



Detecting and solving voltage issues in Low Voltage Networks – with Smart Meter Data

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Question:

HOW MANY CUSTOMERS WITH OVERVOLTAGE?

Hint: out of 1,8M smart meters

Cigré november 2023

CODE OF CONDUCT (GEDRAGSCODE)

← → ↻

autoriteitpersoonsgegevens.nl/actueel/gedragscode-slim-netbeheer-goedgekeurd-door-ap

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Gedragscode Slim Netbeheer goedgekeurd door AP

03 mei 2022 Thema's: [Praktisch AVG](#), [Internet of things](#)

De Autoriteit Persoonsgegevens (AP) heeft de gedragscode Slim Netbeheer van Netbeheer Nederland goedgekeurd. De gedragscode gaat over het verwerken van persoonsgegevens (meetgegevens) voor de wettelijke taak van netbeheerders. De AP verbindt wel een opschortende voorwaarde aan de goedkeuring, omdat het vereiste toezichthoudende orgaan er nog niet is.

Update juli 2023: toezichthoudend orgaan geaccrediteerd

De AP heeft op 11 juli 2023 Netbeheer Nederland geaccrediteerd als toezichthoudend orgaan op de gedragscode Slim Netbeheer. Hiermee is de gedragscode ook daadwerkelijk van kracht als officiële AVG-gedragscode.

Het toezicht wordt uitgevoerd door een intern orgaan binnen Netbeheer Nederland, de Monitoring Body. Om de onafhankelijke positie hiervan te waarborgen, zijn meerdere maatregelen getroffen.



PUBLICATIES

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Besluit gedragscode Slim Netbeheer

PDF, 610 kB

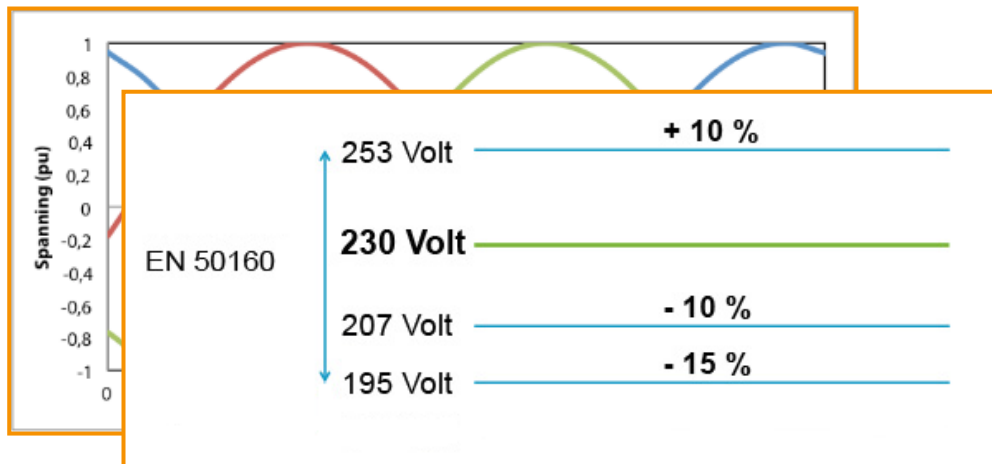
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SMART METER MEASUREMENTS

