



MISSIE  
**Duurzaam Drenthe**  
REIS MEE NAAR 2040

# Doorbraak: Klimaataansturing met kunstmatige intelligentie “bespaar tot 40%”

Frank Visscher  
Priva ECO







**Wat is de overeenkomst?**

Chess combines the beauty  
of mathematical structure  
with the recreational  
delights of a competitive  
game.

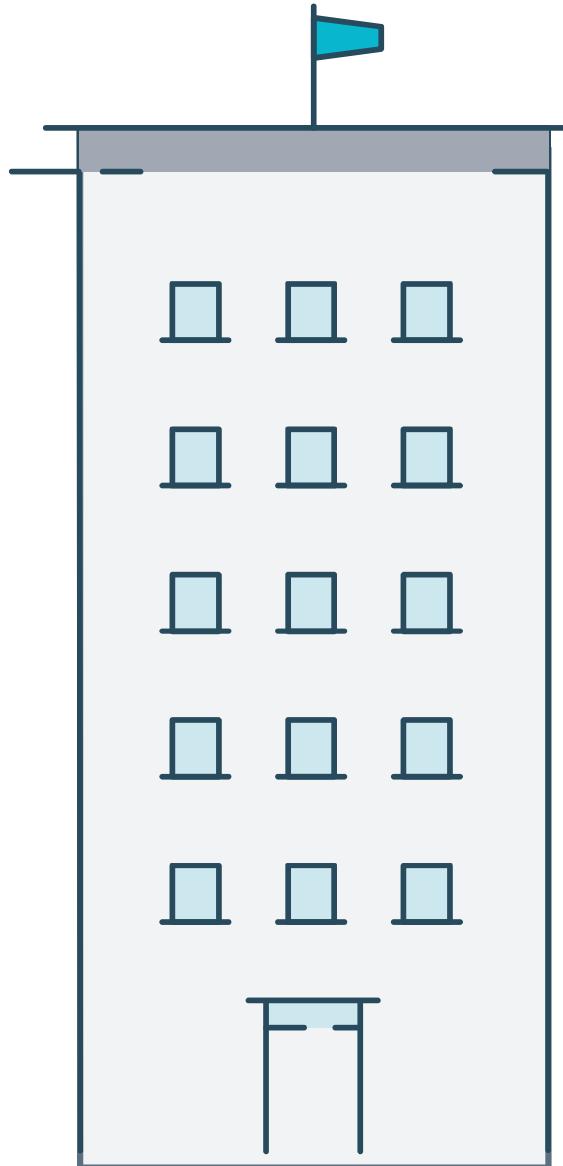
*Martin Gardner*



