



Antwerp's Climate Plan: working towards a climate neutral and robust city

thédate

5 November 2025

Agenda

1

Introduction

2

Climate mitigation & EU Mission

3

Antwerp's vision on water

4

Antwerp's vision on heat



Antwerpen
voor Klimaat

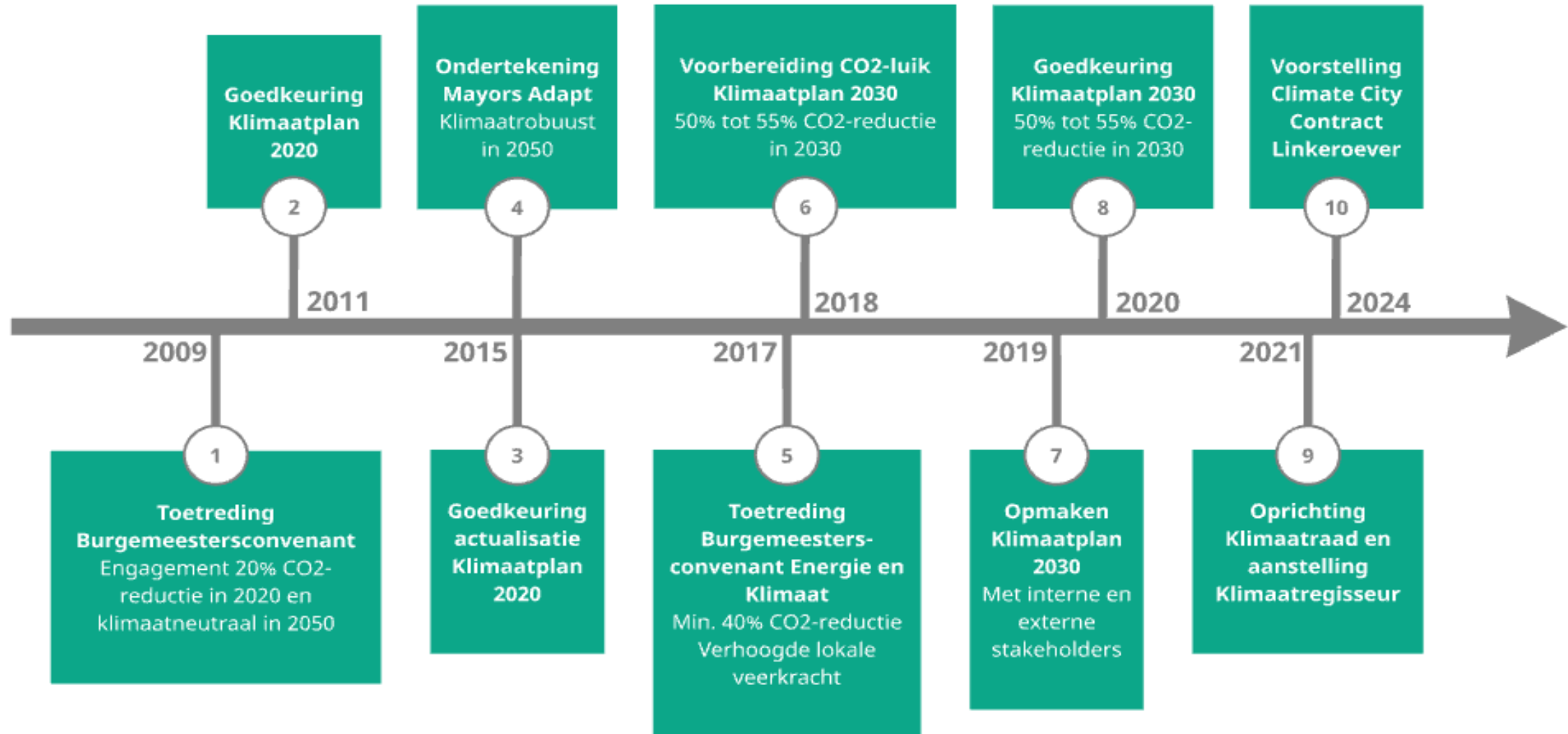
Introduction



© Victoriano Moreno

City of Antwerp Section on Climate & Environment

Timeline – Climate policy in Antwerp



Antwerp Climate Action Plan

- Climate mitigation
 - 1. Living energy efficient
 - 2. Towards a 50/50 Modal Split
 - 3. Energy efficient companies and industry
 - 4. Renewable energy & sustainable heating
- Climate adaptation
 - 5. A climate safe city
 - 6. Making space for adaptation
 - 7. Circular City
 - 8. Lead by example
 - 9. Climate Governance