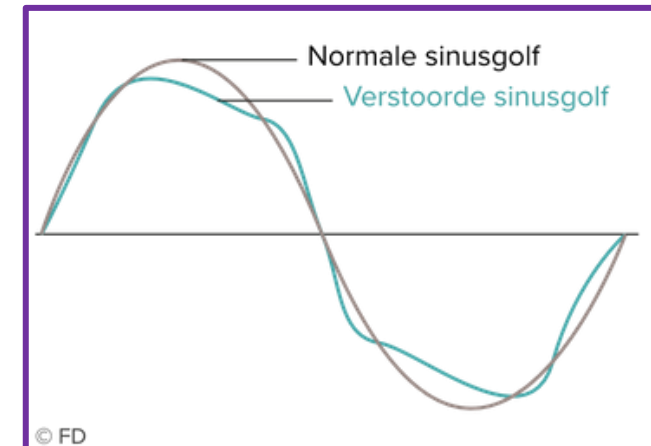
Remote
measurement



Measurement
device at home



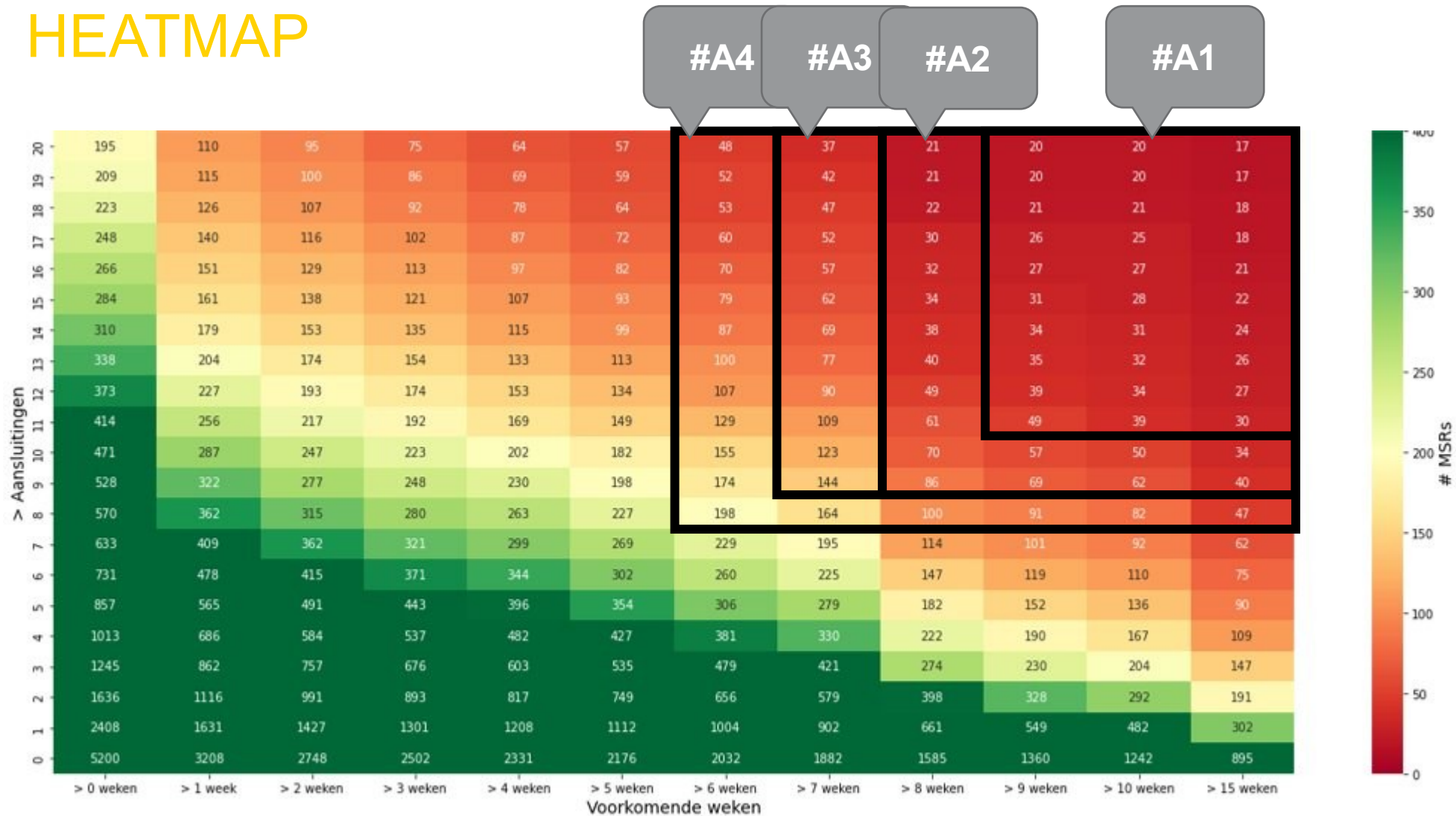
Spanningsniveau / spanningshuishouding



Asymmetrie, dips, flicker

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HEATMAP



New problem statement

Strategy: **Buurtaanpak** to reinforce **LV grids** and solve all overloading and voltage issues.

→ Is there anything more we can do?

(in the short term
without requiring much
finances and labour)