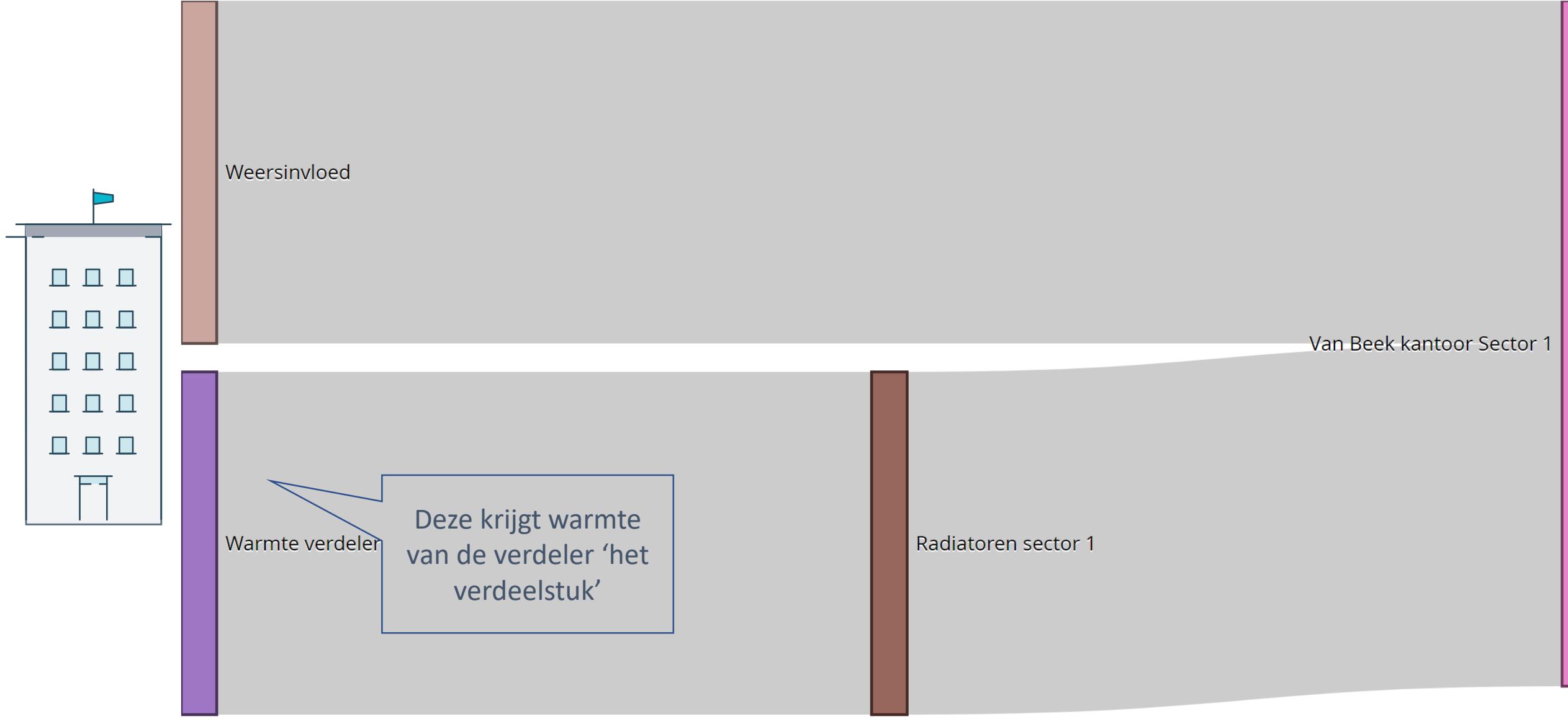


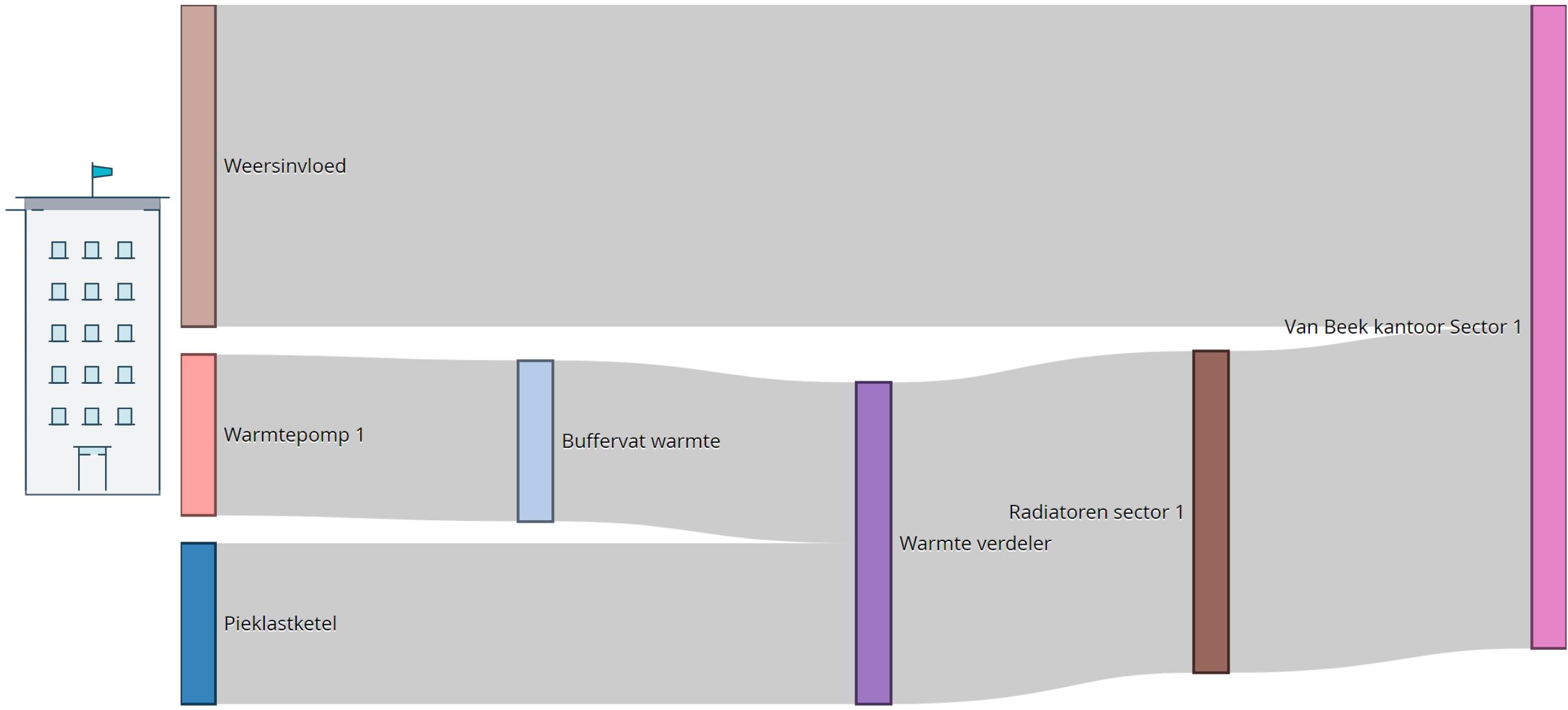
1997; Deep Blue wint van Garry Gasparov

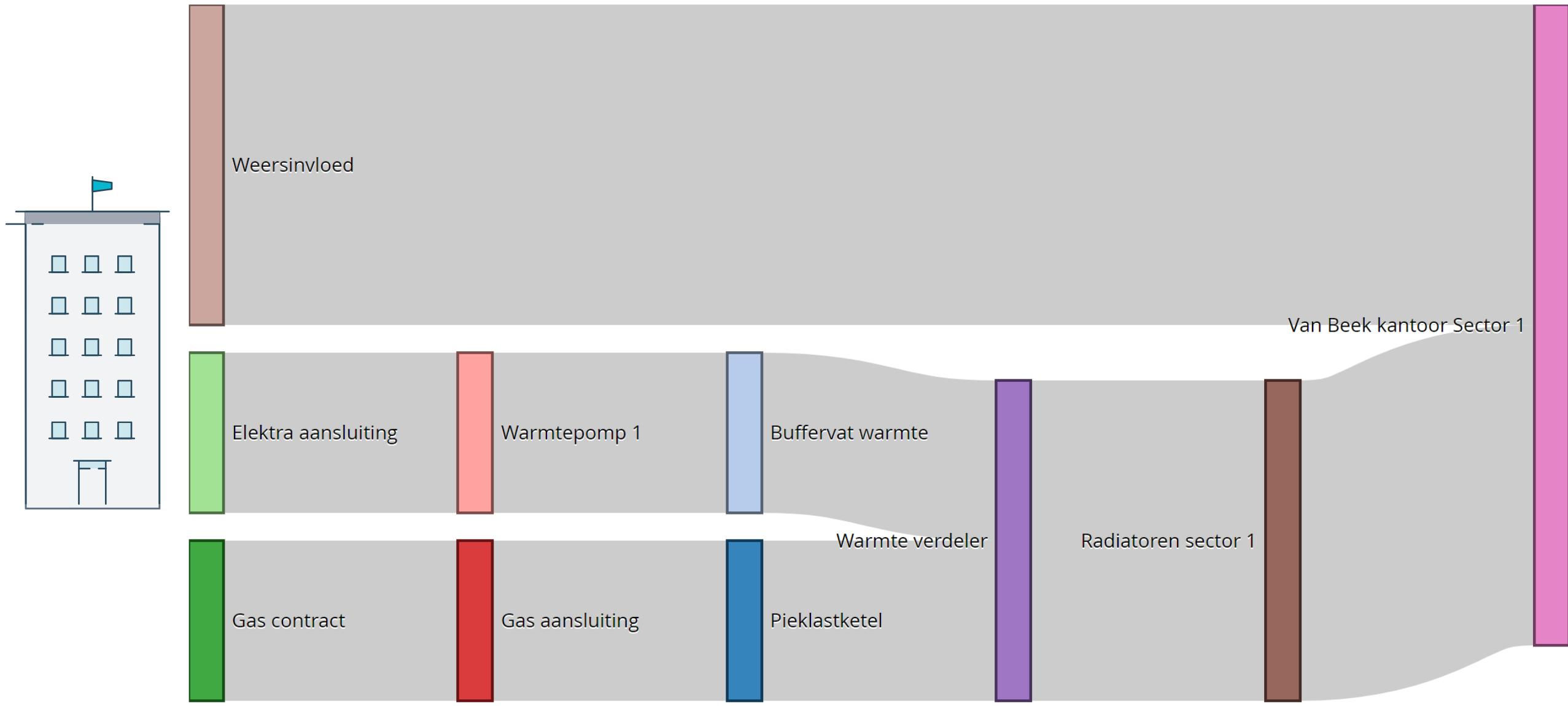


