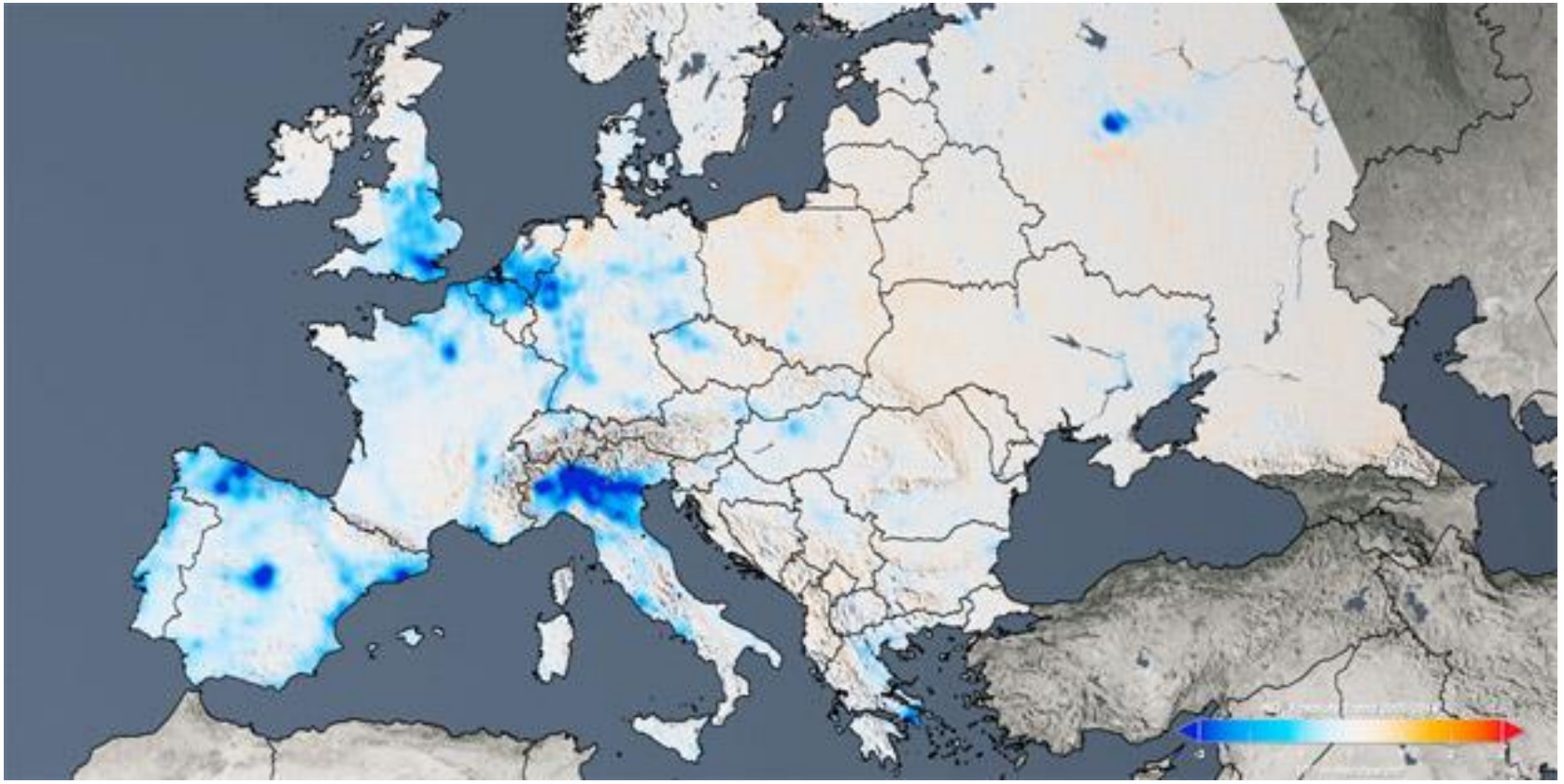
Electromobility in the metropolitan region -Effectiveness -

26-9-2017

Pieter Looijestijn

Is stimulating electromobility through investments in public **charging infrastructure**

an **effective measure to improve air quality ?**



NO2 decrease (NASA)