Trapstandoptimalisatie

Tap changer optimisation

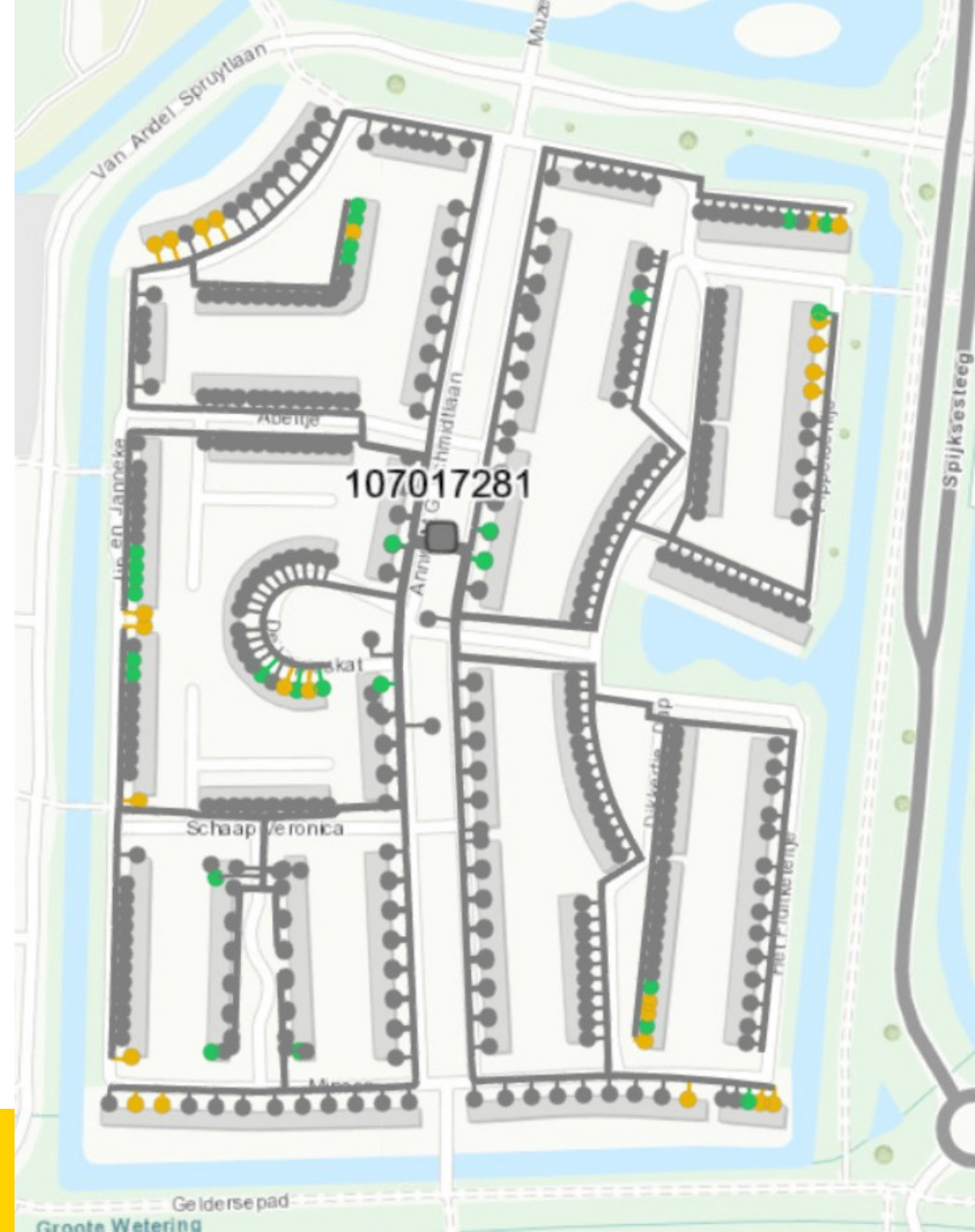
Smart meter voltage data

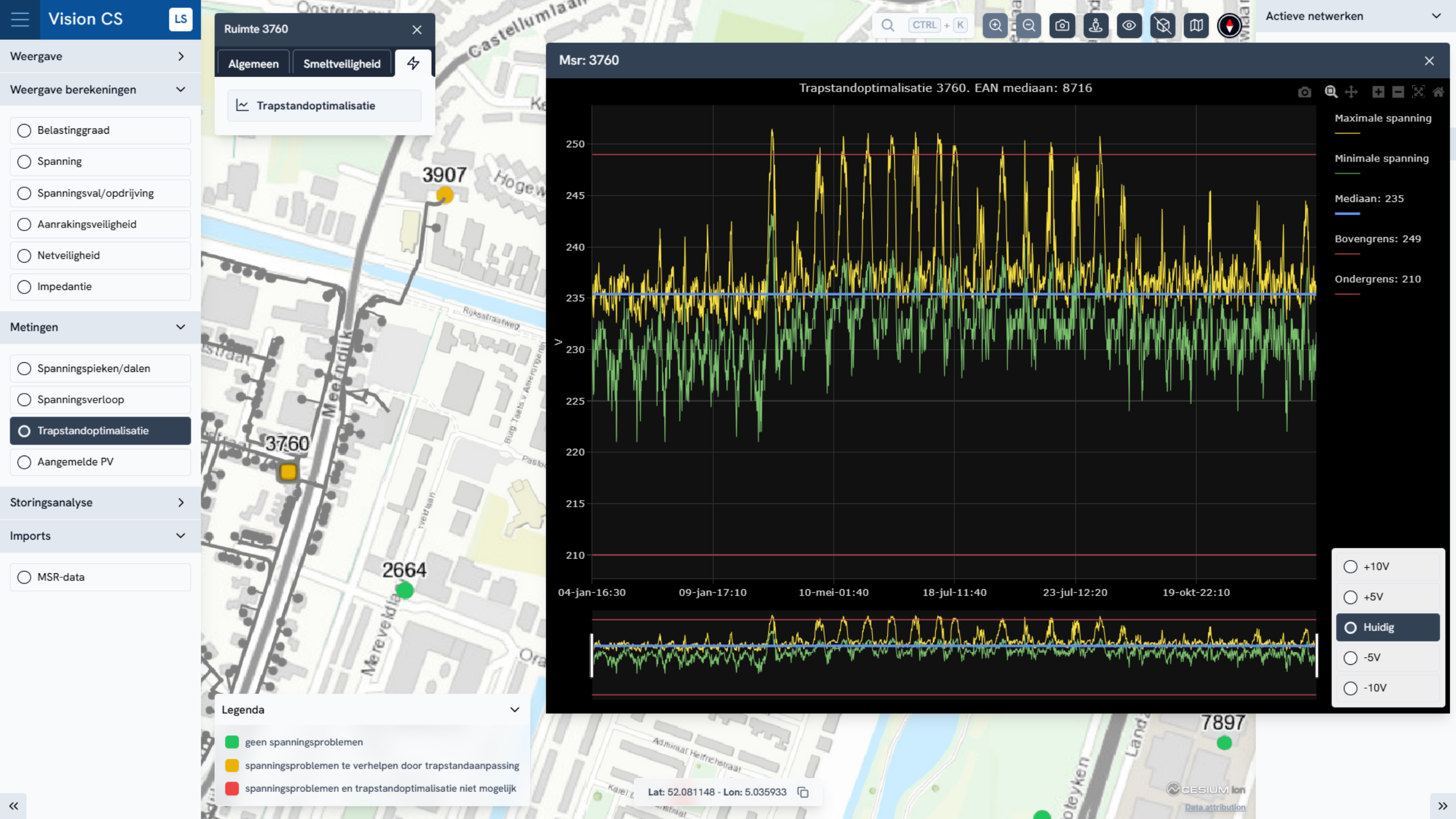
QUARTERLY MEASUREMENTS

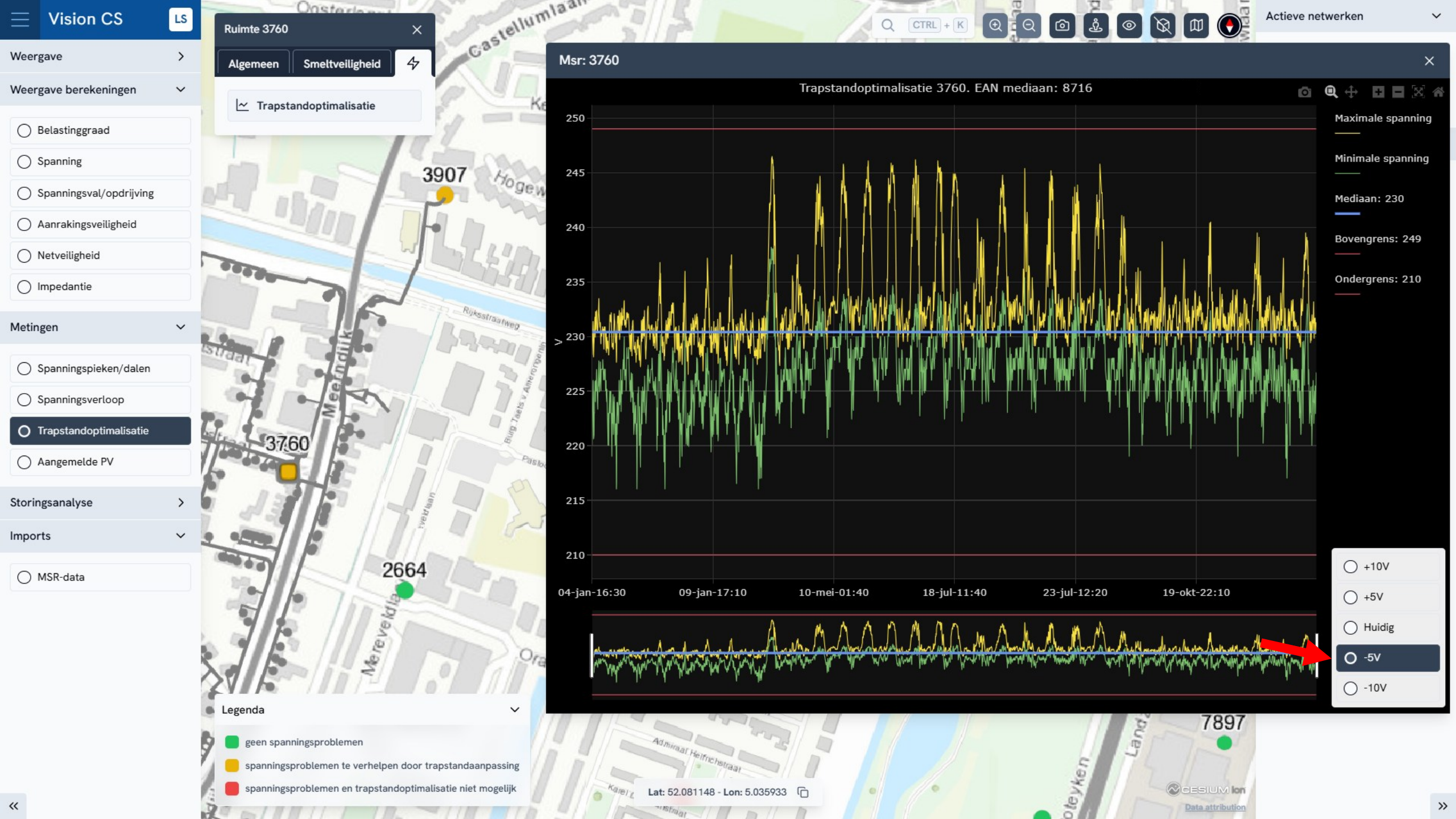
- 4 quarters x 10 days
- First and last smart meter

Kwartaalmeting

- > kwartaal 4 2024
- > kwartaal 3 2024
- > kwartaal 2 2024
- > kwartaal 1
- > kwartaal 4







Pilot results

ZEELAND REGION & MAINTENANCE 2025

- Pilot in Zeeland at 12 locations ($\approx$ 250 voltage problems)
 - 10 locations with perfect results
 - 2 locations with unexpected results
- Piggybacking (meeliften) with 2025 maintenance at 20 locations ($\approx$ 300 voltage problems)