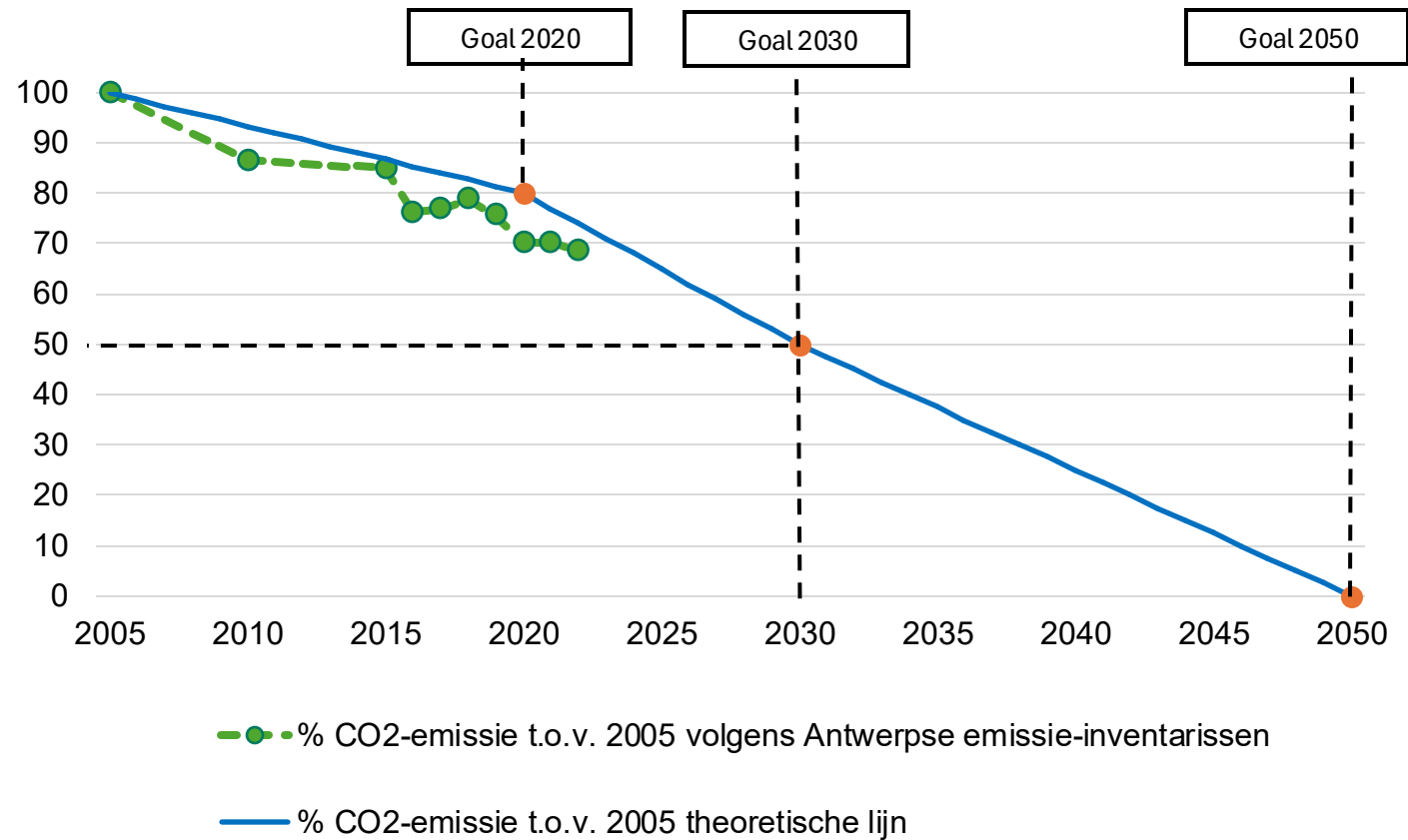
Climate Mitigation

Towards climate neutrality by 2050

Climate Action Plan 2030 - Ambition

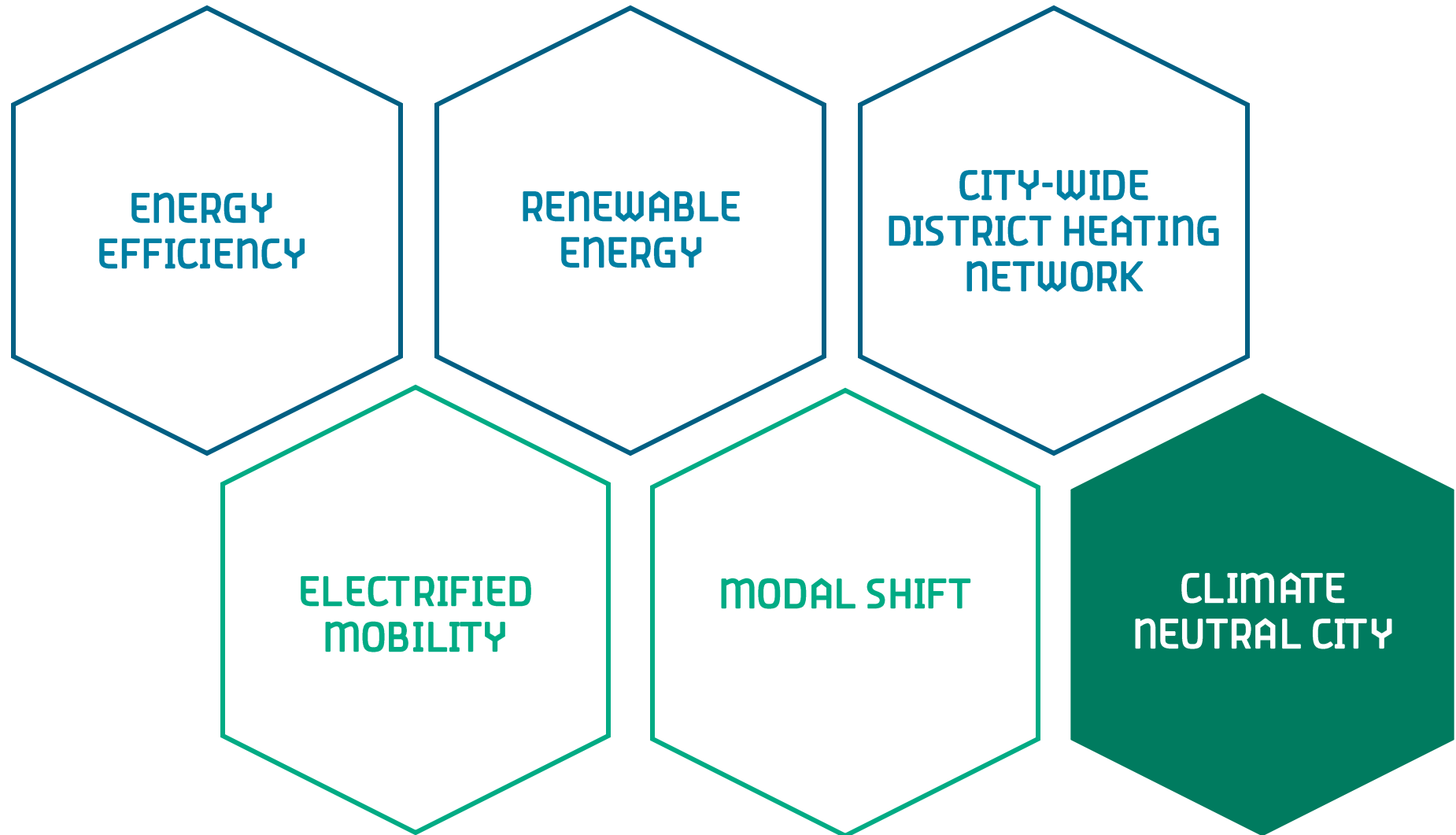


CO₂ reduction path 2005 - 2050



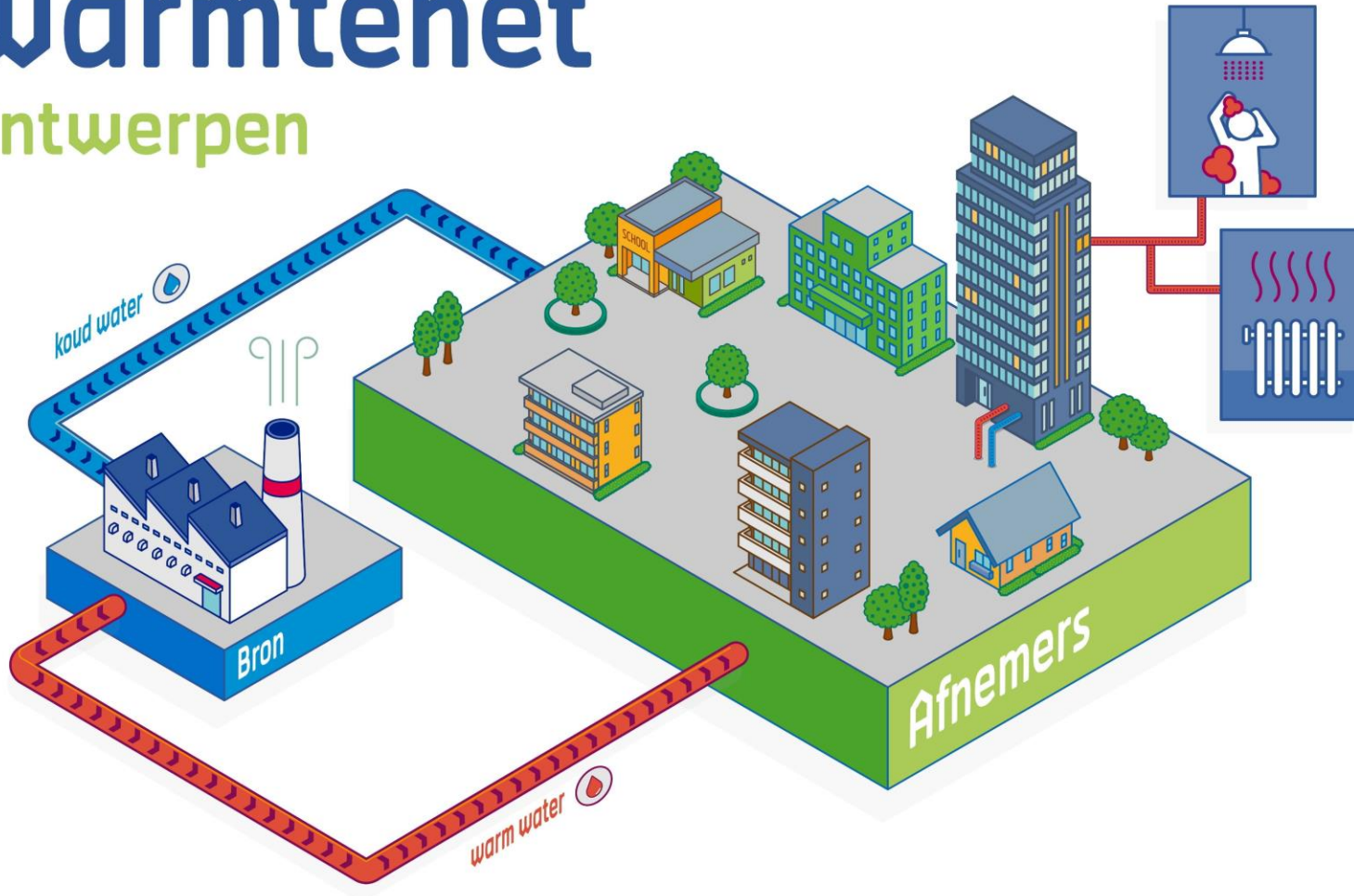
(Bron: Emissie-inventaris 2022 Stad Antwerpen)

Mitigation – main topics



Choosing a district heating network

Warmtenet Antwerpen



71 kton CO₂
reduction by 2030
= 30.000 housing
equivalents

- ✓ Unburdening citizens
 - No individual boiler but a collective system
 - Reliable
 - Space-saving
- ✓ Less CO₂ emissions
- ✓ Heat recovery



