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BREAK



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Opportunities for data tooling in EV rollout

Lessons from the Netherlands

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**Sustainable
Real Estate**



**Sustainable
Mobility**



Solar Field



**Climate
Adaptation**



**Urban Planning
& Policy**



Heat Transition

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**Gratis laadpalen
zonder overlast
voor de omgeving.**

Gerwin Hop & Harm Welleweerd | november 2013

Experts on charging infrastructure planning

> 7+ years of experience



Experts on charging infrastructure planning

- > 7+ years of experience
- > EV charging forecasts for 66% of all municipalities

Number of used charging stations, monthly

Source: www.evdsta.nl



Total kWh charged, monthly

Source: www.evdsta.nl

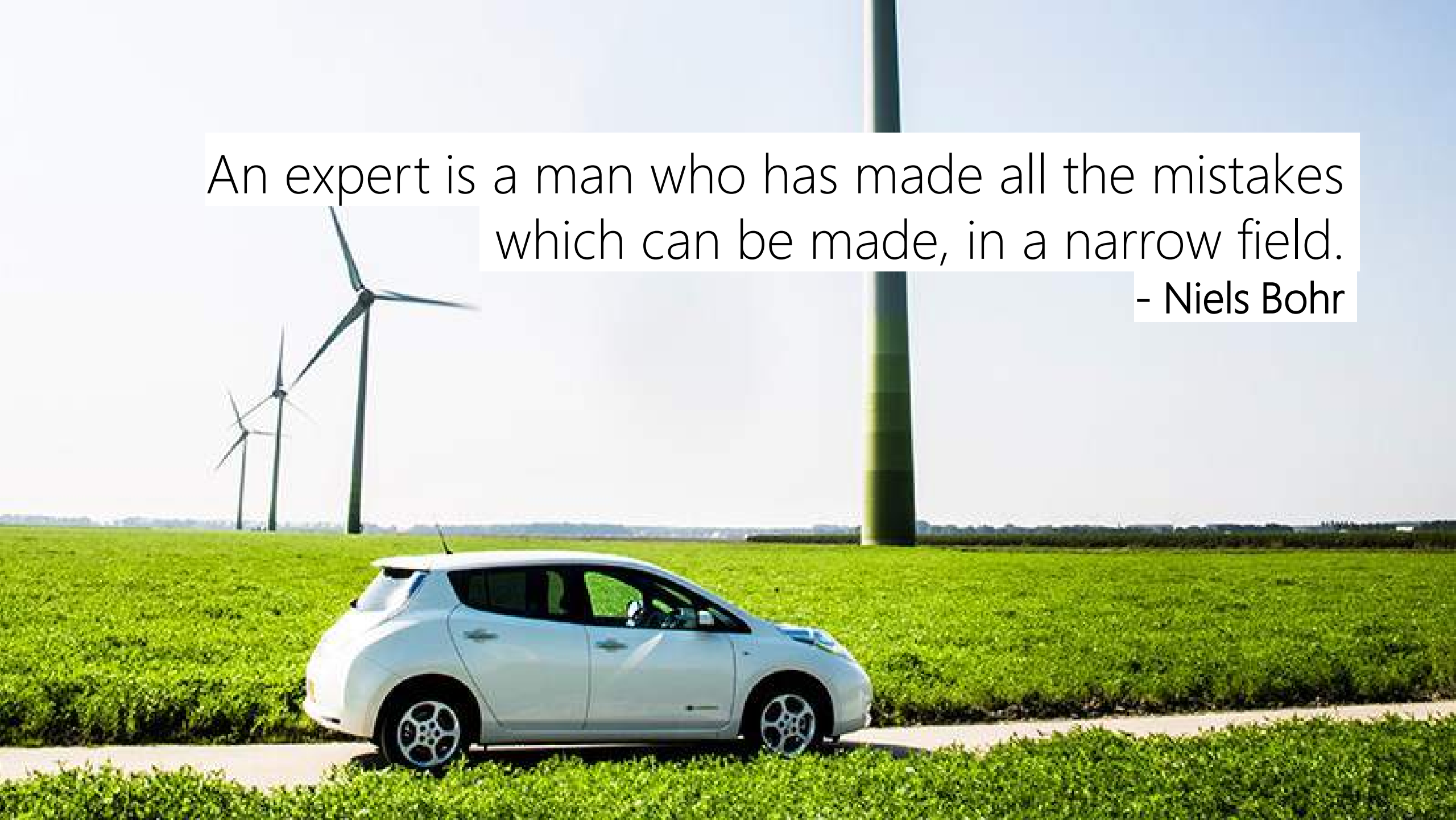


Experts on charging infrastructure planning

- > 7+ years of experience
- > EV charging forecasts for 66% of all municipalities
- > City of The Hague (L'Aia):
 - > 500k residents
 - > 1000 public chargers

An expert is a man who has made all the mistakes
which can be made, in a narrow field.

