



**Interreg**  
North Sea Region  
ACCESS

European Regional Development Fund



EUROPEAN UNION

# **Upscaling e-mobility: Smart charging with 100% green and locally produced energy in Mechelen**

*Polis Conference – November 30th 2023*









ANTWERPEN

MECHELEN

BRUSSEL





## Research purpose of the Access project in the administrative agreement of the city.

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The city is investigating how an energy community with locally produced solar energy combined with smart mobility (smart chargers and V2G) can work in a newly built parking tower.





# Eandis-Keerdok. Urban development project

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## Piloting energy solutions for fossil-free electric mobility

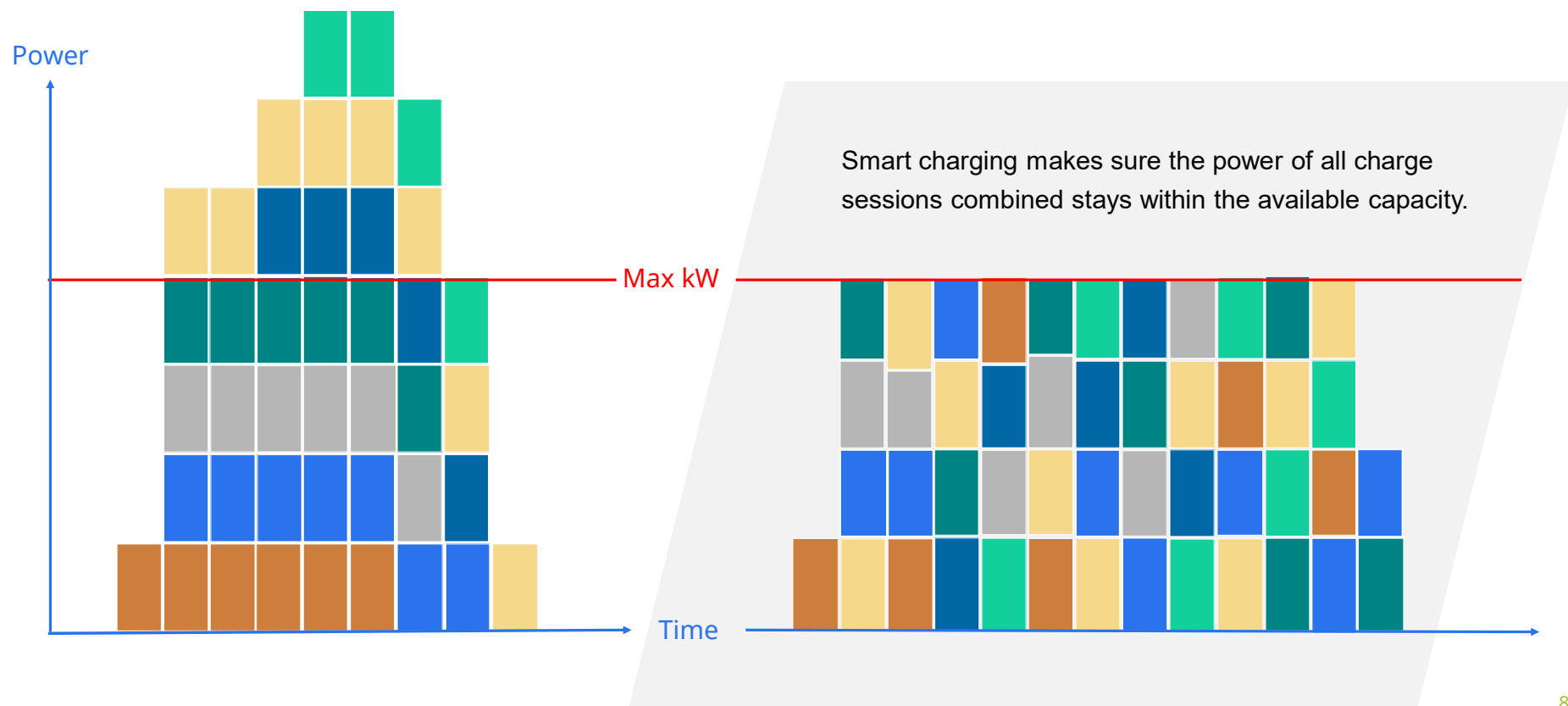


New multifunctional parking building & mobility hub with 528 parking spaces, offices and retail.  
New landmark for the city of Mechelen.