Climate Neutral Left Bank 2030

EU Mission Linkeroever and Climate plan 2030

Climate-Neutral
By **2030**

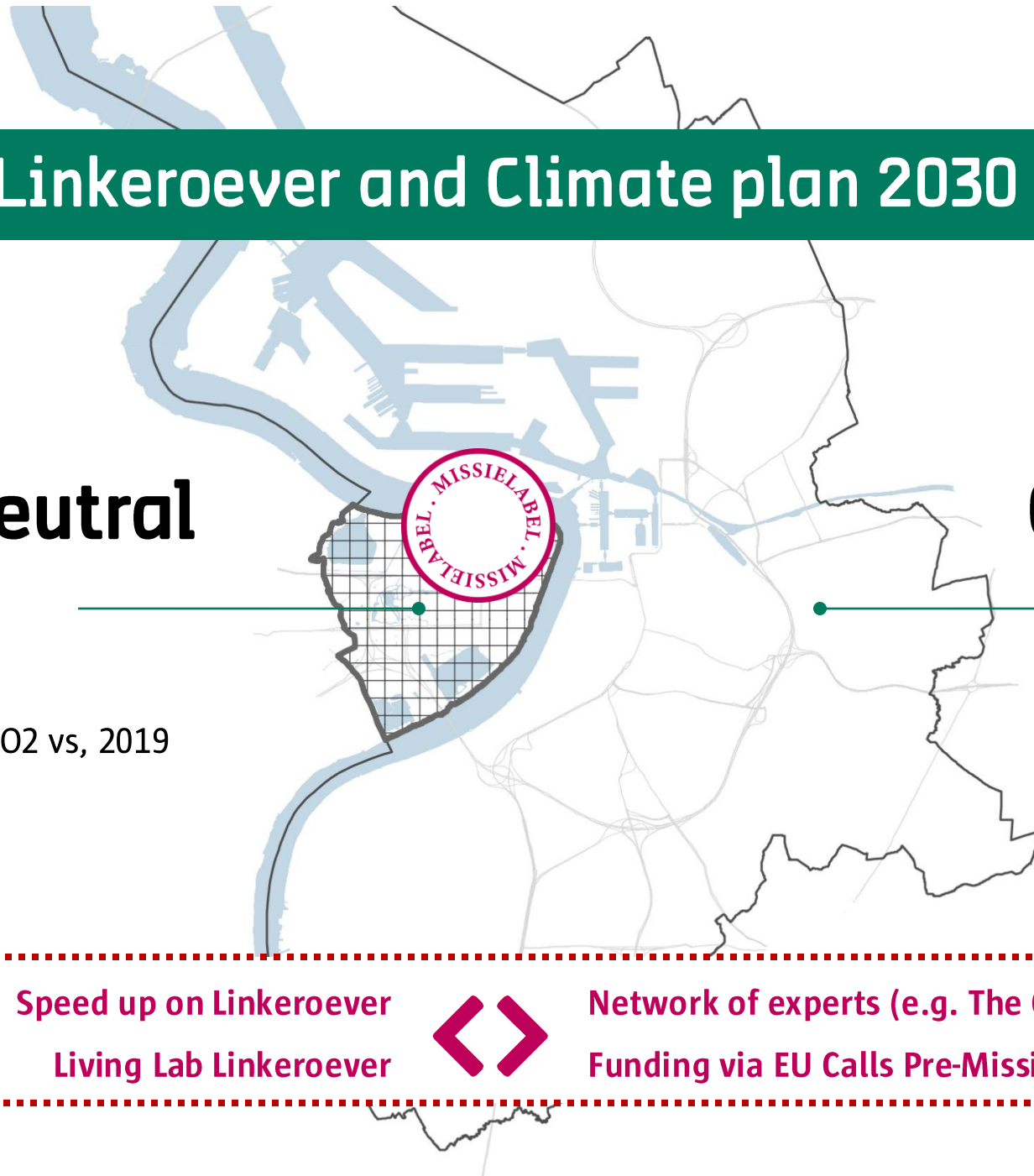
80% reduction CO2 vs, 2019

Speed up on Linkeroever
Living Lab Linkeroever



Network of experts (e.g. The Capital Hub)
Funding via EU Calls Pre-Mission Cities

Climate-Neutral
By **2050**



Main focus Antwerp Mission: Breakthrough projects



Realisation of a district heating network on residual heat



Renovation apartment buildings



Scaling up renewable energy

Fossilfree Mobile Energy Hubs ‘Hot Wheels’

New investment grant for apartment buildings

New investment grant for landlords

Discount on property tax for fossil free buildings

Long term financing of collective renovation

Solar Broaker

Deployment of new breakthrough projects trough Antwerp climate fund:

- Building integrated PV
- Virtual Power Plant
- Heat pumps as a service
- ...