- Niels Bohr



Mistake 1: Free parking



Mistake 2: strategic locations too soon



Mistake 3: Slow realization process





last-mover advantage *noun*.

the **advantage** someone has when they are **the last** to introduce a new product, service, or technology, **because they can learn** from developments that have taken place, or from what others have done

Important for a good rollout strategy



Cover demand



Collaborate



Embed in policy



Define
responsibilities

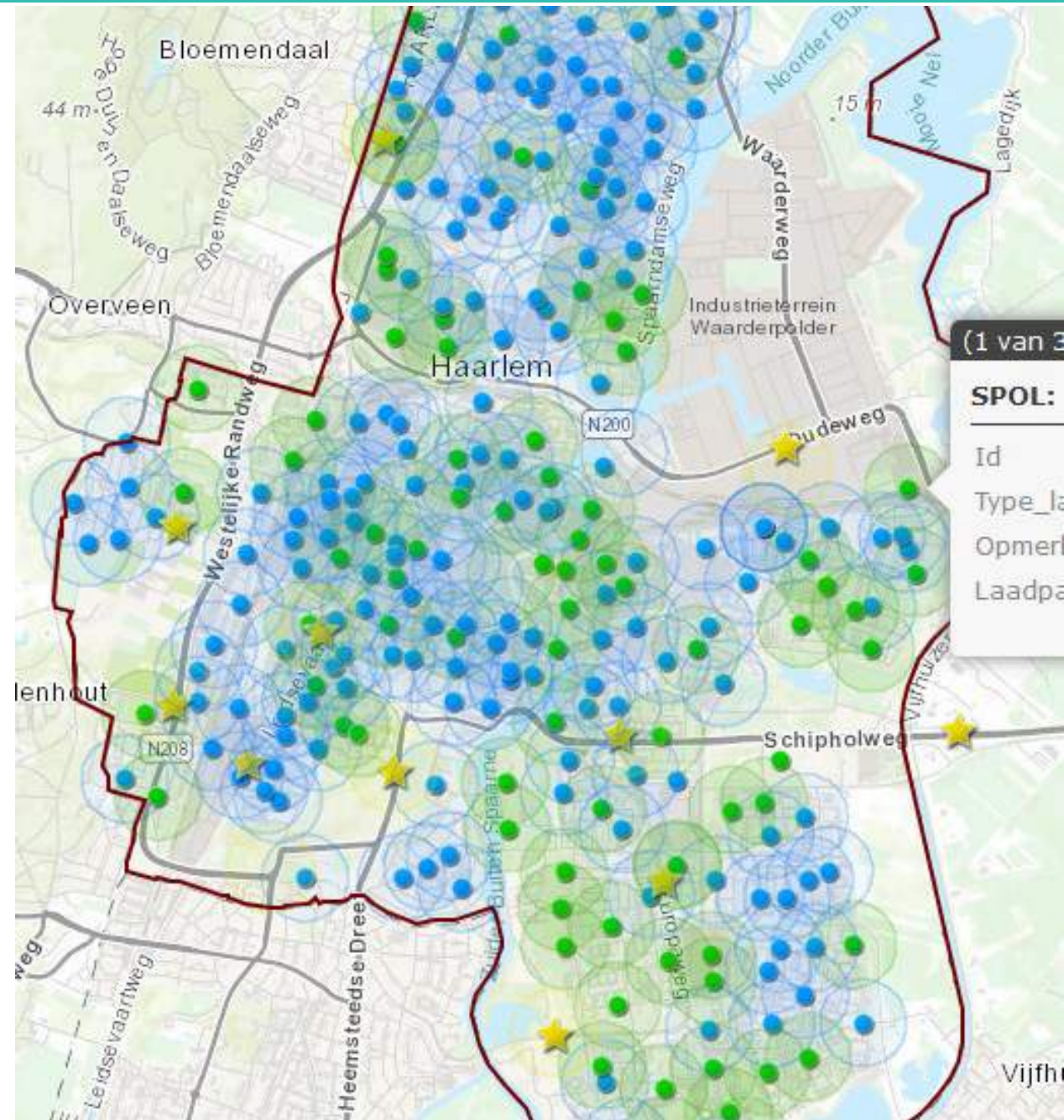


Plan strategic
locations

Coverage of charging demand

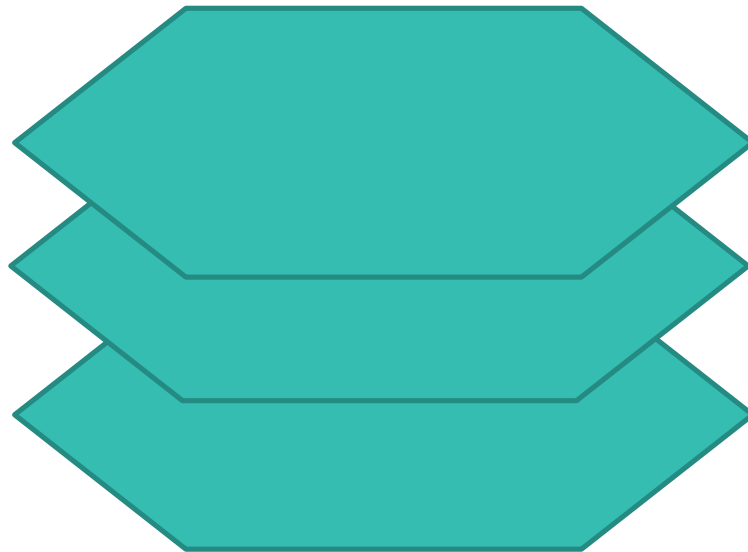
Goal:

- > 'Charging certainty': always being sure that you can charge during your trip



Coverage of charging demand

residents
workers
visitors



Public:

70%

20%

40%



Groningen EV

zoeken



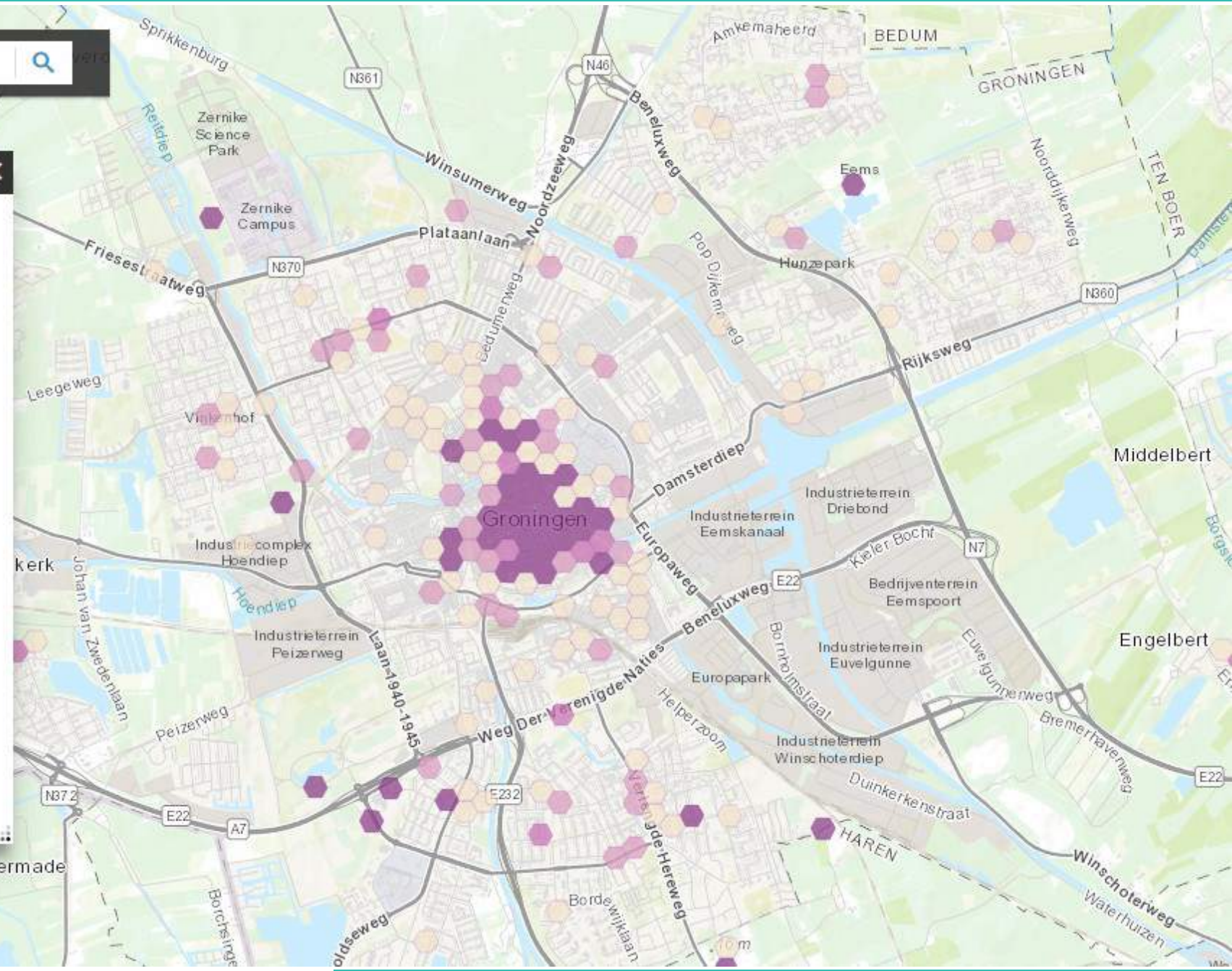
Legenda

Aantal elektrische voertuigen met openbare laadbehoefte onder bezoekers in 2025

aantal EV van bezoekers met openbare laadbehoefte in 2025