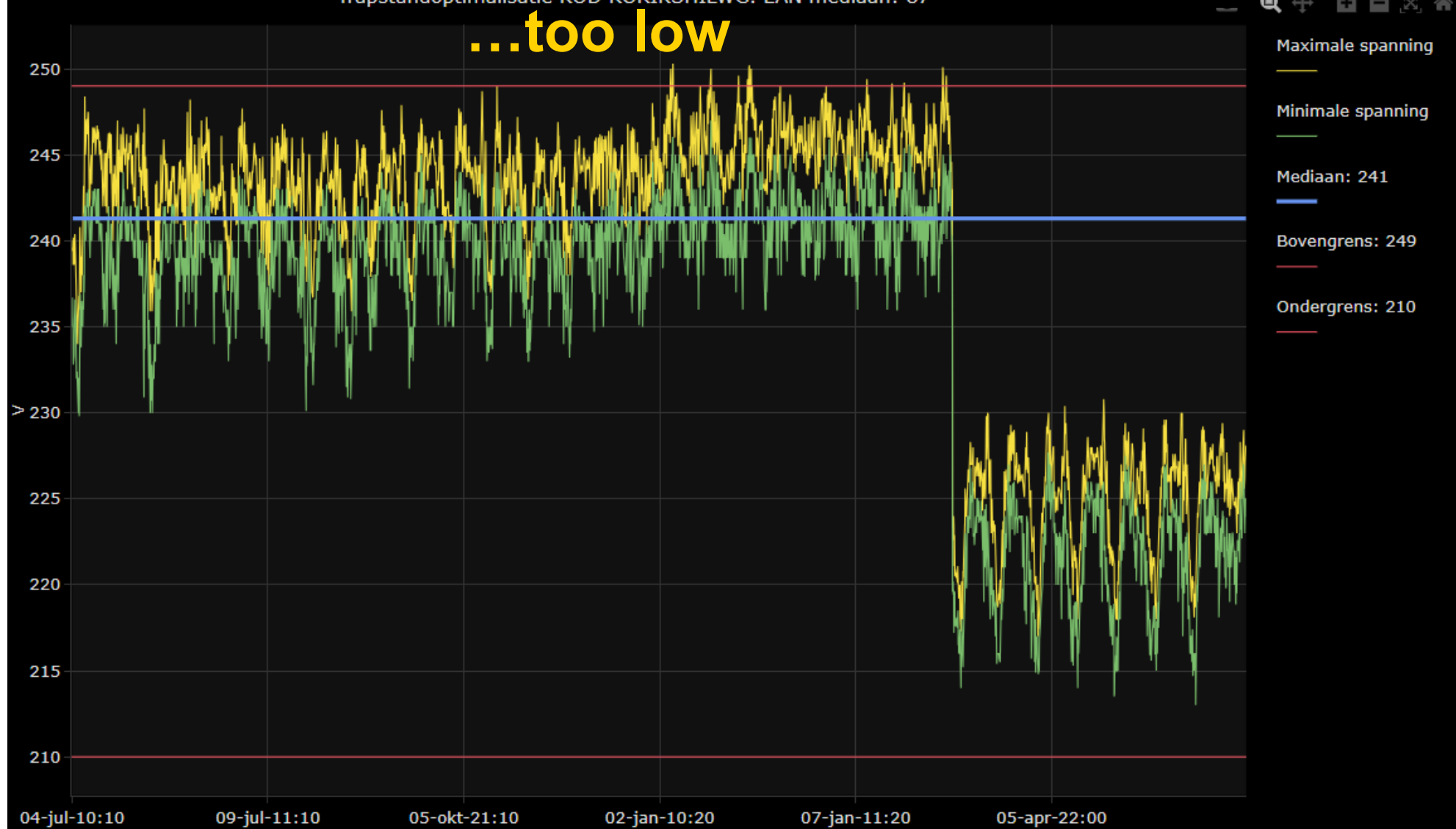


Trapstandoptimalisatie KOD RORIKSHILWG. EAN mediaan: 87

A little...