Climate Adaptation

Towards climate robustness by 2050

**(pluvial and fluvial)
FLOODING**

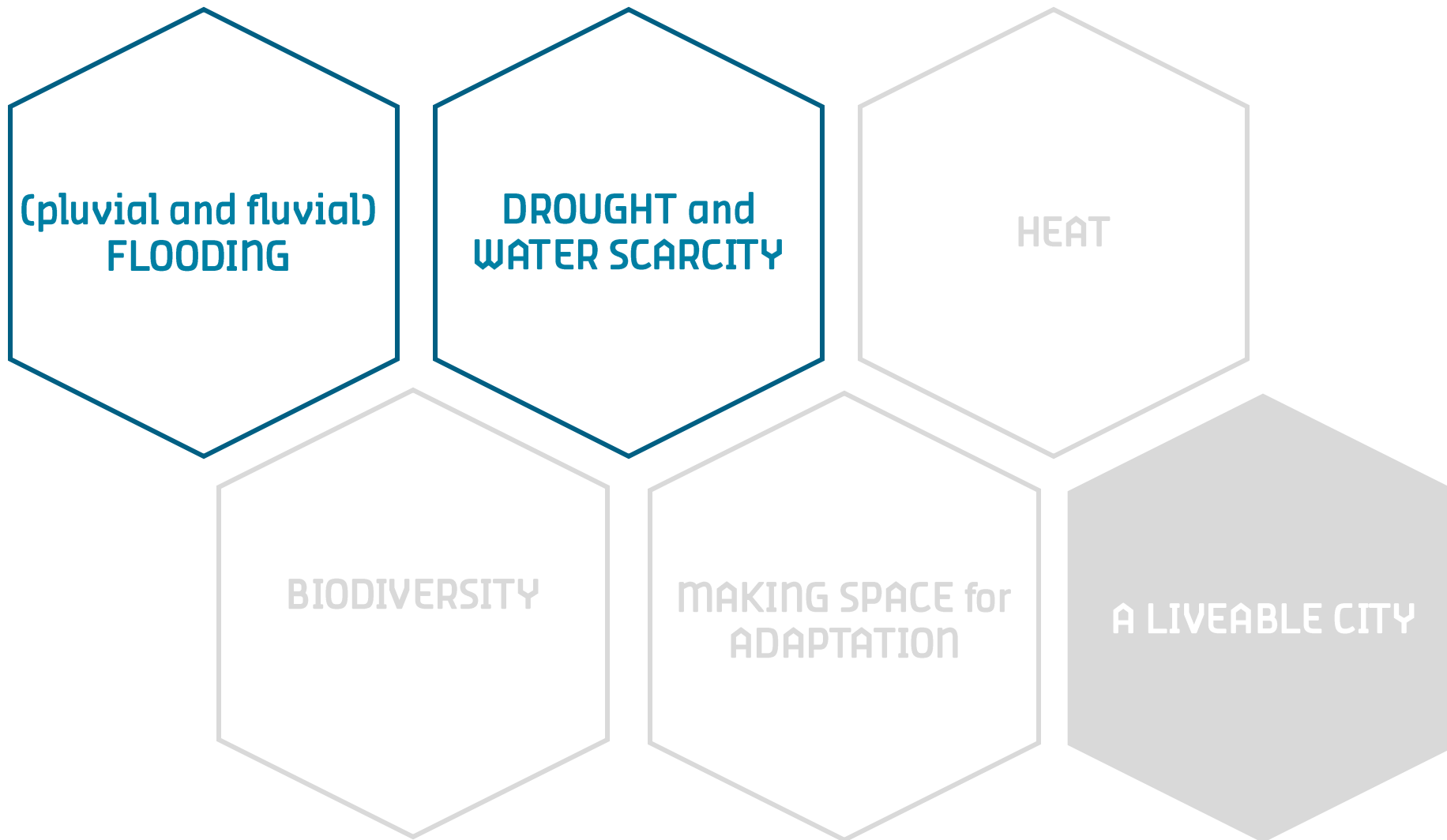
**DROUGHT and
WATER SCARCITY**

HEAT

BIODIVERSITY

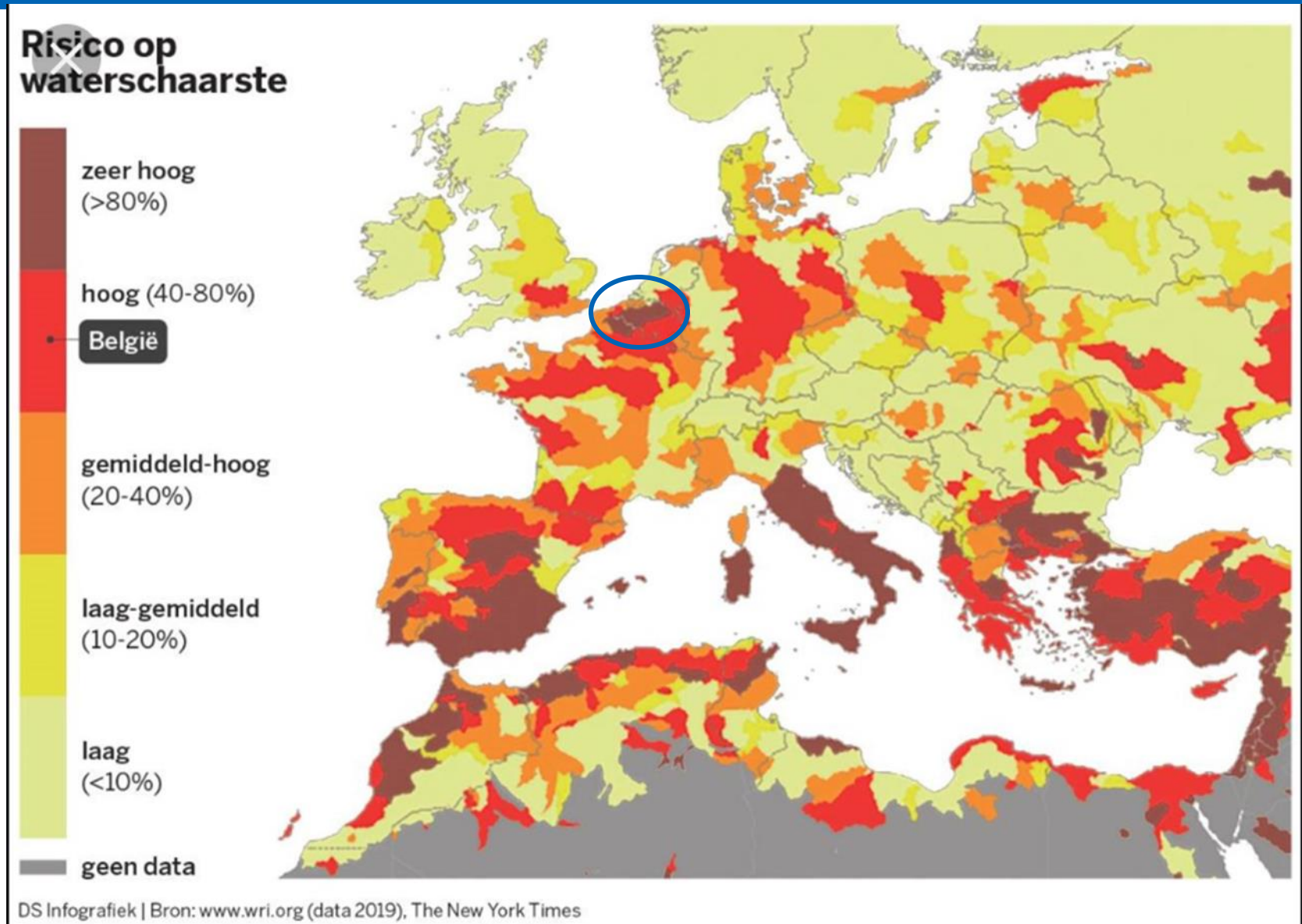
**MAKING SPACE for
ADAPTATION**

A LIVEABLE CITY



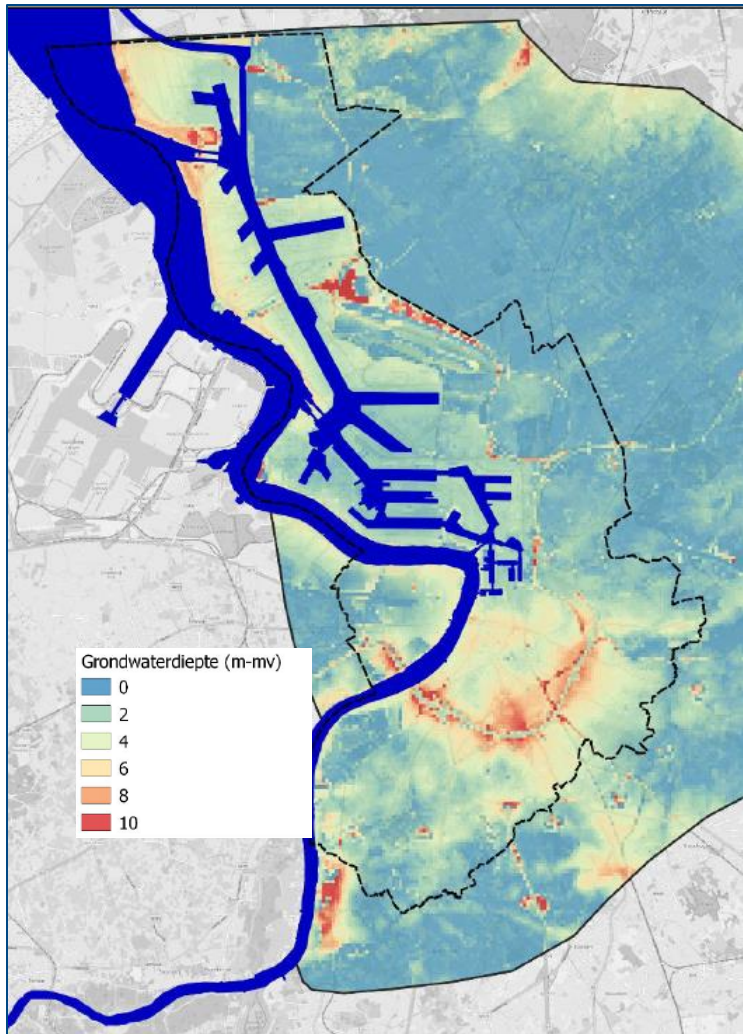
Drought and water scarcity

Belgium - a rainy
but water scarce
region

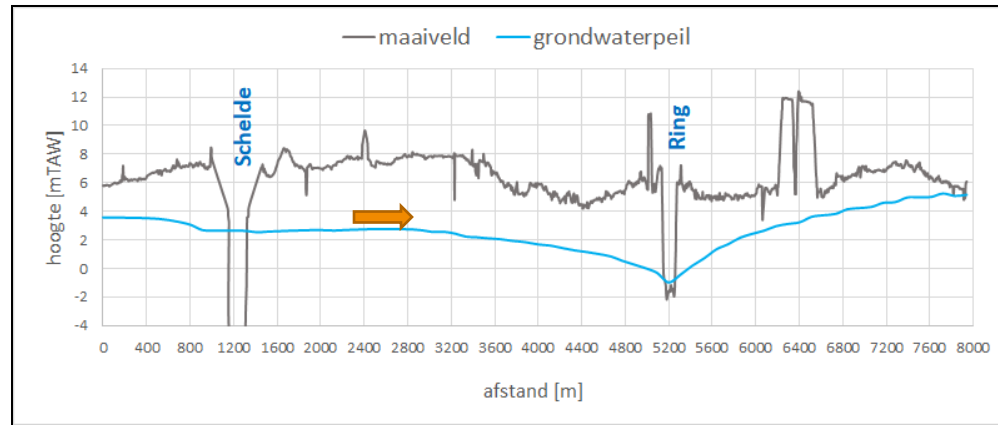


Drought in Antwerp

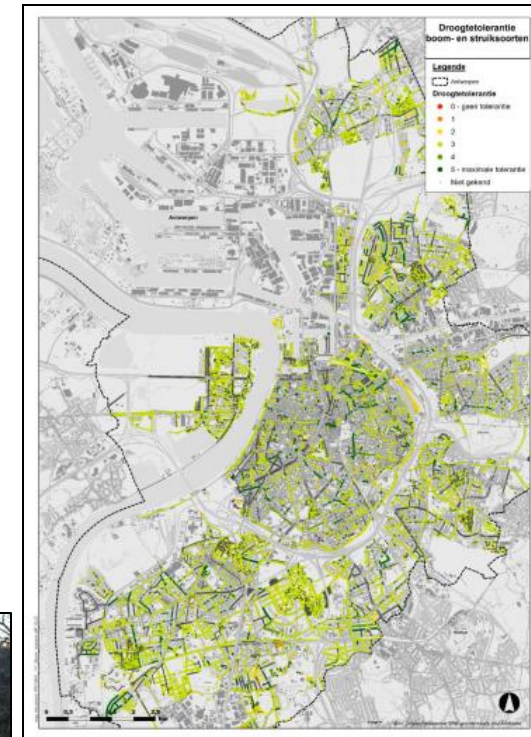
Low groundwater levels



Risk of salt intrusion



Health of trees and urban green spaces



Dry ponds



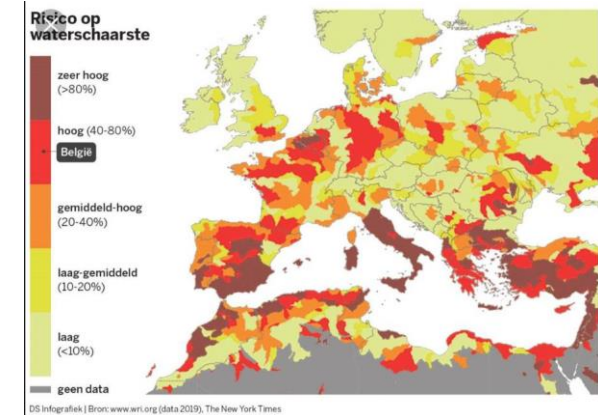
City's need for water

Strategic irrigation of green areas, including in public spaces

Potential: 1,2 million m³/year



© Stad Antwerpen



Replenishment of main ponds (and ground water)

Potential: 4,5 million m³/year



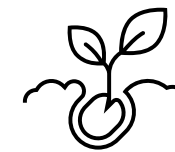
© Stad Antwerpen



© Stad Antwerpen

Residential water use for toilets, washing machine, garden, ...