- > 9
- > 6 - 9
- > 3 - 6
- <= 3

visitors





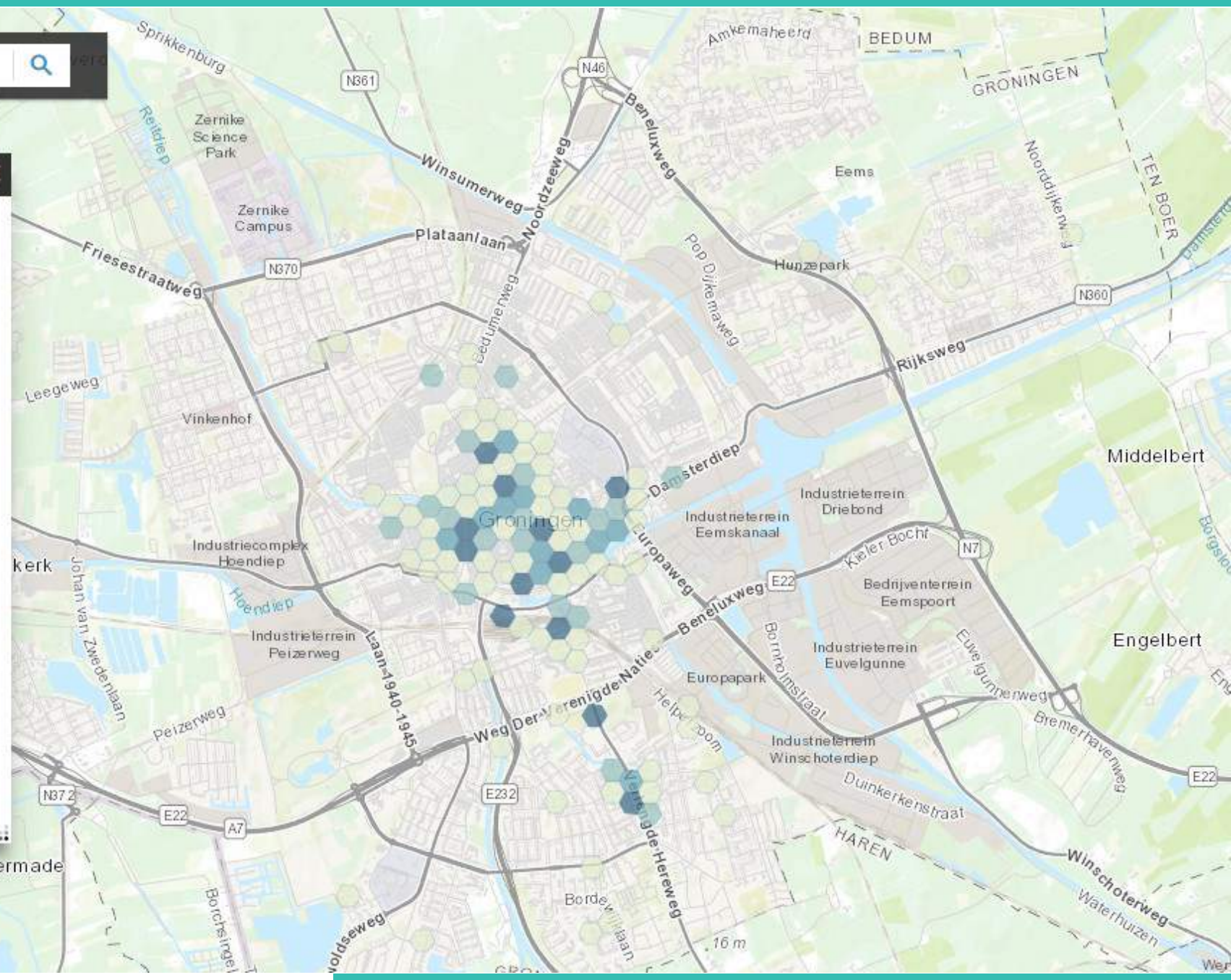
Legenda

Aantal elektrische voertuigen met openbare laadbehoefte onder forenzen in 2025

aantal EV van forenzen met openbare laadbehoefte in 2025

