop a sustainable, city-wide and flexible electricity system through the use of regional flexibility sources. Ready for the future.

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SCALE research on

City needs & challenges in integrated planning for Smart Charging and V2X service

City of Utrecht (task leader), Rupprecht, Polis, ElaadNL, WeDriveSolar

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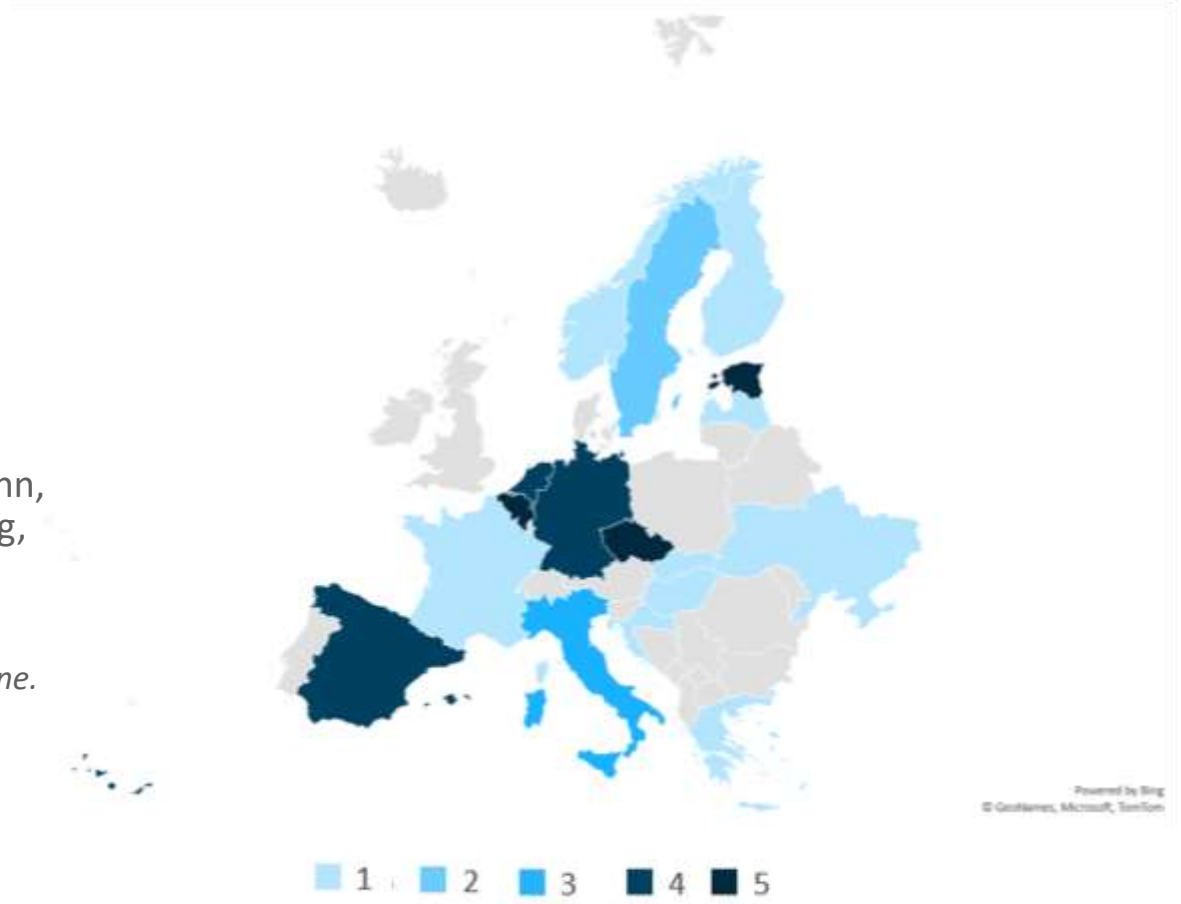
Research

- Assessment of city and regional planning needs related to smart charging & V2G/V2X:
  - *Survey (37 respondents) – 16 countries*
    - *Cities:* Barcelona, Madrid, Murcia, Leuven, Gent, Stockholm, Berlin, Aachen, Rotterdam, Arnhem, Utrecht city, Province of Utrecht, Florence, Pisa, Tallinn, Örebro, Bielefeld, Općina Dobrinj , Žilina, Gothenburg, Turku, Oslo.
    - *DSO/TSO: Czech Republic (2x), Greece, Spain, Latvia, Italy, Hungary, France, Sweden, Netherlands, Germany (2x) Ukraine.*
  - *Interviews: (17 interviews / 19 interviewees)*
  - *Desk research: academic and professional sources, + practical case studies.*



Number of Survey responses by European countries represented in the survey.