2015

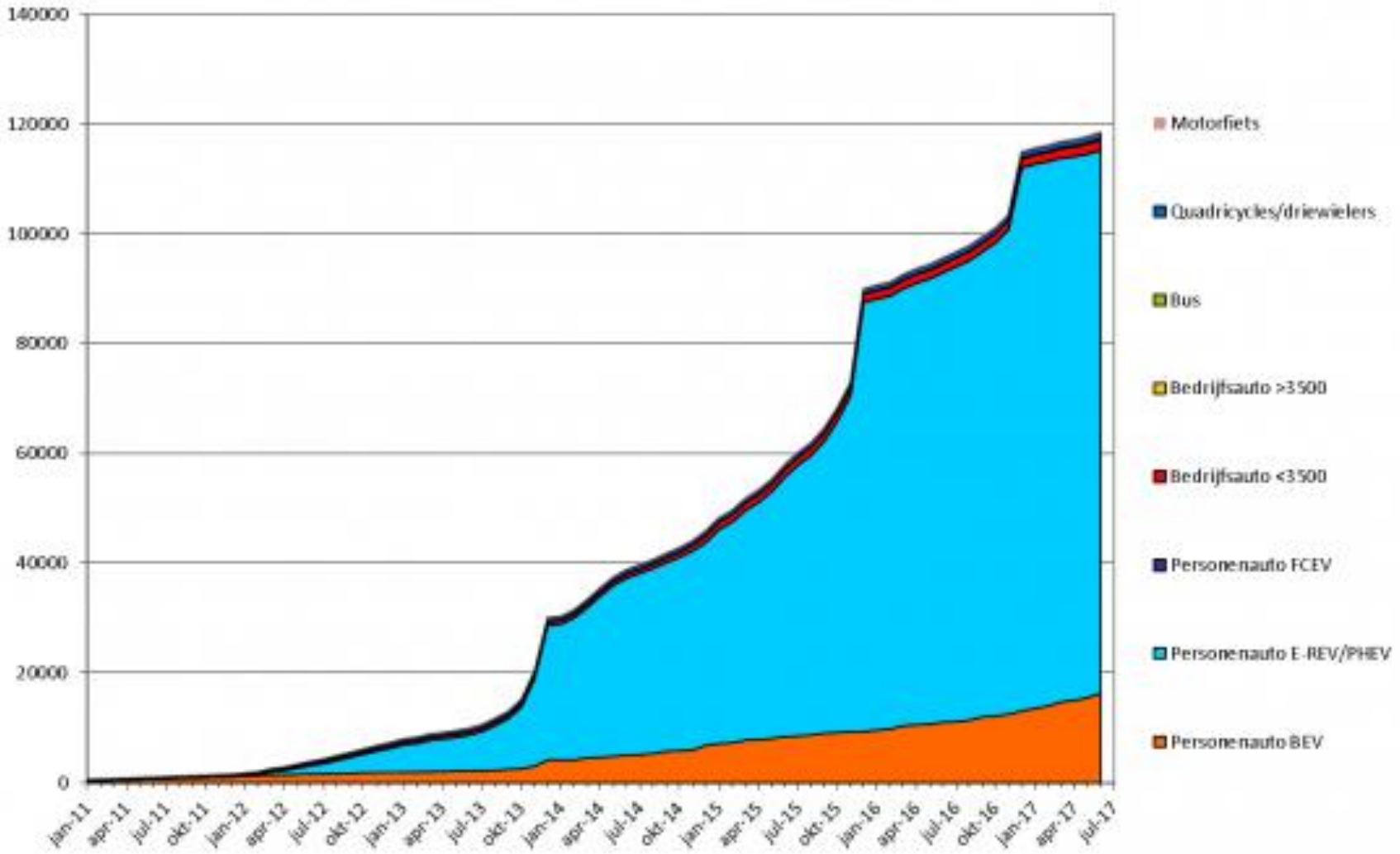
Important measures in the Netherlands for stimulating electromobility

Cities and regional governments – January 2011

- Invest in public charging infrastructure

National government – June 2012

- Fiscal benefits for company cars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jul-17
Motorfiets
Quadricycles/driewielers
Bus
Bedrijfsauto >3500
Bedrijfsauto <3500
Personenauto FCEV
Personenauto E-REV/PHEV
Personenauto BEV

MRA elektrisch

Who

Cooperation of local and regional governments, organised in a result-oriented and responsive project, presided by the Province of Noord-Holland

Aims

Stimulate and facilitate **electromobility** , with the ultimate aim of improving **air quality**, reducing **CO2** emissions and reducing dependence on **fossil fuels**

2016

43% NL electric vehicles
52% NL charge points

Noord-Holland

Lelystad

Flevoland

Amsterdam

Utrecht

Utrecht

Why is it a public task?