- > 9
- > 6 - 9
- > 3 - 6
- <= 3

workers



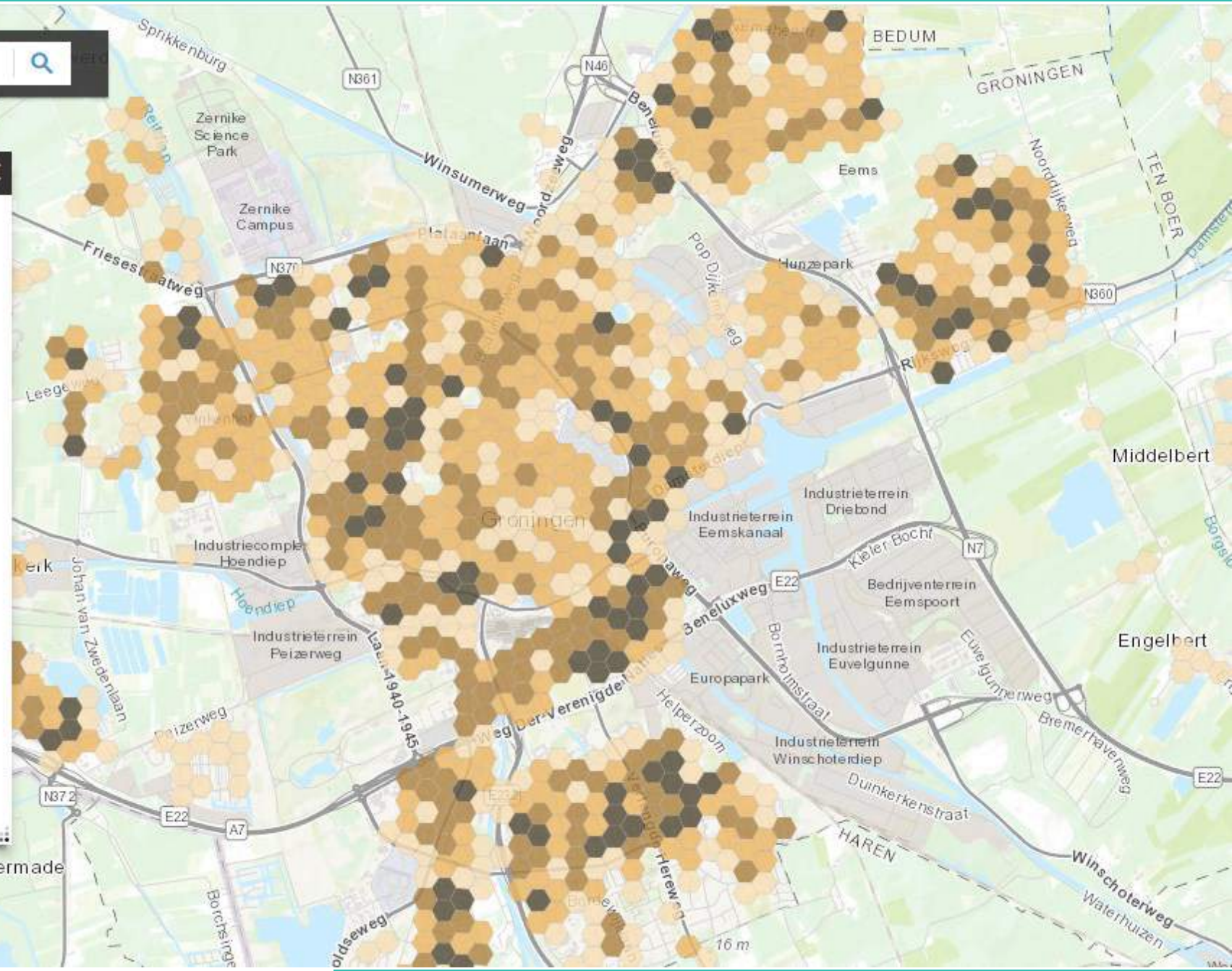
Legenda

Aantal elektrische voertuigen met openbare laadbehoefte onder bewoners in 2025

aantal EV van bewoners met openbare laadbehoefte in 2025