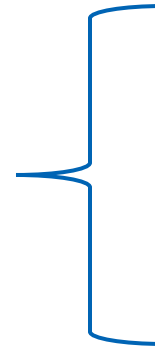
Potential: 12 million m³ / year



Vision on circular water

Solution 1: Reuse of rainwater

- Individual rainwater reservoirs
- Collective rainwater reservoirs



Rainwater on roofs
13,5 million m³ / year

Rainwater on roads
11,8 million m³ / year

Solution 2: Circular water network

- To use permanent low quality water sources



Permanent groundwater drainage
4 million m³ / year

Treated wastewater
20 million m³ / year

Solution 1: Reuse of rainwater – reuse roof water

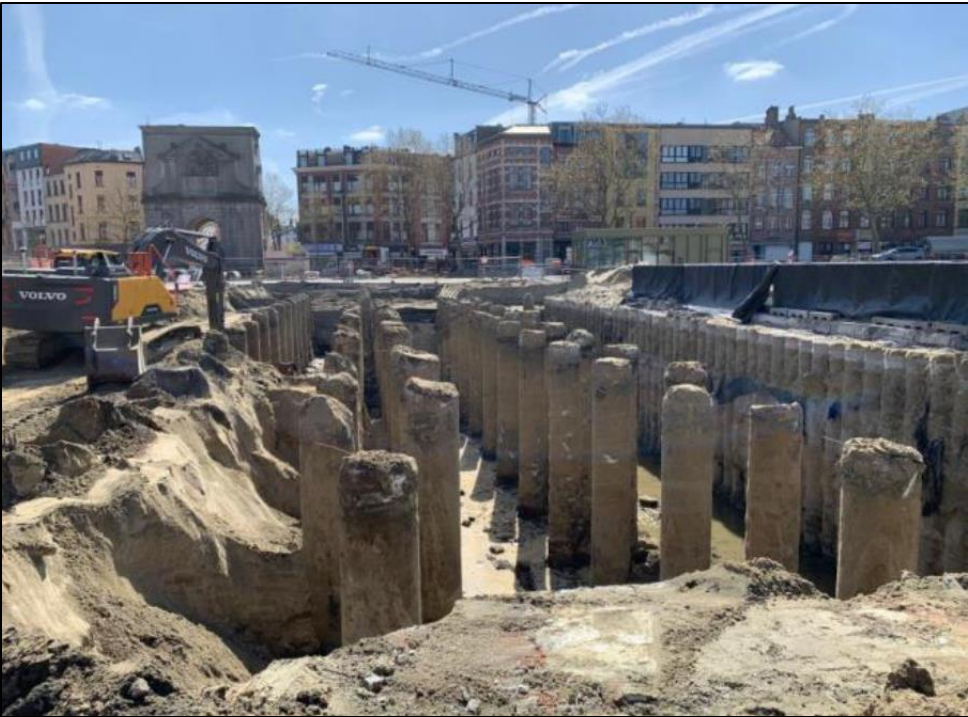
Individual
Rainwater reservoirs



City rainwater reservoirs



Collective rainwater reservoir
South Park



Solution 2: Circular water network

Low quality water sources

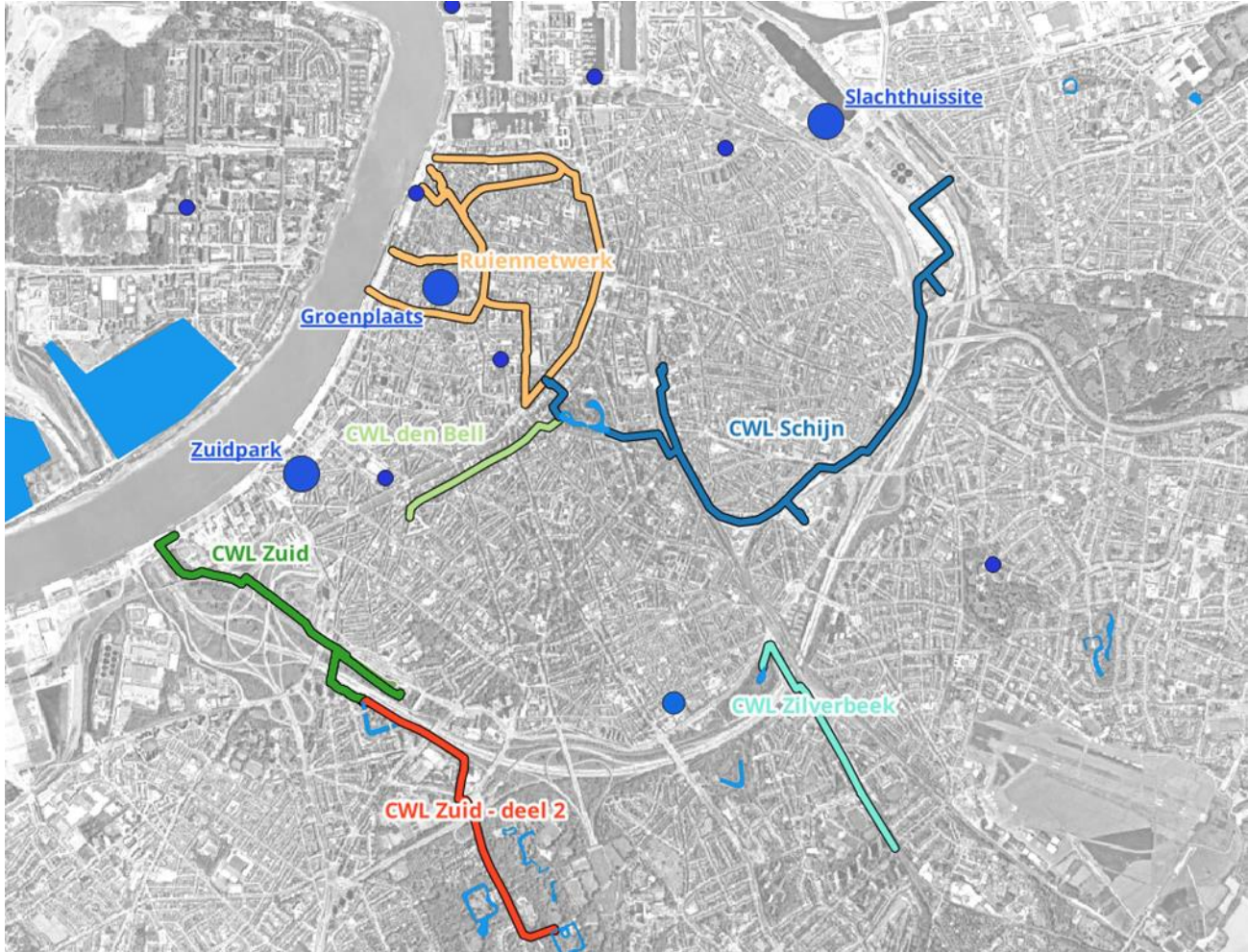
Permanent groundwater drainage



Treated wastewater



Network of circular water pipes



© Stad Antwerpen



(pluvial and fluvial)
FLOODING

DROUGHT and
WATER SCARCITY

HEAT

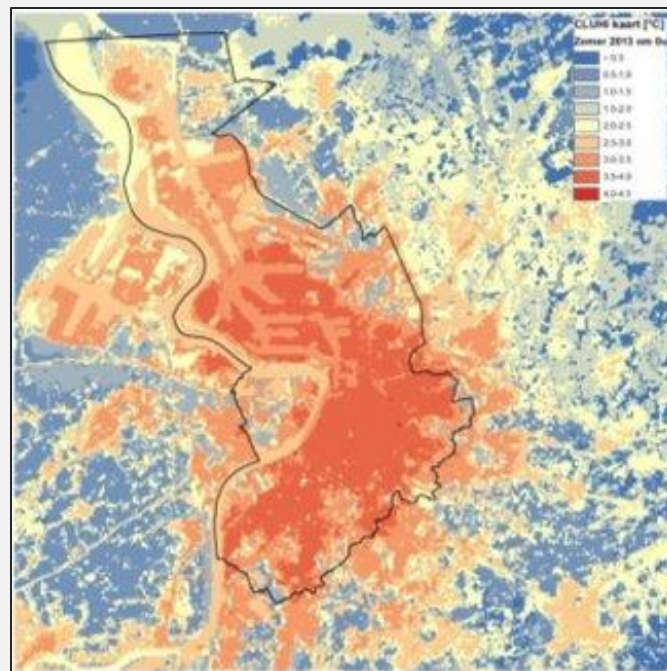
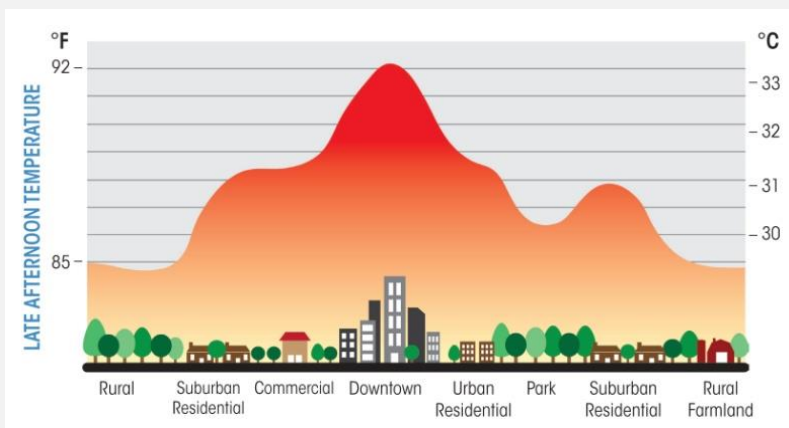
BIODIVERSITY

MAKING SPACE for
ADAPTATION

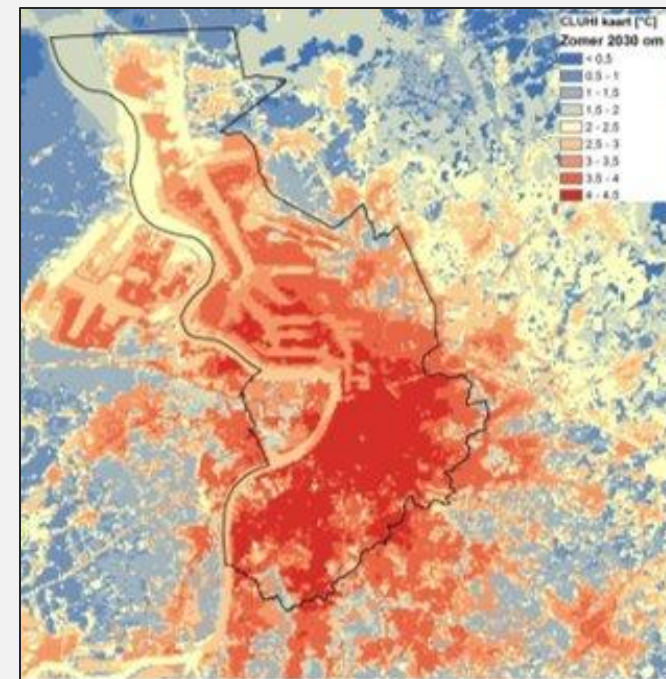
A LIVEABLE CITY

Urban heat island effect (UHI)