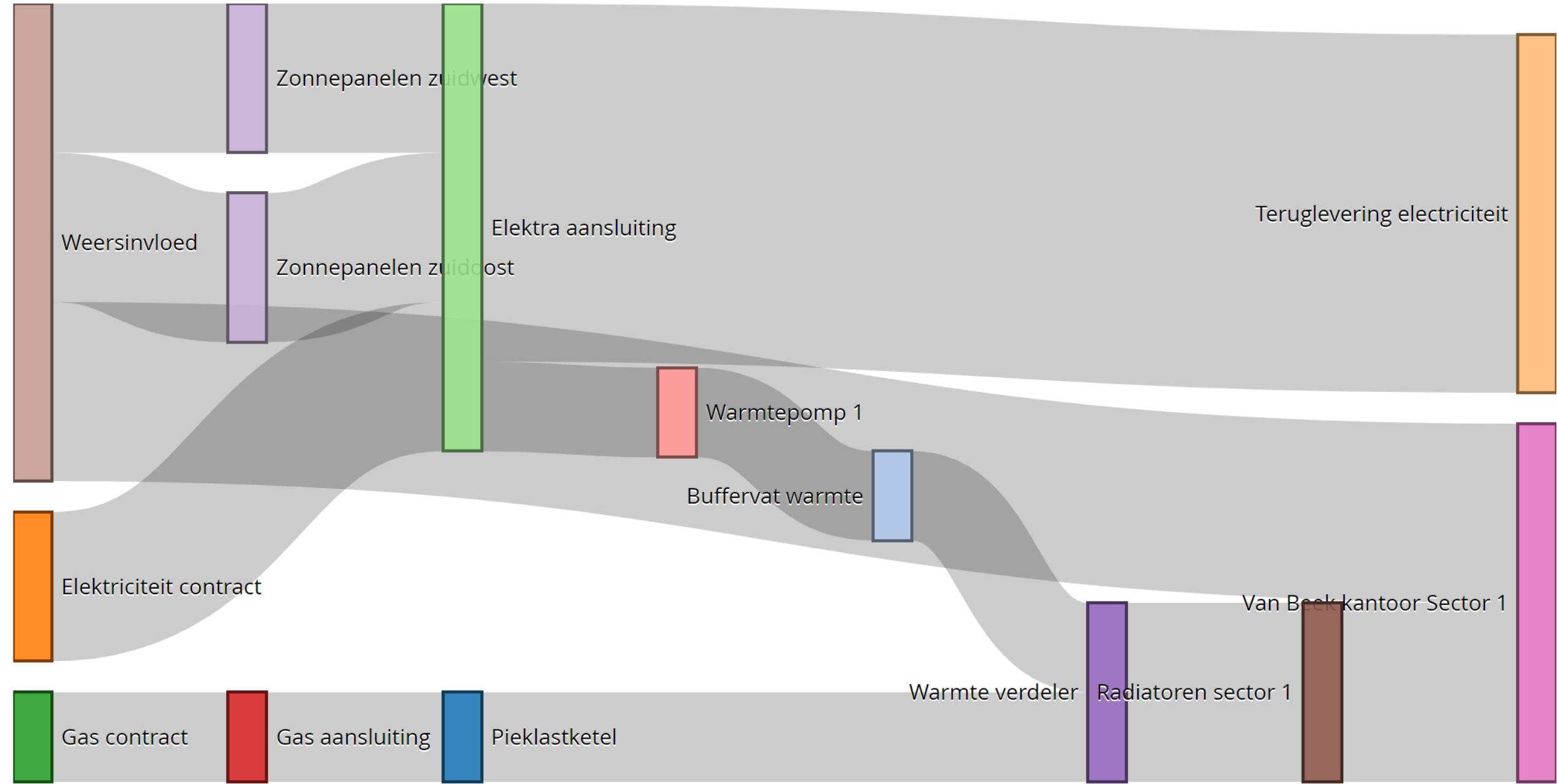




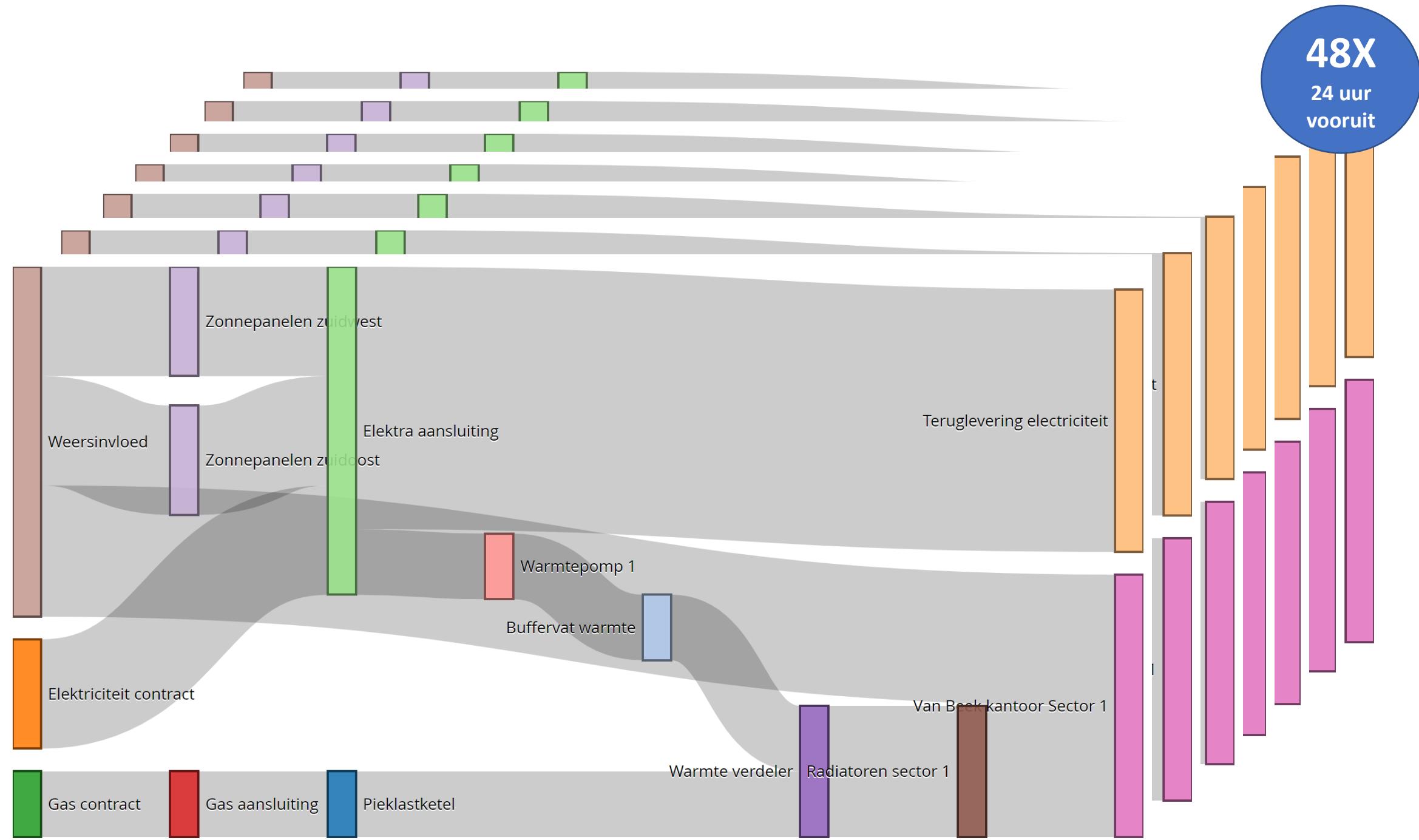








**48X**  
24 uur  
vooruit



# INTRODUCING: PRIVA ECO

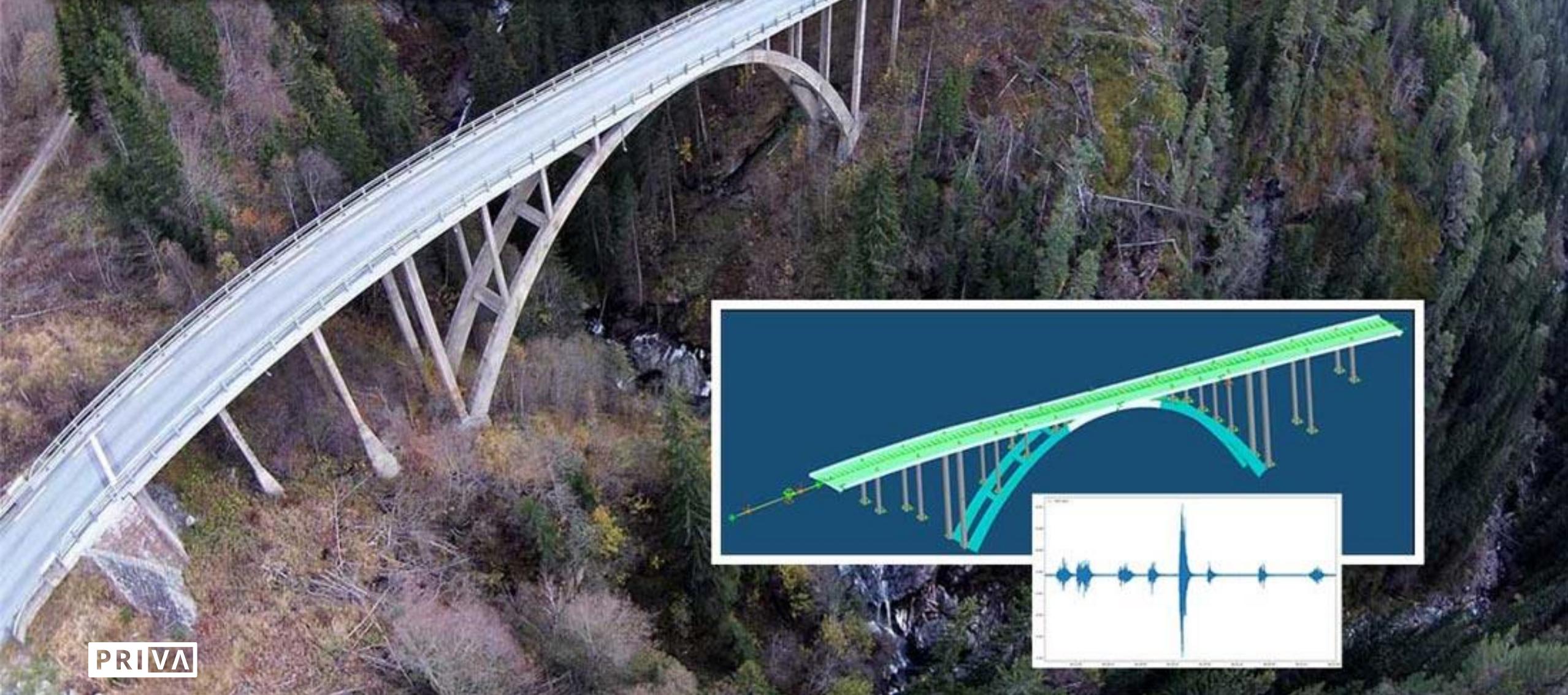