1. Air quality, CO2 emissions, energy transition

2. Charging happens on the city streets

3. Market not fully developed:
   a) Pricing & transparancy
   b) Competition
   c) Interoperability
   d) Improve business case

4. Economic value – commercial activity
   export value, innovation and accessibility

Where we are – Charging infrastructure

- Comprehensive network of **2.800 charge points**
- Growing by **80** each month
- Monthly **300 MW sustainable energy** charged

- Market size, proces innovations, product innovations and standardisation allow **commercial business case** for long-term contracts to install, maintain and operate regular chargers – guided by public policy and public management

Next challenges 2017-2019

- Large numbers
- Integrating electromobility in the broader energy transition, moving beyond pilots
- Price transparancy en EU roaming

LIFE – Boosting electromobility

LIFE11/ENV/NL/00793

Projects aims (2011)

- Give an impuls to charging infrastructure and improve geographic spread
- Improve cooperation between cities

Results (2015)

- 110 normal charging stations in city centers
- 30 fast charging stations in and around the Randstad
- 160 e-taxi's Schiphol Airport
- E-bestelbus promotion campaign
- **Detailed monitoring system**

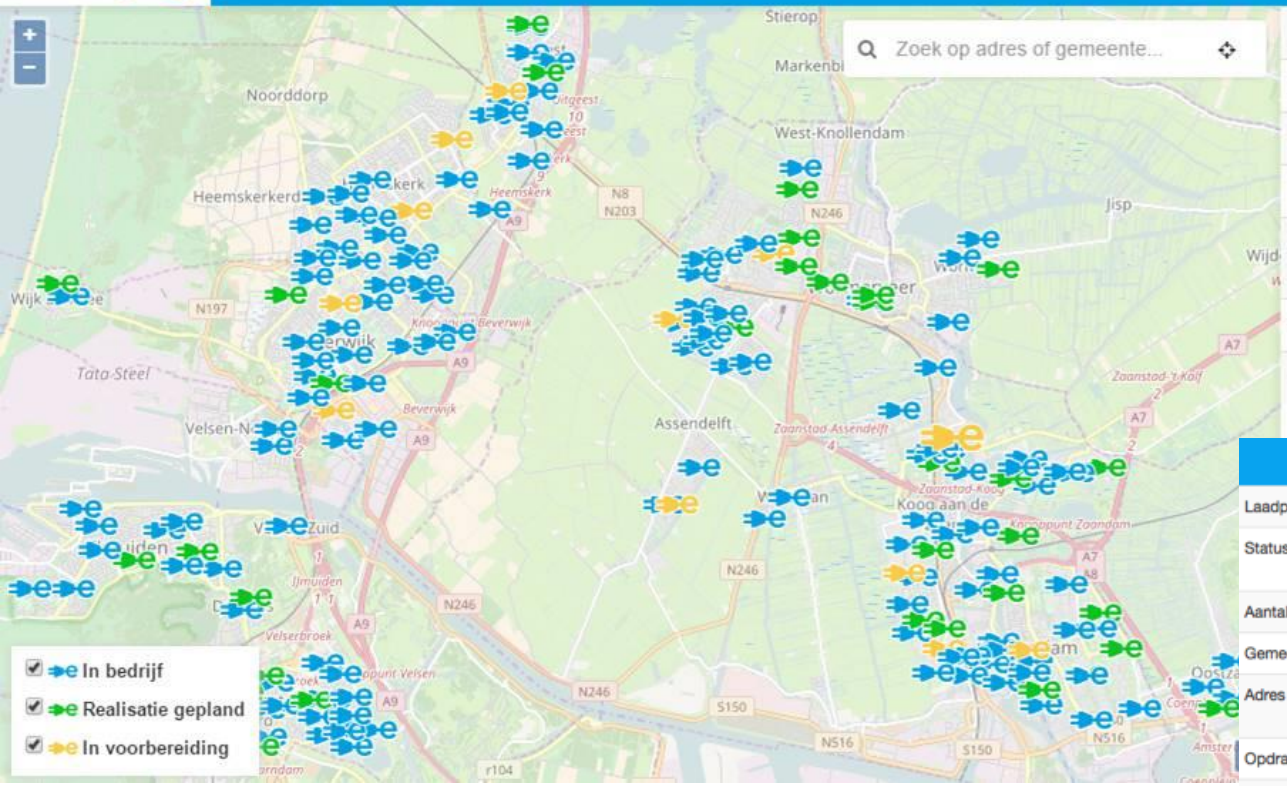
Elektrisch rijden: in 5 stappen van 0 naar 100%