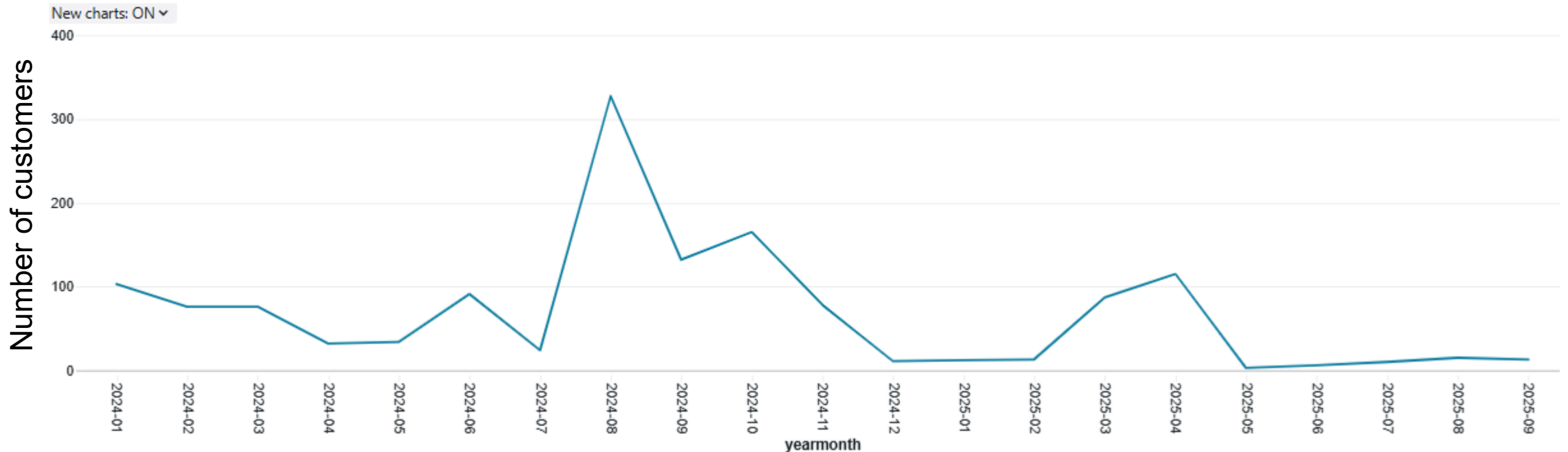


Trapstandoptimalisatie KOD RORIKSHILWG. EAN mediaan: 87

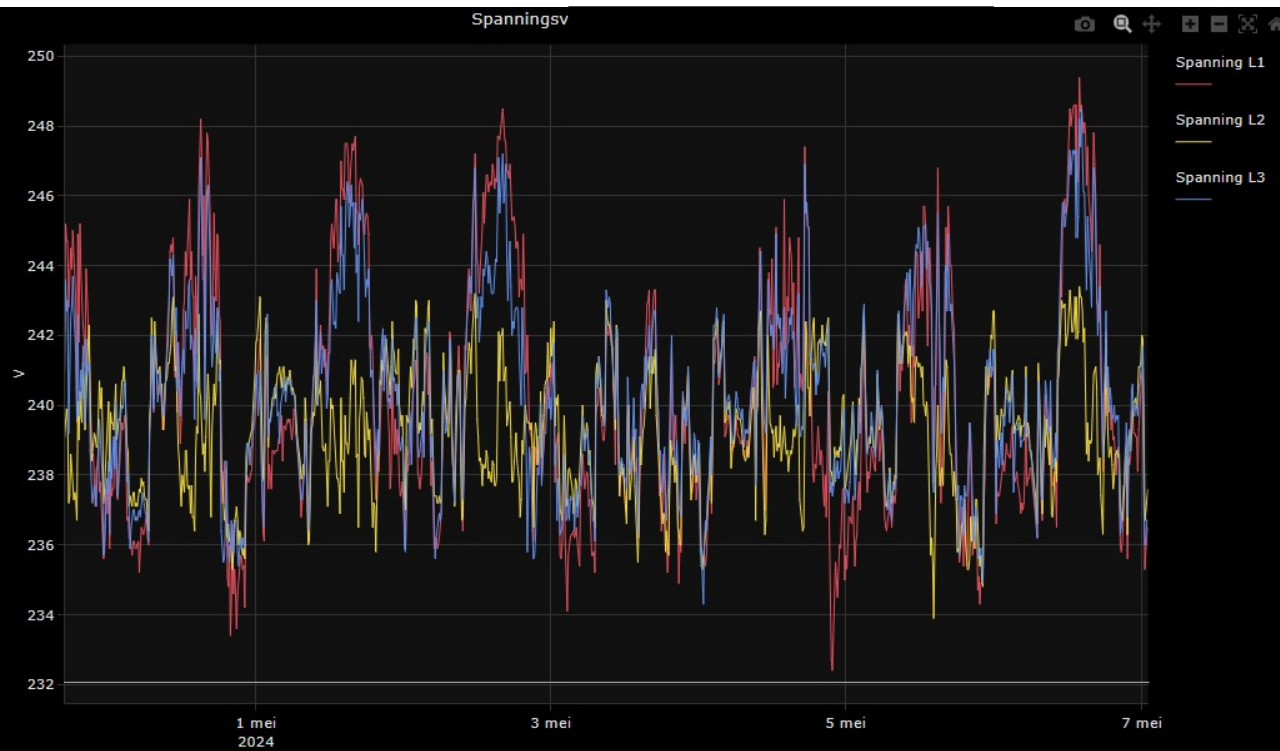