BETTER  
WORKING

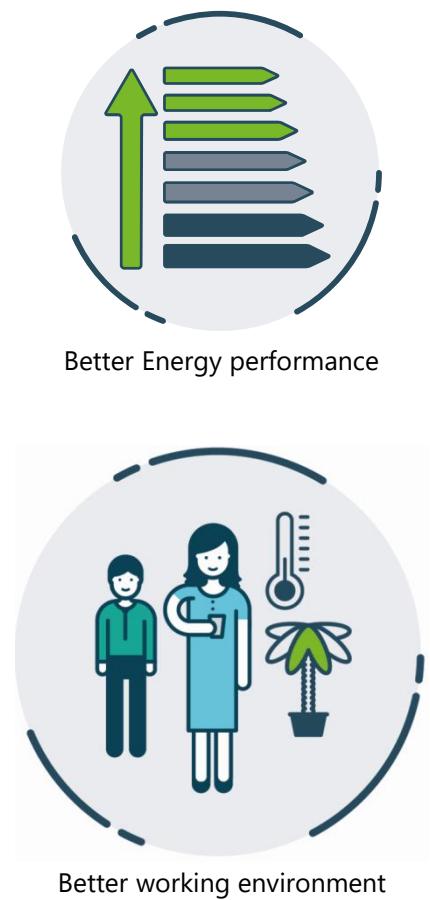
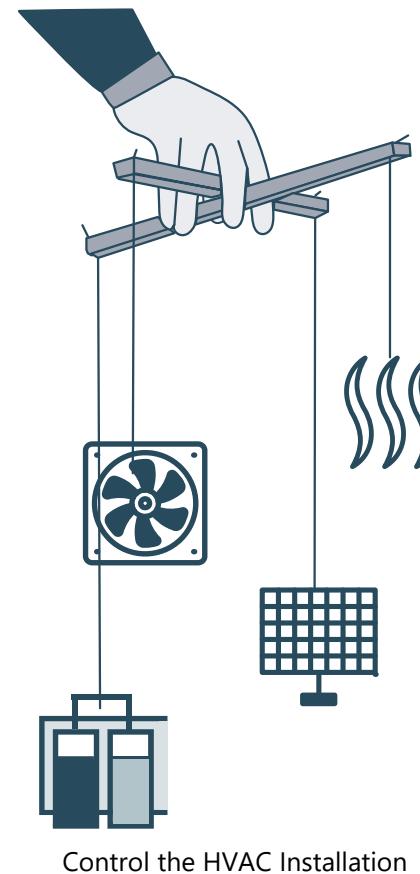
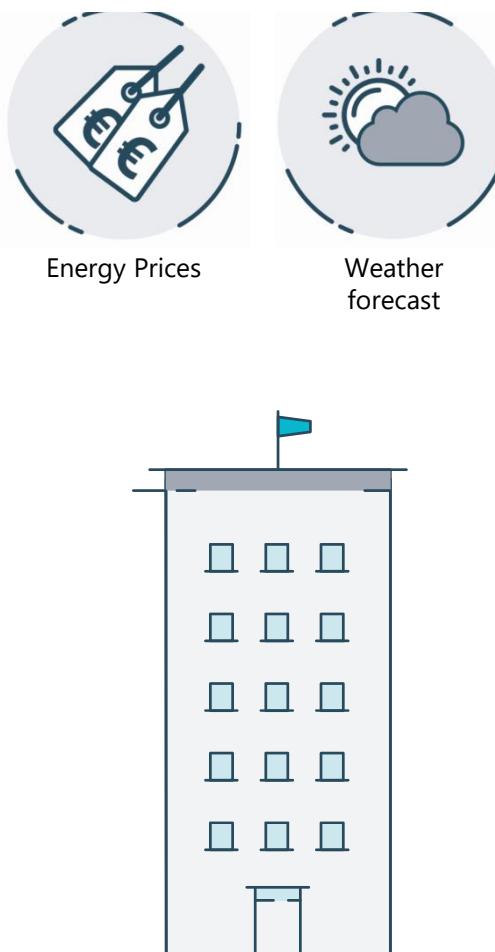
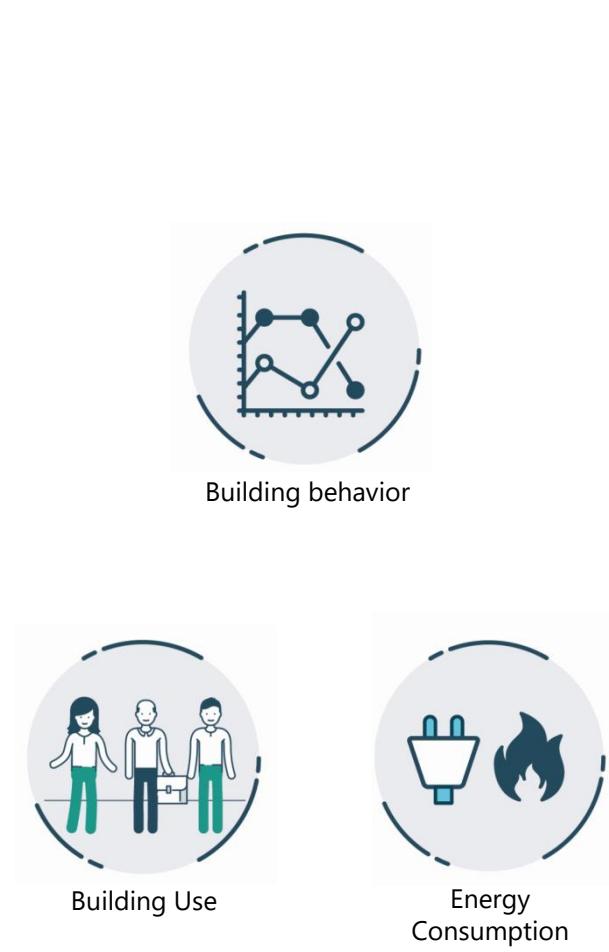