- > 9
- > 6 - 9
- > 3 - 6
- <=3

residents





Legenda

Gemeentegrens



Wijkgrenzen: aantal SPOL per wijk

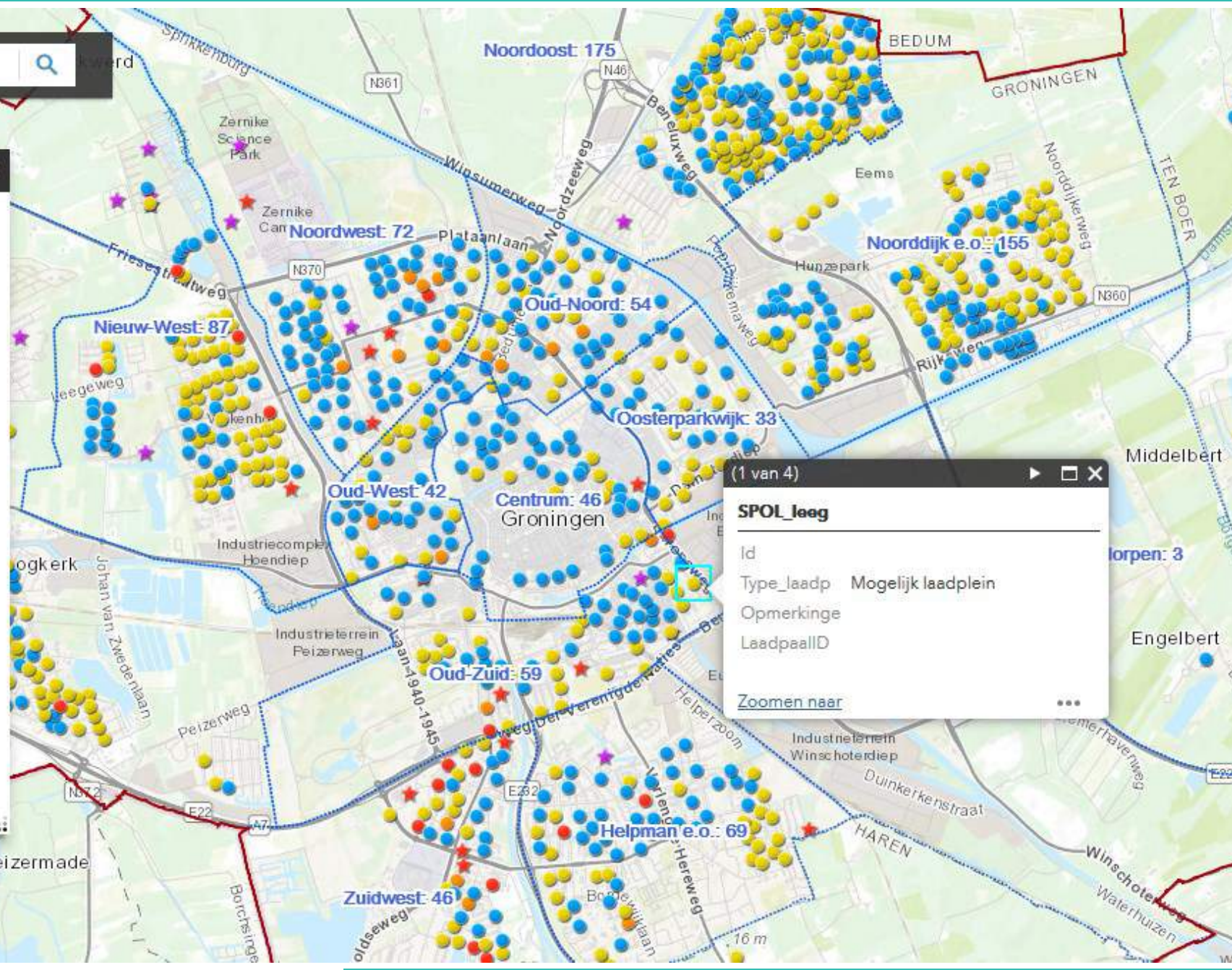


SPOL Groningen

- Mogelijke laadpaal
- Laadplein < 4 plekken