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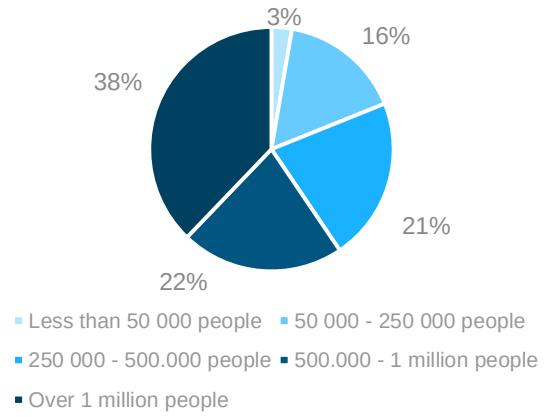
Results

- **In general, there is a clear need for:**
  - **validated knowledge**
  - **concrete examples**
  - **best practices**

  to support integrated planning of e-mobility and energy systems

Figure 7 Population size ranges of cities and regions represented in the survey:



Plus a need for:

- **detailed requirements for smart charging (sofware + hardware) + interest for V2G requirements**

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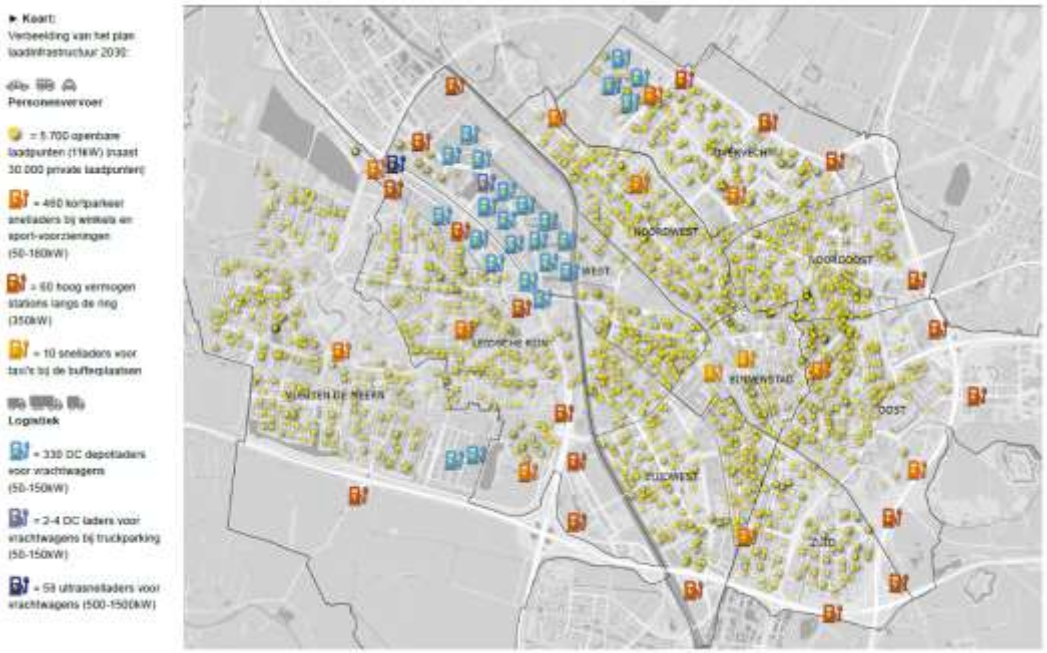
Conclusions and Recommendations

To the European Commission and European cities

1. **Accelerate and scale up the dissemination of knowledge about smart charging and V2G/V2X services, including the establishment of an online knowledge centre.**

2. **Synchronise between cities and assess available digital tooling for providing a scalable European Integrated EV Mobility and Energy Planning Tool.**



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Conclusions and Recommendations

To the European Commission and European cities

3. **Solve the chicken-egg problem for smart charging and V2G, for hardware and software, with the policy 'super' power of the EU to develop:**

   - 3a: smart charging requirements at European level for public and semi-public charging stations.
   - 3b: requirements for EV models to be V2G ready, starting with high end models.

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Conclusions and Recommendations

To the European Commission and European cities

4. **Incentivize publicly accessible charging infrastructure on private land, with smart charging requirements as an additional condition.**

5. **Implement stricter energy efficiency policies for electric vehicles to reduce the pressure on the local electricity grid (EV Euro norms)**

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And now.. the interesting tale of the cities of Barcelona and Stockholm.

Gertjan Geurts, project leader Smart Charging/V2G & Congestion, City of Utrecht (NL/EU)

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