SMARTER  
ENERGY

# Example Of a Digital Twin



PRIVA



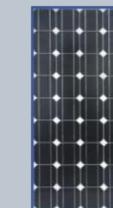


IT'S LIKE RETROFITTING AN EXISTING CAR  
TO BE A SELF DRIVING CAR





## Installation Equipment





## Existing building automation system

**PRIVΛ**

Johnson  
Controls

**Honeywell**

**SIEMENS**

Installation  
Equipment





WIJ WERKEN MET PARTNERS

PRIVΛ ECO



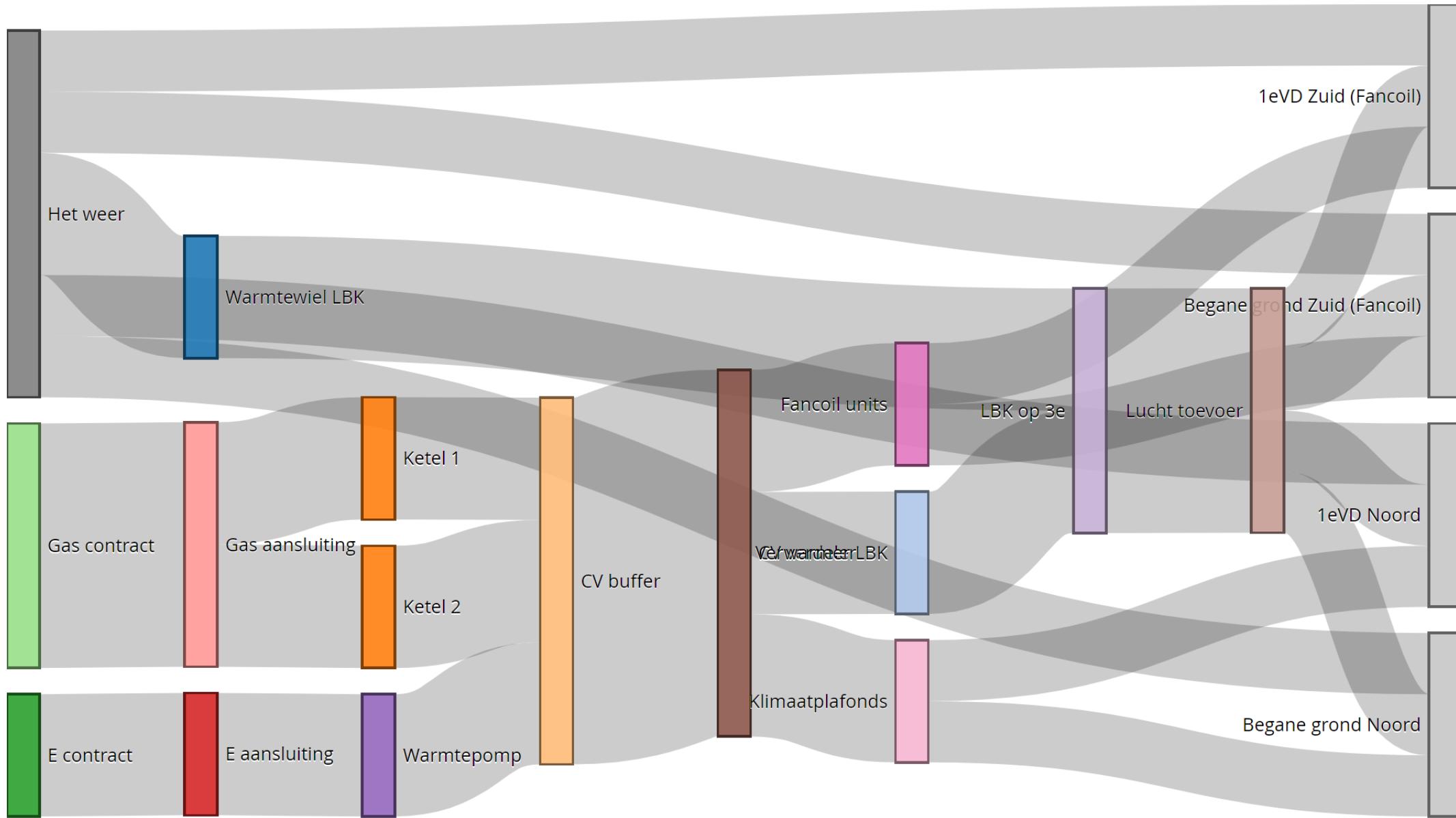
*More partners will follow in Q1 2020*

# IMPLEMENTATIE; VOORBEELD 'ANDRÉ DUMONT'

PRIVΛ ECO





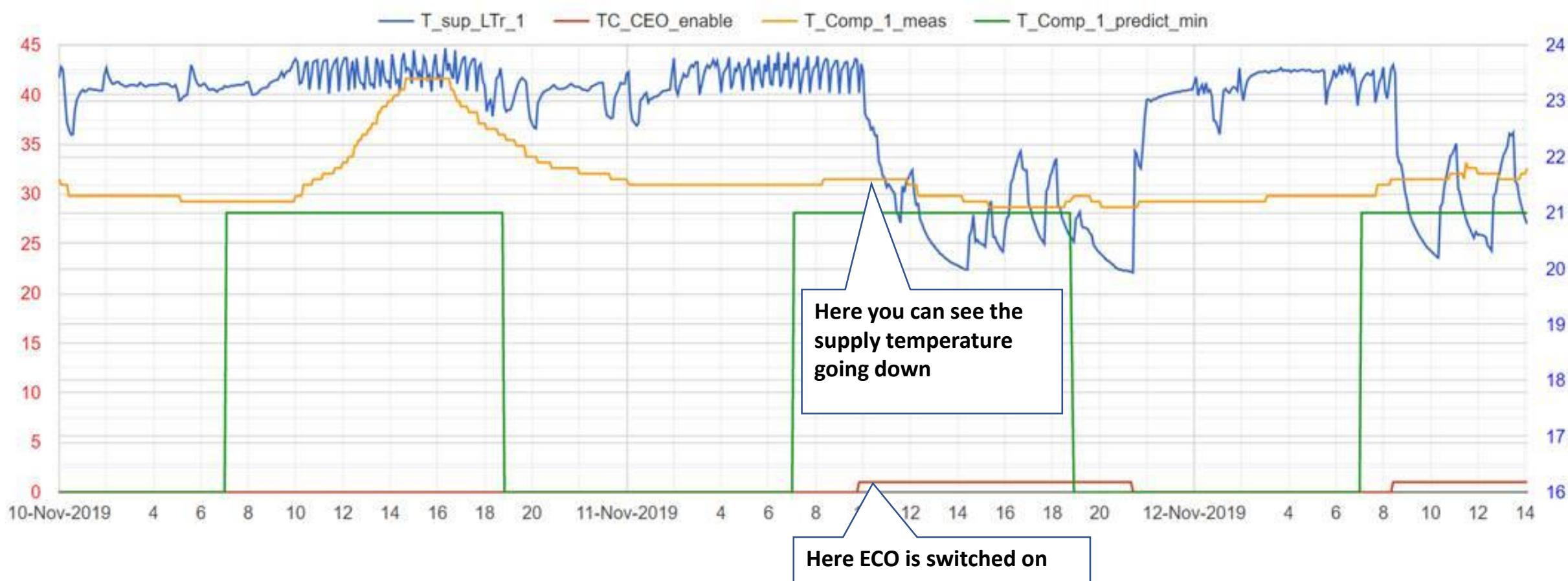




Date From: 10/11/2019 00:00 Date To: 12/11/2019 23:59 Interval: 5m Show

Attributes left: T\_sup\_LTr\_1, TC\_CEO\_enable Search... Attributes right: T\_Comp\_1\_meas, T\_Comp\_1\_predict\_min Search... Height: (500px)