- Global temperature is rising
- In addition, nighttime temperature in the city will be higher because of **UHI**
 - Today t°-difference at night = **4 to 9°C**
 - in 2030 effect + **50%**



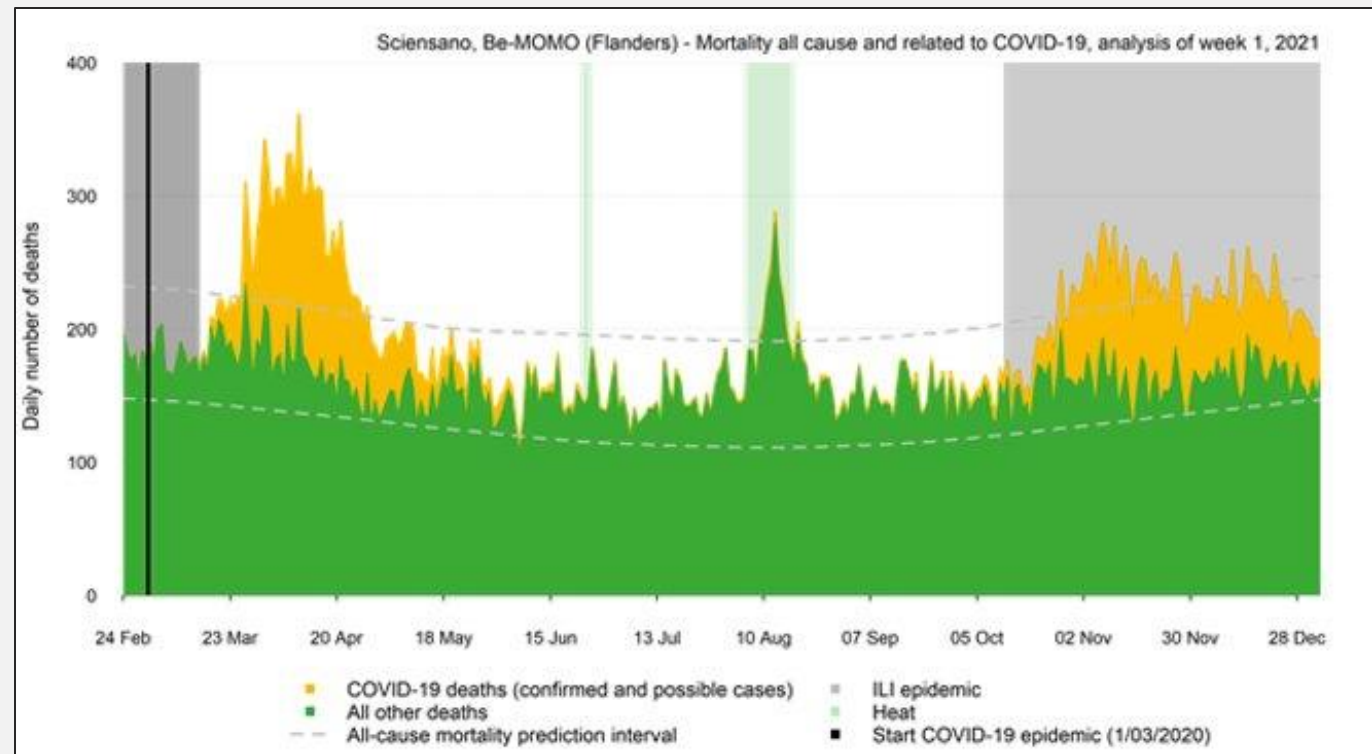
2013



2030

Heat stress

- Health and wellbeing – more hospital admissions and deaths (+- 2000 in Flanders in 2021)
- Especially children (< 4 year), elderly (> 65 year) and people with preexisting conditions
- Excess mortality heat stress ~ Covid