Number of customers with overvoltage in Zeeland group

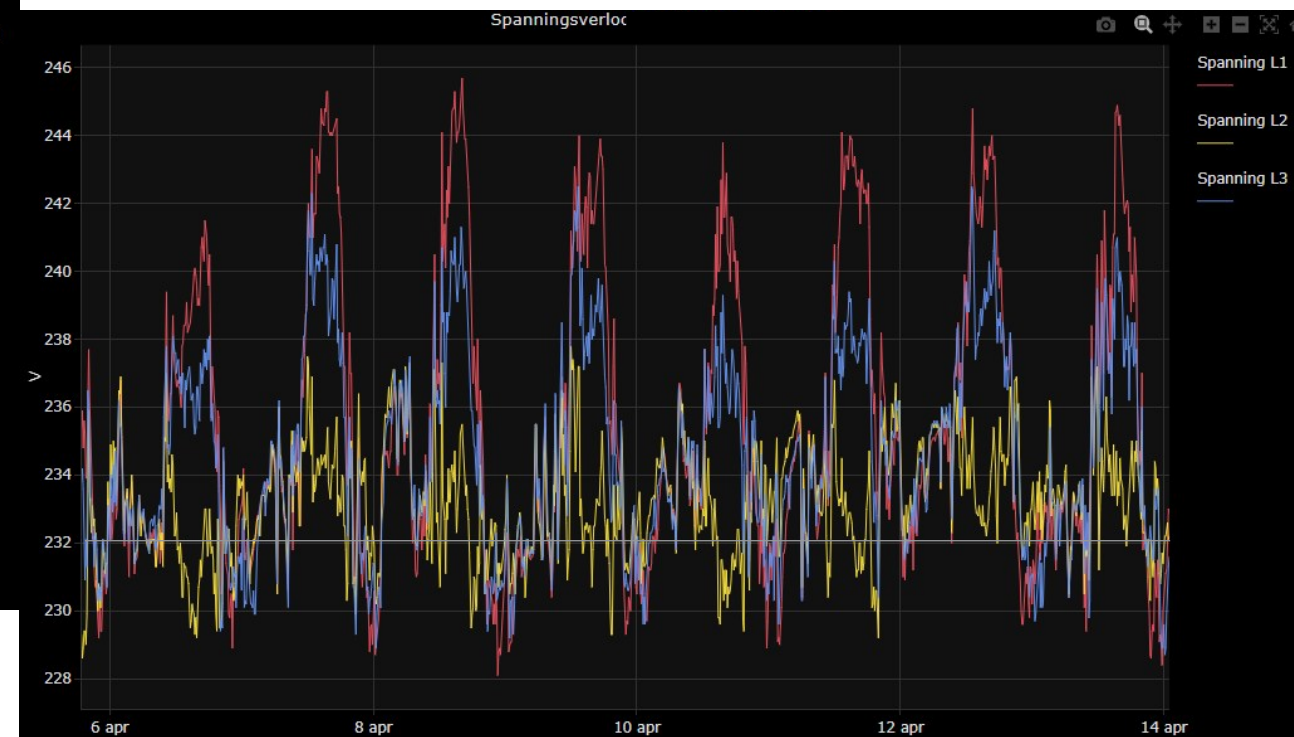
SMART METER EVENT DATA OF 12 SUBSTATIONS