- Laadplein < 6 plekken
- Laadplein > 8 plekken

Opmerkingen_Groningen

- ★ nieuw locatie voorstel
- ★ reactie op geplande locatie



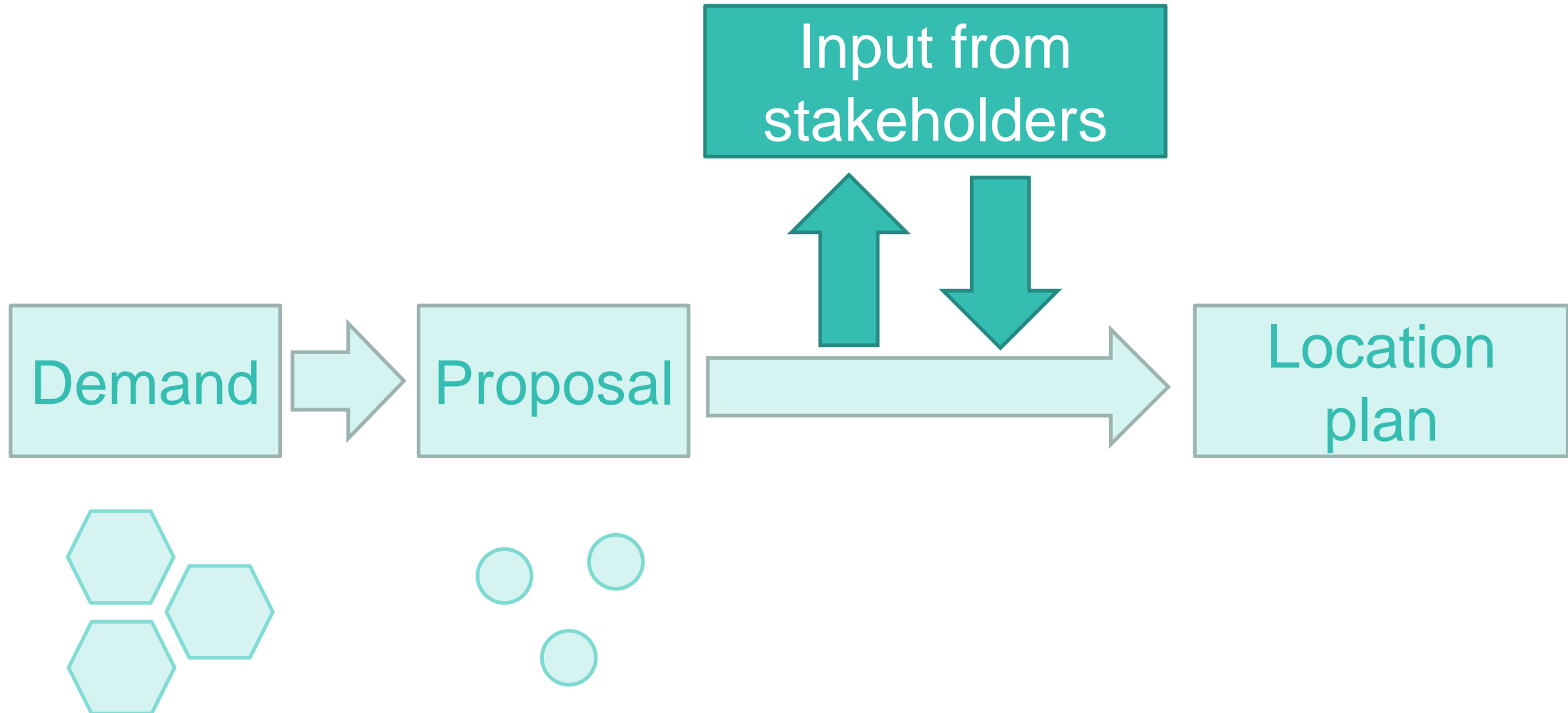
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SPOL_leeg