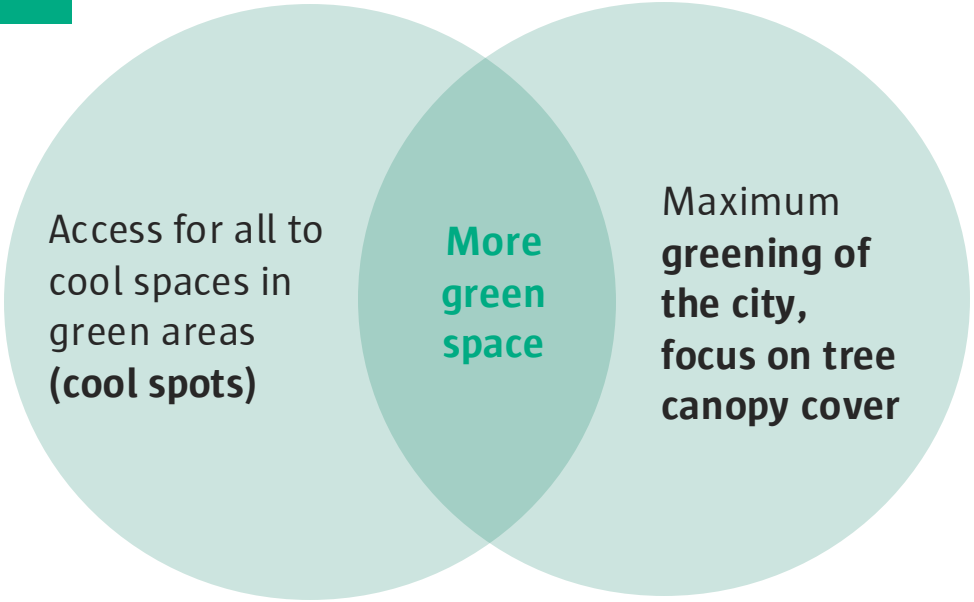


Bron: Sciensano

Double focus on heatstress

Antwerpen kan zichzelf verkoelen bij hitte

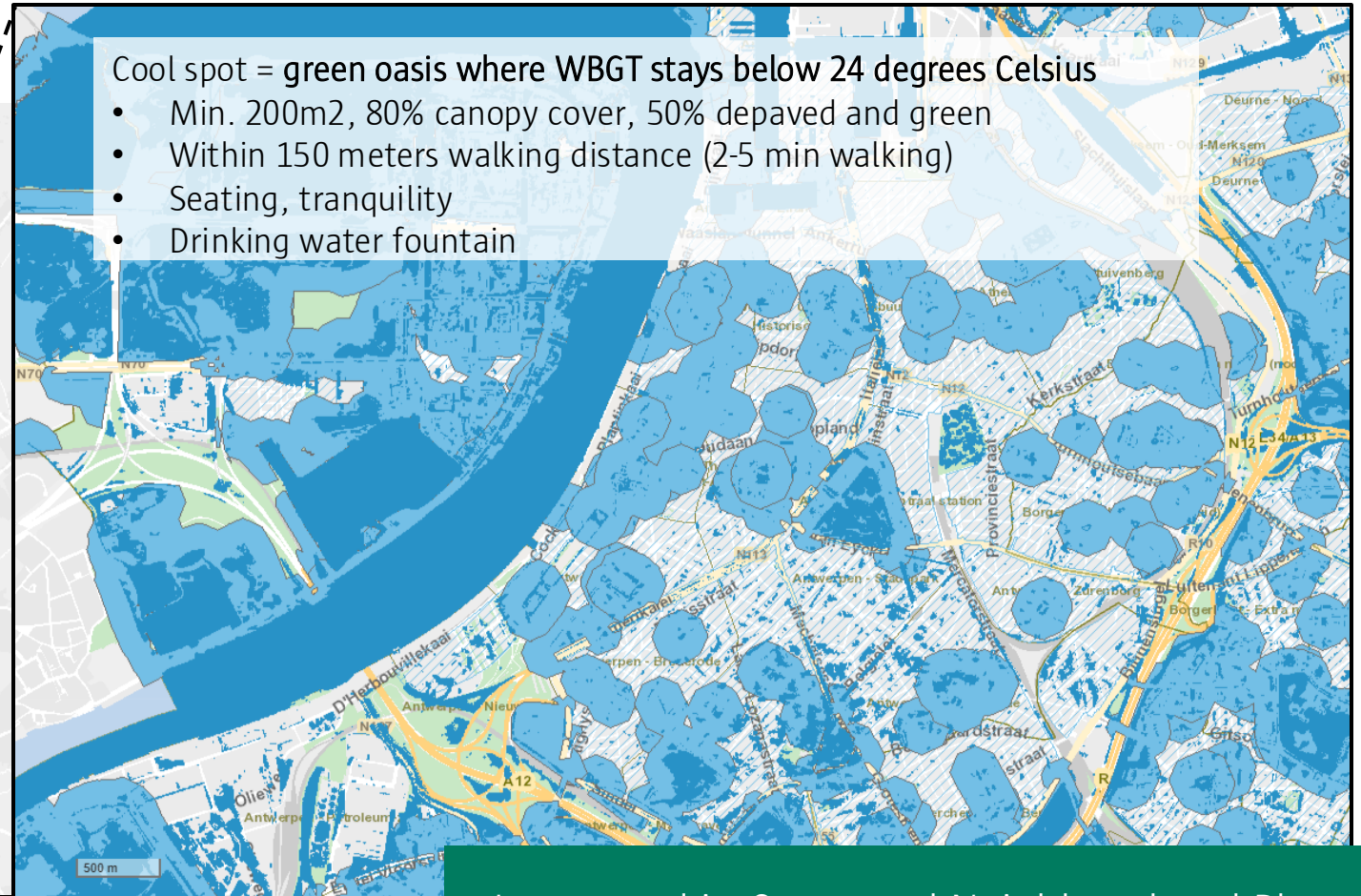
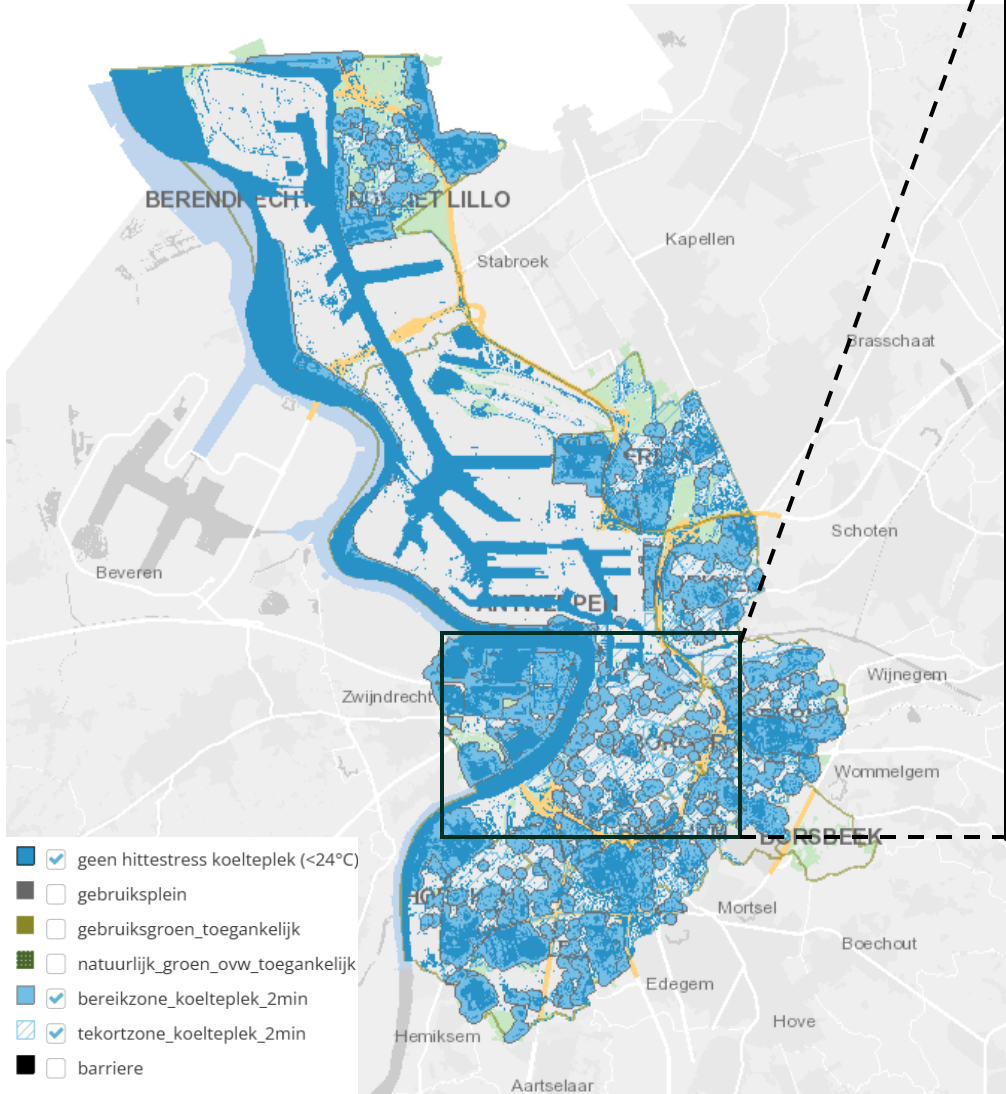
Track 1 – short term
Keeping the city liveable



Track 2 – long term
Cooling the city

Track 1 – Cool spots in Antwerp

Cool spots coverage (2025)

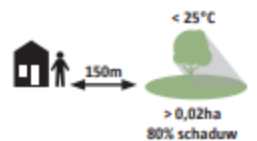


Cool spot = green oasis where WBGT stays below 24 degrees Celsius

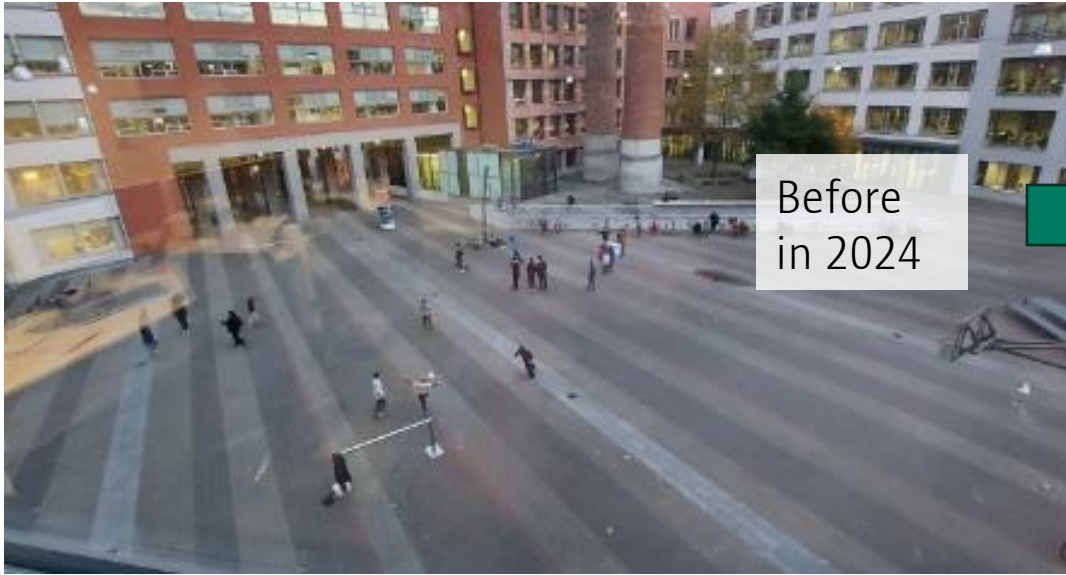
- Min. 200m², 80% canopy cover, 50% depaved and green
- Within 150 meters walking distance (2-5 min walking)
- Seating, tranquility
- Drinking water fountain

Integrated in Green and Neighbourhood Plans

- **Elke inwoner beschikt op 150m over een koelteplek**
Een koelteplek is een groene plek die groter is dan 200m², waarvan 80% beschaduwde is en die voorzien is van een zitgelegenheid en bij voorkeur ook een waterdrinkpunt. De temperatuur blijft er lager dan 25°C.



1 - Cool spots: Leading by example – den Bell square



Track 2 – Overall greening of the city



More high-quality trees for shelter
(Tree plan Antwerp)



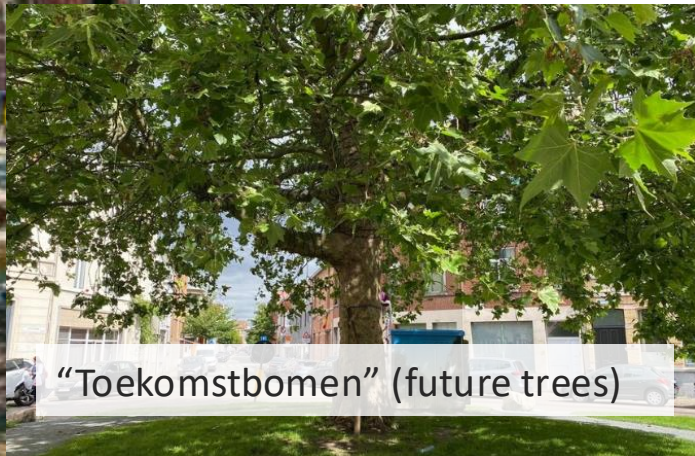
Increasing tree canopy cover



Depaving and greening (semi-) private domain



Greening streets and squares



“Toekomstbomen” (future trees)



Financial and operational support for private initiatives



“Tuinstraten” (Garden streets)