Toolkit EV

Ondersteunend materiaal voor gemeenten over elektrisch vervoer

MRA elektrisch

Geen laadpaal in de buurt? Dien verzoek in »

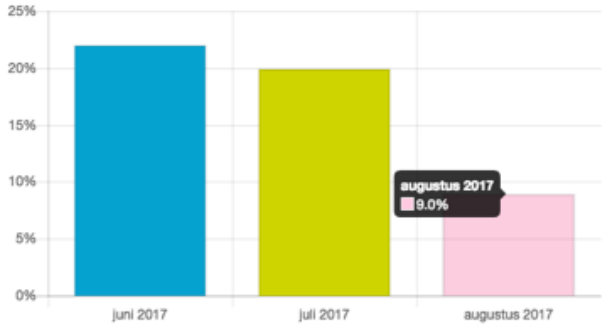


Laadpaal ID	NTB129
Status	In voorbereiding — wat betekent dit?
Aantal laadpunten	2
Gemeente	Zaanstad
Adres	Karl Marxstraat 42 Zaandijk Bekijk omgeving in Google Street View
Exploitant	Pitpoint
Prijsinformatie	Bekijk de prijzen

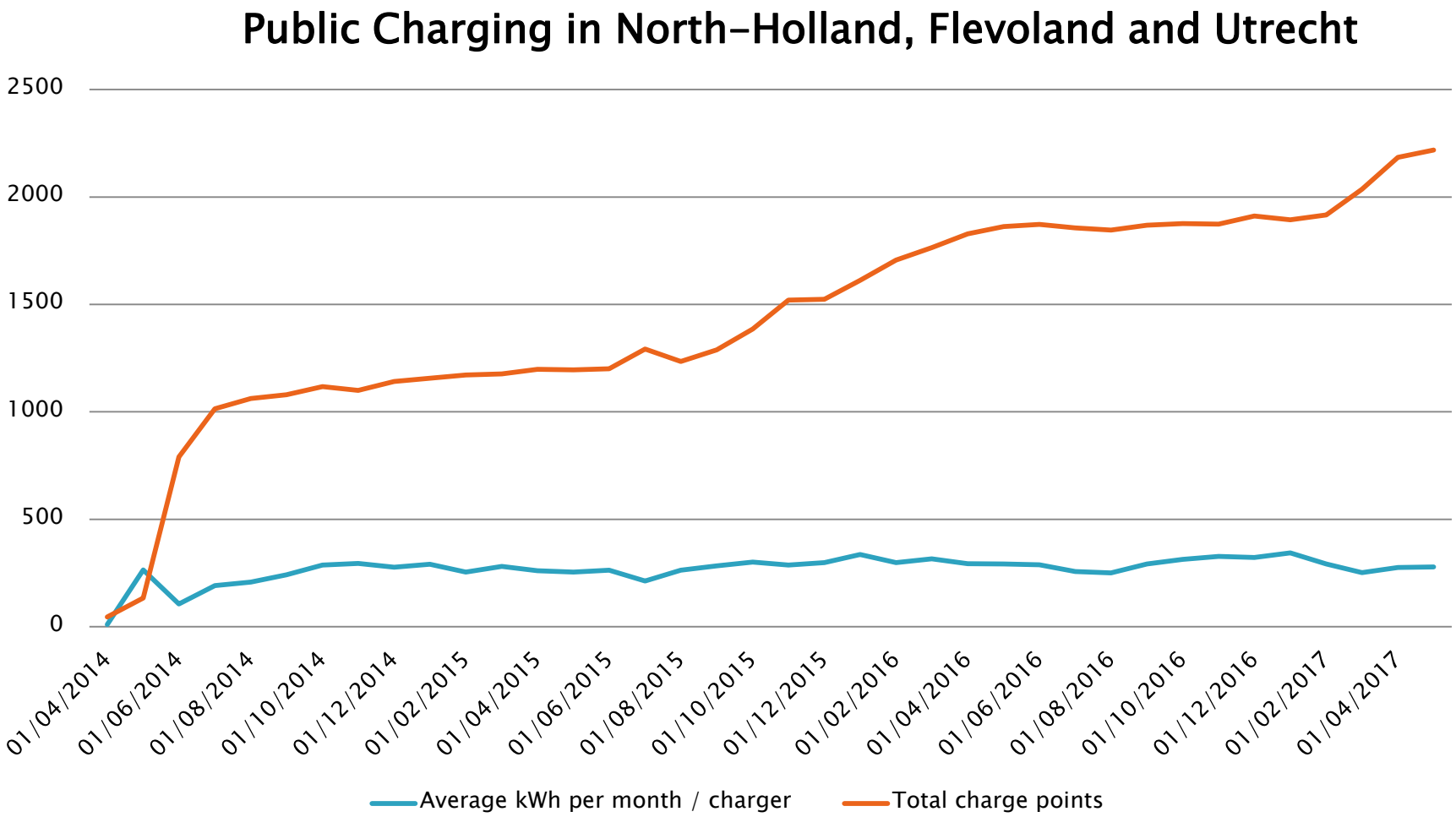
Geen laadpaal in de buurt? Dien verzoek in »