Id	Type_laadp	Mogelijk laadplein
Opmerkinge		
LaadpaalID		

[Zoomen naar](#)

Collaboration



'Offline' Collaboration

- > Sessions about electric mobility with
 - > Municipality departments
 - > Residents
 - > Energy companies
 - > ...
- > Give everyone **same insight and knowledge**



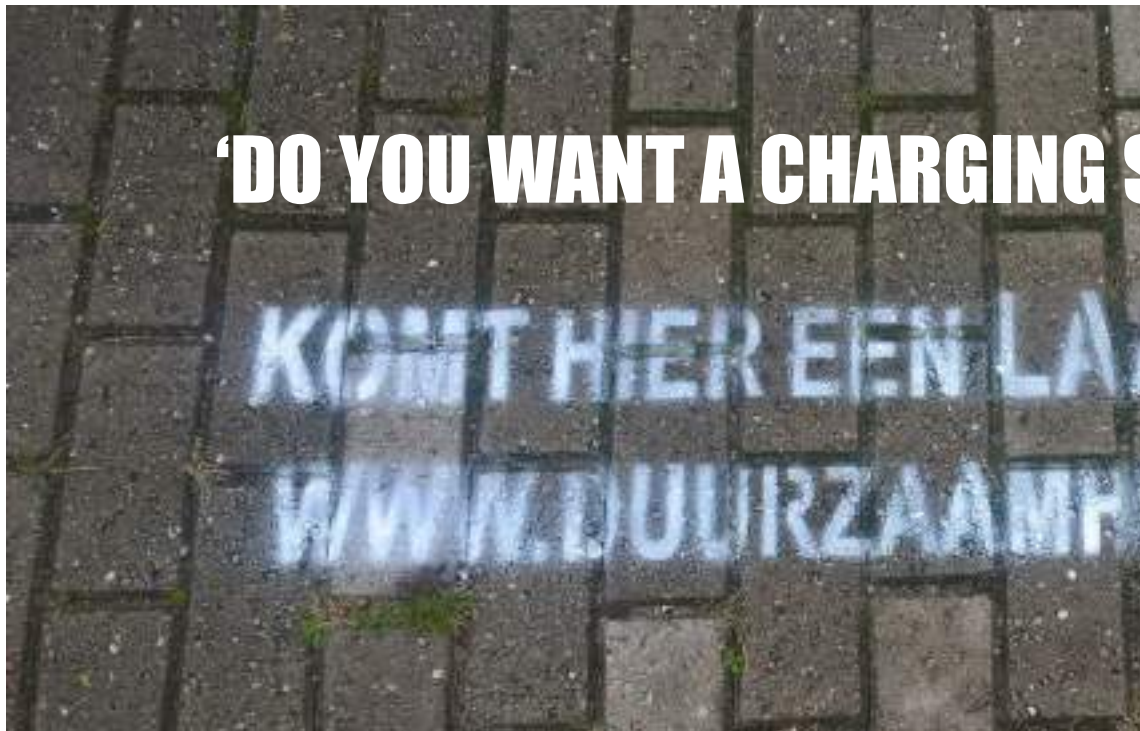
'Online' Collaboration

- > Allow all residents to **participate**



'Online' Collaboration

- > Allow all residents to **participate**



Locatiekaart Dronten

Wilt u meer weten over de totstandkoming van de locatiekaart?

Door op de icoontjes van een laadpaal te klikken kunt u uw reactie indienen.



Results

- > Location plan supported by all stakeholders
- > Only 8 weeks from request to finishing construction
- > Less expensive process, larger scale realization and better locations

Planning a public charging network



- > Contact: anne.vanderveen@overmorgen.nl
- > Site: www.overmorgen.nl

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