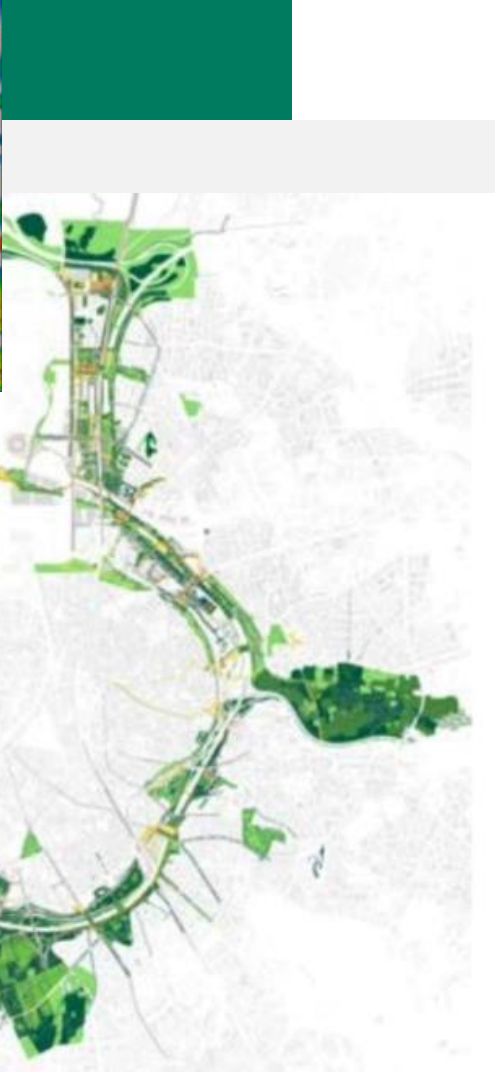
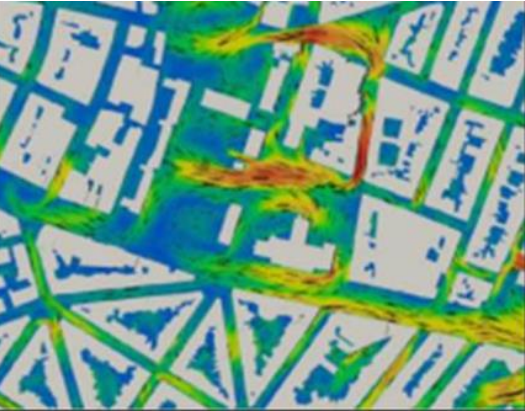


Annual tree campaign



EcoSchools project to green school yards

Track 2 – Other cooling actions



Tracking progress

Number of inhabitants

Antwerpen, België

470.041

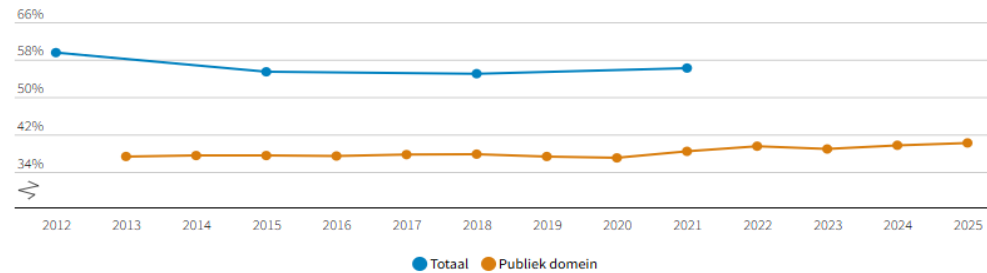
2006

565.707

2025

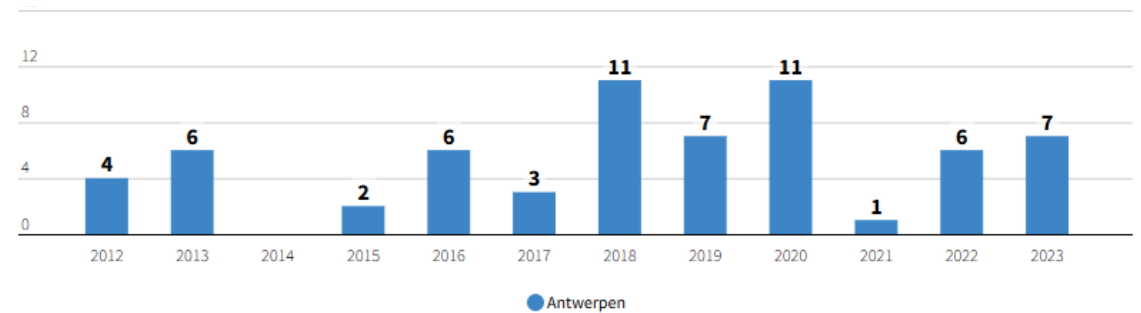
Stad Antwerpen, Districts- en loketwerking | 2006, 2025

Unpaved space



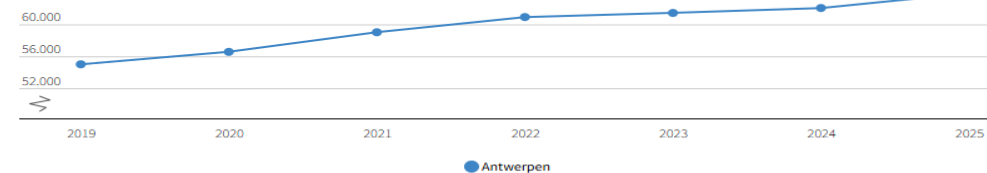
meerdere bronnen | 2012 - 2025

Number of tropical nights per year



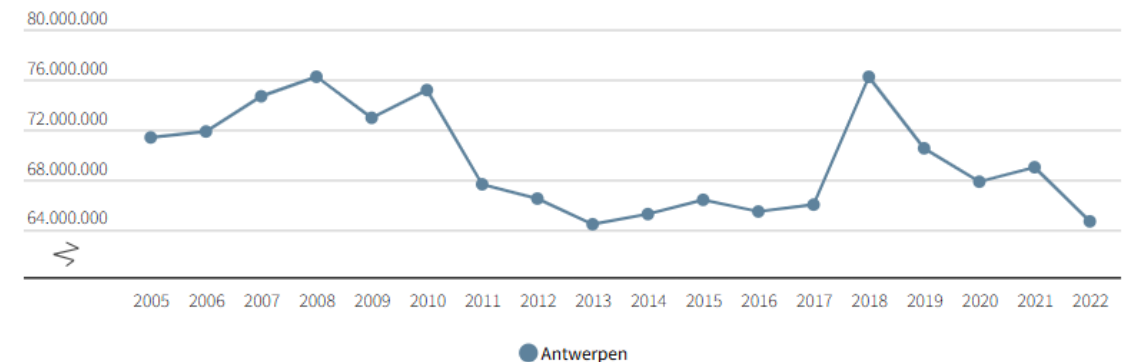
VITO | 2012 - 2023

Number of trees in total, in public space



Stad Antwerpen, Stadsbeheer | 2019 - 2025

Drinking water consumption in m3 per year



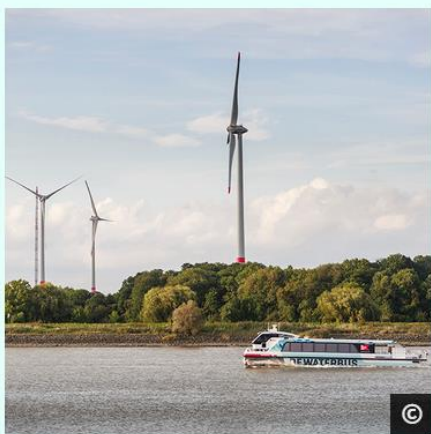
Waterlink | 2005 - 2022



Klimaatdashboard Antwerpen

Antwerpen wil tegen 2050 een klimaatneutrale en klimaatrobuuste stad zijn. Klimaatneutraal zijn betekent dat we niet meer broeikasgassen uitstoten dan we kunnen opslaan. Met klimaatrobuust bedoelen we dat we klaar zijn om de gevolgen van de klimaatverandering aan te pakken. Om deze doelstellingen te halen, hebben we iedereen nodig: overheden, bedrijven, industrie, kennisinstellingen, ondernemers en bewoners. De stad werkte de voorbije jaren samen met heel wat partners en organisaties en bundelde alle gezamenlijke doelstellingen en acties in een ambitieus “Klimaatplan 2030 - Antwerpen voor Klimaat”. De voortgang van dit klimaatplan wordt in dit klimaatdashboard met verschillende indicatoren weergegeven.

[Ontdek ons dashboard](#) ▾



Klimaatmitigatie

Uitstoot van broeikasgassen reduceren

Antwerpen wordt tegen 2050 een klimaatneutrale stad. Hier vind je uitgebreide gegevens en inzichten over hoe we onze uitstoot verminderen in verschillende sectoren: Energie, Handel en Diensten, Huishoudens, Industrie en Transport. Ontdek de maatregelen en resultaten die bijdragen aan een duurzamere toekomst.

[Bekijk de cijfers](#) >

Klimaatadaptatie

Antwerpen aanpassen aan de gevolgen van klimaatverandering

Antwerpen wil tegen 2050 klimaatrobuust zijn. Deze cijfers bieden inzicht in waar Antwerpen staat in de aanpassing aan de klimaatverandering, met aandacht voor droogte, hitte en wateroverlast. Ontdek strategieën en maatregelen die de impact van extreme weersomstandigheden trachten te beheersen en die Antwerpen als leefomgeving veerkrachtiger maken.

[Lees meer over klimaatadaptatie](#) >



Stad als goede voorbeeld

Op weg naar een klimaatneutrale stad willen we tegen 2030 al 50-55% minder CO₂ uitstoten: aan die doelstellingen wil de stad Antwerpen als stadsorganisatie een grote bijdrage leveren. Wat we vragen van onze burgers, bedrijven en organisaties, doen we ook zelf. Meer nog: de stad wil andere partijen stimuleren en enthousiasmeren via zichtbare initiatieven aan stadsgebouwen en in het straatbeeld.

[Bekijk de cijfers](#) >



Thank you for your attention

Heleen.vanhecke@antwerpen.be