Laadpaal ID	EV0138
Status	In bedrijf wat betekent dit?
Aantal laadpunten	1
Gemeente	Dronten
Adres	Schans 1 8254KM Dronten Bekijk omgeving in Google Street View
Opdrachtgever	MRA-Elektrisch
Exploitant	EVNET
Prijsinformatie	Bekijk de prijzen

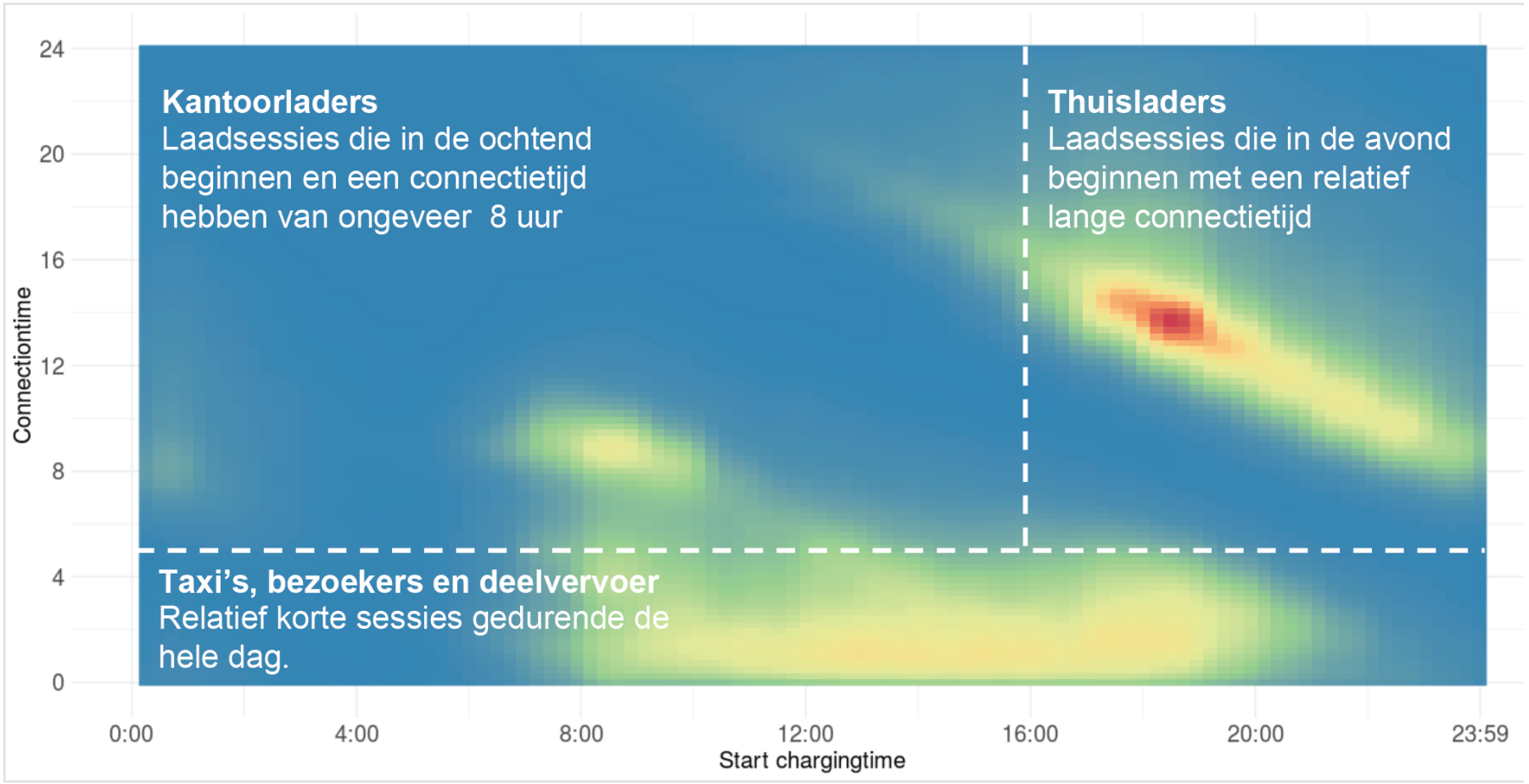
Bezettingsgraad



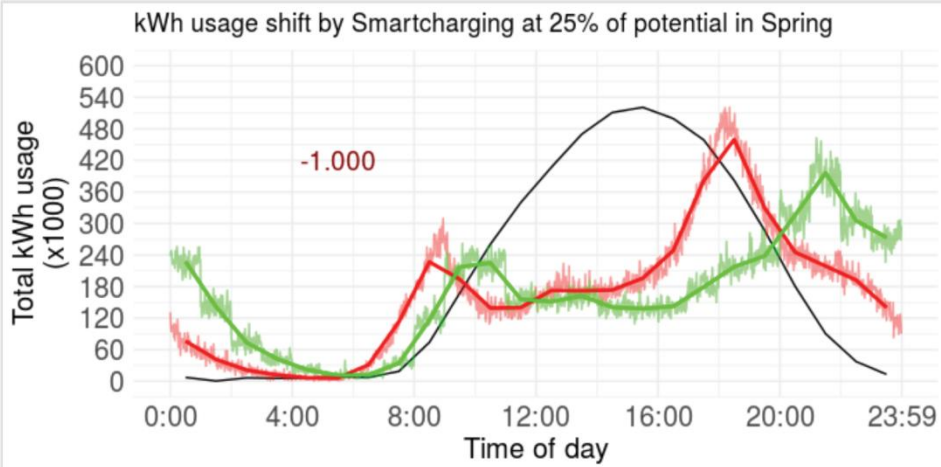
Monitoring

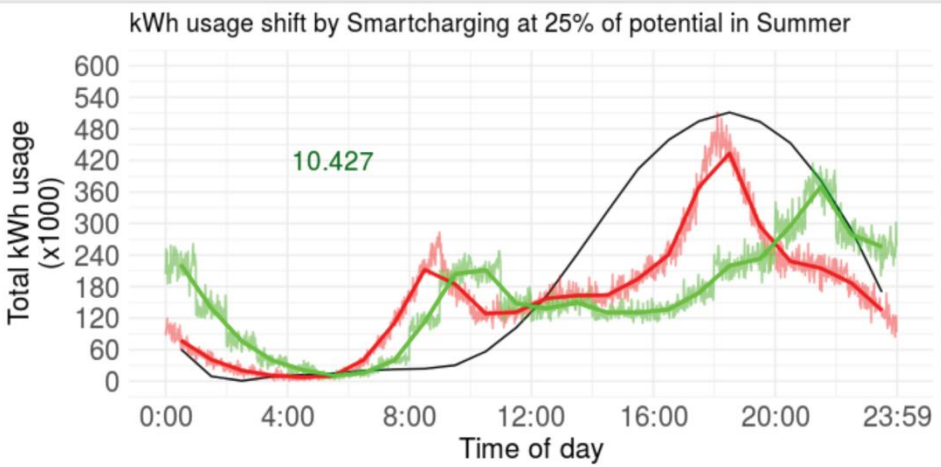


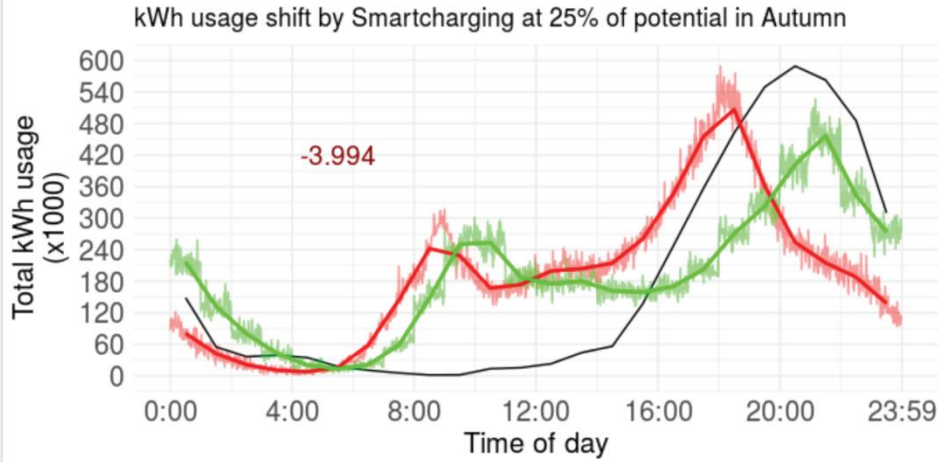
MRA elektrisch

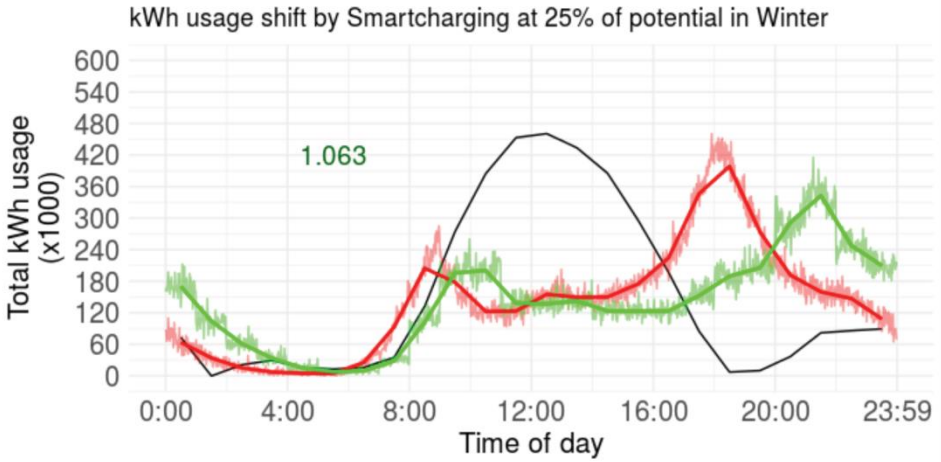


MRA elektrisch









MRA elektrisch

Is stimulating electromobility through investments in charging infrastructure an effective measure to improve air quality ?

- **Acting within local and regional authority**
  - Long-term public transport concessions, freighters, speed limits, neighbouring industry…
- **Combine restrictions with alternatives**
- **Project sets in motion broader developments, preparing for a new system**
  - Commercial business case for public charging infrastructure with acceptable consumer prices and full interoperability
  - Total cost of ownership of e-car for frequent drivers is now better than fossil-car, but often only with fiscal benefits included

How effective is it?

- Monthly 300 MW green energy charged in the MRA region
- At 6 km/kWh this equals 1.800.000 kilometer

- 0,05 gr PM10/km → 90.000 gr PM10 / month
- 0,5 gr NOx / km → 900.000 gr NO / month
- 120 gr CO2 / km → 216.000.000 gr CO2 / month

Related to LIFE investment

- LIFE funding € 570.000
- Within projectperiod 655 MW sustainable energy charged

	kWh	gr PM10	gr NOx	gr CO_2
Regular chargers (6,06% Life)	479.294	138.995	1.389.952	333.588.551
Fast chargers (100% Life)	175.889	51.008	510.078	122.418.744
Total	655.183	190.003	1.900.030	456.007.295

MRA elektrisch

For any further questions,
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