### Innovative pilot

- 20 AC charging points
- 4 DC charging points
- 2 V2G charging points
- Energy management system: maximum self-consumption and smart steering
- sharing of surplus solar energy between charging infrastructure operator, supermarket and offices on 2 floors.
- Charging lockers for batteries e-bikes
- V2G pilot: charging and discharging energy with electrical shared cars

# Basics of smart charging





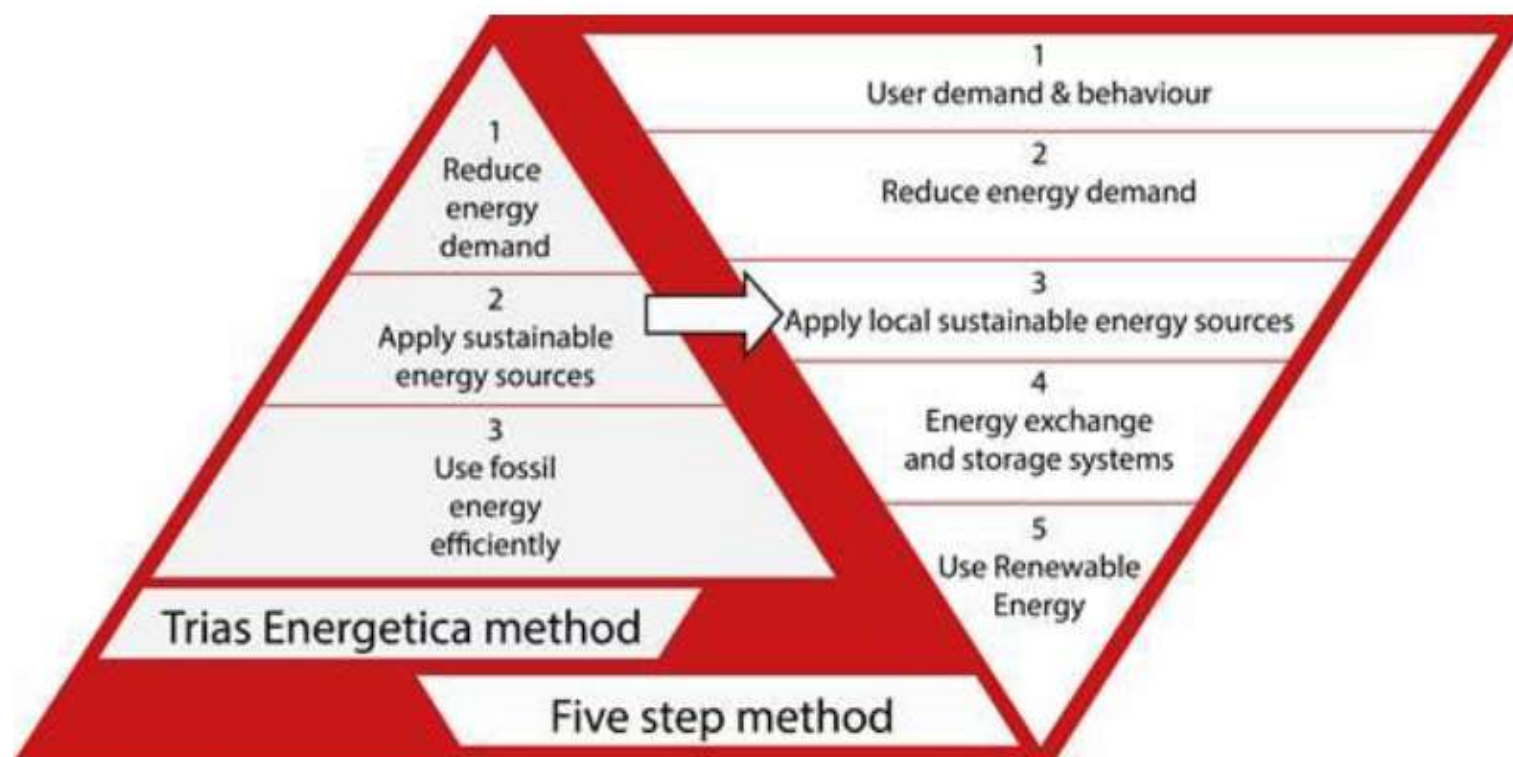
## Main milestones - state of the art charging pilot

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Start project	09/2019
Tender 1    Feasibility study <i>(optimisation kWp (72 → 172), extension PV)</i>	01/2020
Tender 2    Framework contract engineering company	09/2021
Tender 3    Investment & operation charging infra 15 years <i>(price@charging pole, innovation, timing, extension charging infra)</i>	04/2022
Opening Keerdok parking	11/2022
Final event & ending Interreg NSR Access	04/2023

## 5 step method

- Trias Energetica -> update naar Five Step Method





## Lessons learned

Make your building future proof & multifunctional for when mobility changes.

Building architecture in function of an optimal local energy production.

Market exploration interviews are important.



## Lessons learned

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Cooperation with independent energy experts. Mechelen worked with [www.ingenium.be](http://www.ingenium.be)

When growing e-mobility in your city, pay attention to the energy story. Switch to smart charging as electricity will become more expensive & scarce (smart management)





The local government as a facilitator, pushing the innovation further, challenging the market.



**Mechelen took on a coordinator role to effectively source the right actors to make the Keerdok smart local energy system work**

## Final video & final tool Pilot city Mechelen

Access legacy:

<https://leadinglocalenergy.systems>

<https://www.youtube.com/watch?v=a3YEeOlylD8>

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