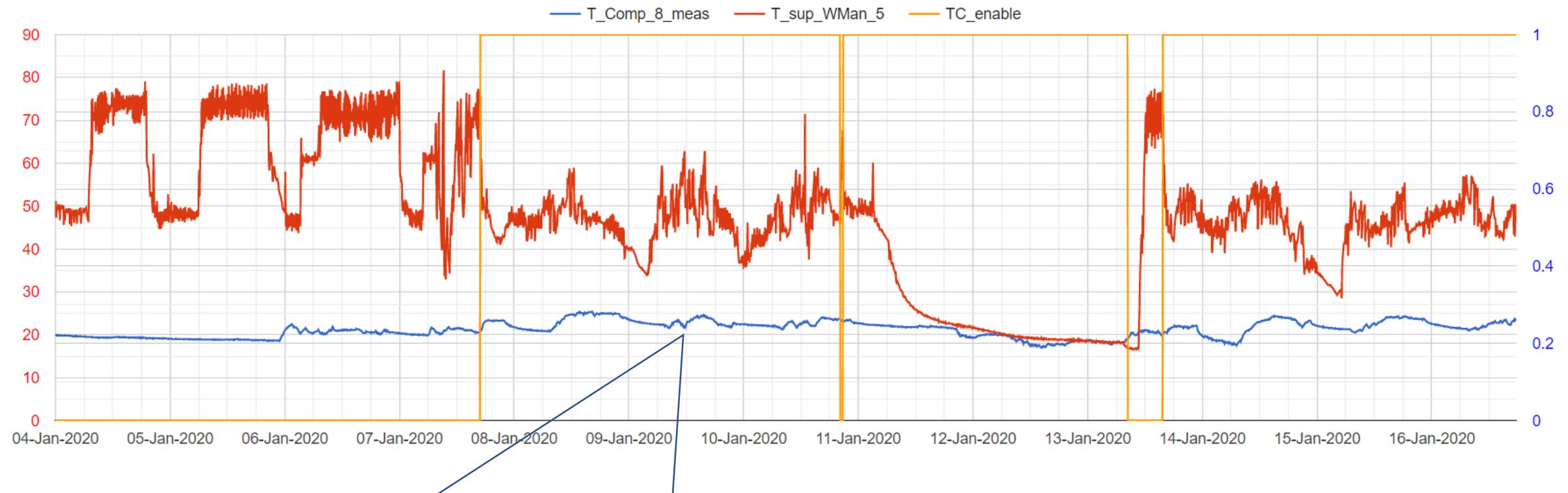
Results 10 November 2019 00:00 - 12 November 2019 23:59



Date From  Date To  Interval

Attributes left  Attributes right  Height

Results 4 January 2020 00:00 - 16 January 2020 23:59



Same as the previous page; Every time when ECO is turned on the temperatures on the manifold is pushed down. In the blue line you can see that the zone temperature stays comfortable on the same level.

**Lower temperature means saving energy, with the same temperature in the zones**

# VOORBEELD RE-COMMISSIONING

PRIVÀ ECO

## Situatie:

- Vloerverwarming
- Betonkern activering
- Luchtbehandeling

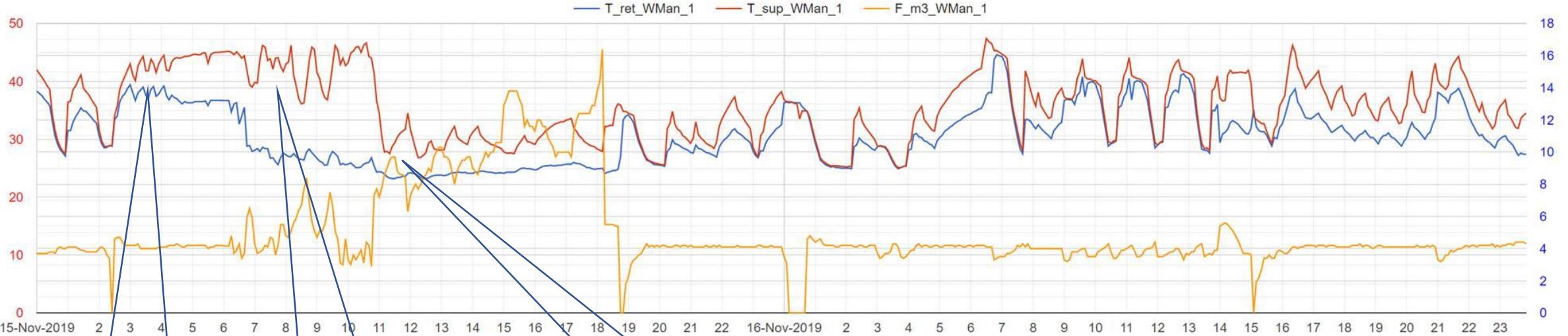
## Legenda:

- Blauw: verdeelstuk retour temp.  
Rood: Verdeelstuk aanvoer temp.  
Oranje: Verdeelstuk flow (m3)

Date From  Date To  Interval  Show

Attributes left  Attributes right  Height

Results 15 November 2019 00:00 - 16 November 2019 23:59



Te hoog vermogen ingevuld (80 KW) bij vloerverwarming waardoor WP te hoge temp maakt (slecht voor rendement). Op gele lijn zie je laag aantal m3 water over verdeelstuk

Hier komen LBK bij en kan WP beter zijn warmte kwijt en zakt de retour temp. en lopen aantal m3 op

Hier vermogen van vloerverwarming naar 40 KW gebracht en dan zie je dat WP minder warmte maakt (hoger rendement, minder verlies)

# REFERENCE PROJECTS

P R I V A E C O



Partner: None (Priva direct)

Project: Goldbeck office in Bielefeld

Details: Gas heat pump, floor heating and air handling units

Result: over 6 weeks 53% savings\* compare to last year

P R I V A



Partner: Vitani

Project: PostNord, Silkeborg, Denmark, 4.100 m<sup>2</sup>

Details: Distribution centre with two floors of offices and three main sorting areas; letters, parcels and commercial post.

District heating, 3 radiator groups, 4 air handling units.

Result: over 14 weeks 43% savings\* compare to last year

VITANI



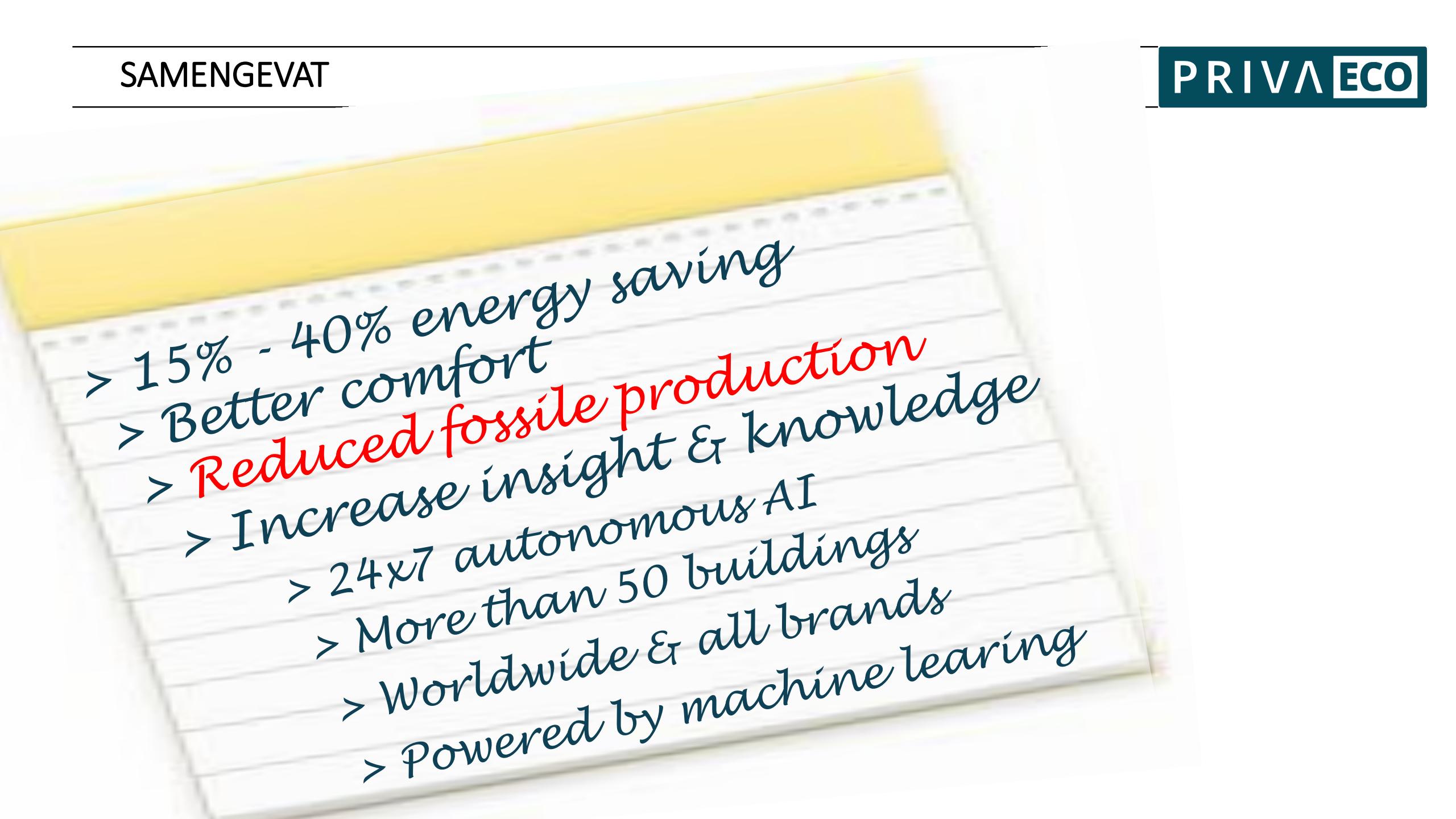
Partner: Cloud Energy Optimizer

Project: Local Townhall, 4.250 m<sup>2</sup>

Details: Gas boilers, Heat pumps, solar panels

Result: +/- 30% savings on HVAC

cloud  
**ENERGY**  
optimizer

- 
- > 15% - 40% energy saving
- > Better comfort
- > **Reduced fossile production**
- > Increase insight & knowledge
- > 24x7 autonomous AI
- > More than 50 buildings
- > Worldwide & all brands
- > Powered by machine learning



Sustainable Urban Delta  
Powered by Priva ECO