Results Pilot MAINTENANCE 2025

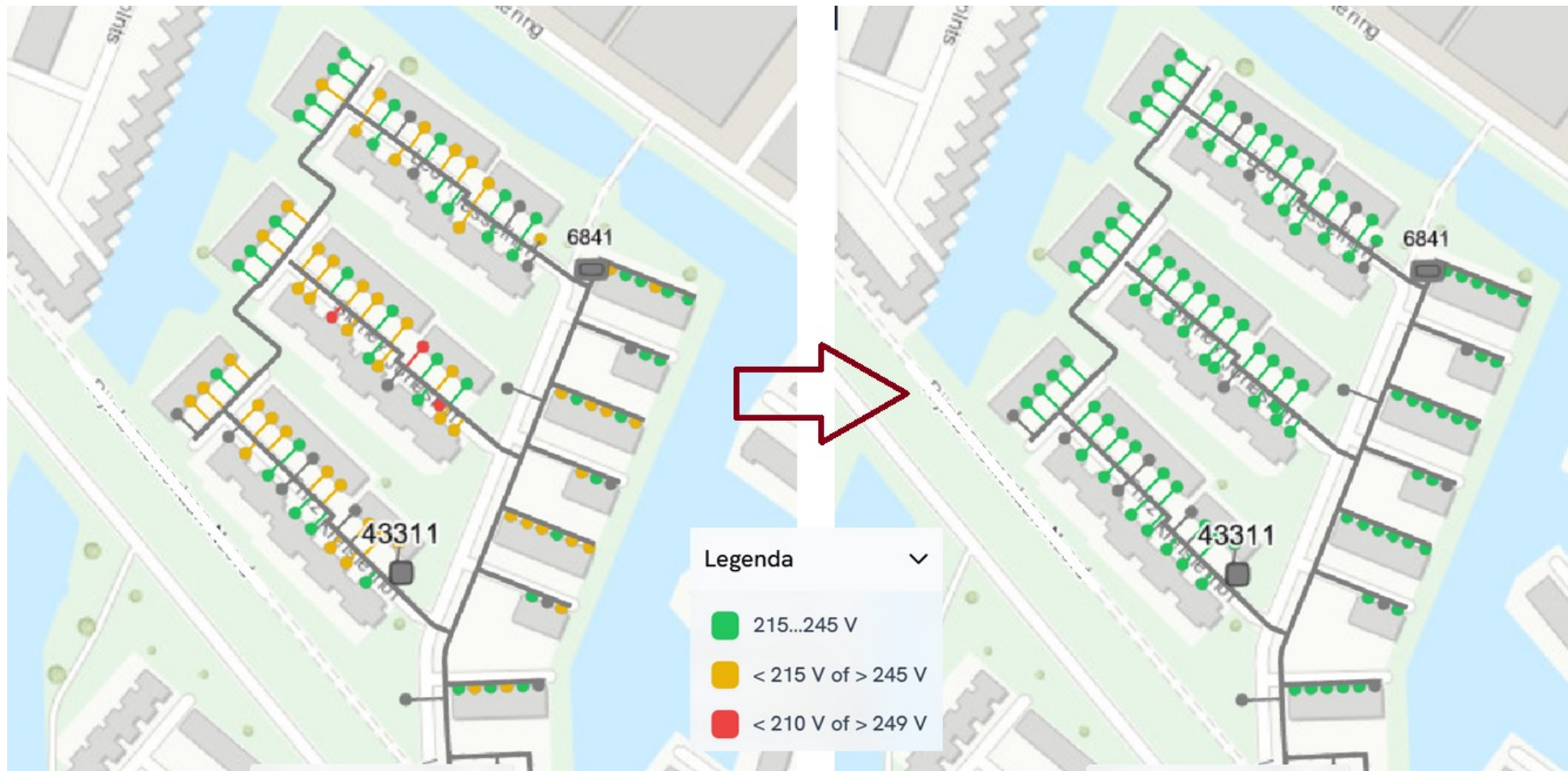


Measurement 2024



*Measurement 2025 after
changing tap setting*

More nice pictures...

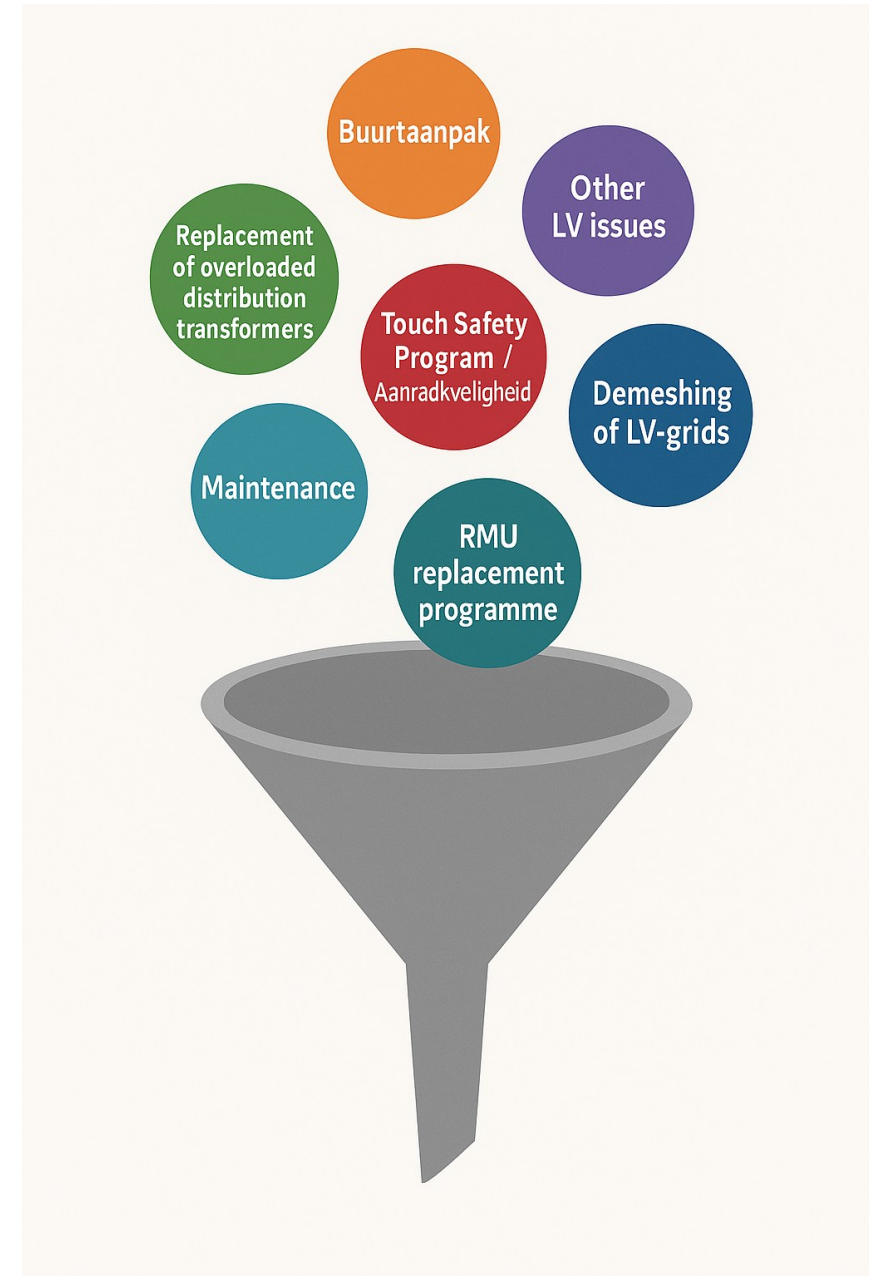


Future work

- Finish pilots in other regions
- Piggyback (meeliften) with maintenance of 2026

Structural improvements:

- Eliminate the backlog (single time project)
- LV monitoring desk (operational monitoring)



A photograph of three business professionals in a modern office setting. Two men and one woman are gathered around a large wooden table, looking at a large map or blueprint spread out on the surface. One man is pointing at the map. A laptop is open on the table. The office has large windows and a modern interior with a large white pendant light. A yellow banner is overlaid on the left side of the image.

Thank you for your attention