

Zielgebietsplattform / Klimawandel am Westgürtel  
Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum  
PlanSinn - Meinhardter

## Grundsätze der Anpassung im Freiraum:

- Wasser (Trockenheit, Regen)
  - > Versiegelung, Entsiegelung
- Temperatur, Hitze
  - > Beschattung, Belüftung, Kühlung mit Wasser
- Erreichbarkeit und Versorgung
  - > Nähe, Mikroklimatische Auswirkung, Erholungswirkung, Verkehr
- Kosten der Pflege
  - > Pflanzenauswahl
- Teilhabe
  - > kooperative Verantwortung für den öffentlichen Raum und seine Erholungswirkung



## Projektinformationen:

- Initiative zur Entsiegelung in niederländischen Städten
- Gebührenfreie Nutzung des Gehsteig - Randbereichs 6
- Antrag online für jede(n) möglich
- Kosten für Pflanzen und die Pflege verbleiben bei den Privaten
- Hauseigentümer kann Antrag stellen
- Es gibt online Hilfs- und Informationsangebote
- Projektbeteiligte:  
die jeweilige Stadtverwaltung (Amsterdam, Rotterdam, ...)
- z.B. Amsterdam rainproof:
- <https://www.rainproof.nl/wat-kan-ik-doen/straat>



# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „GEVELTUIN“

Foto: © Ton Muller / Gemeente Amsterdam



Zielgebietsplattform / Klimawandel am Westgürtel

Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum

PlanSinn - Meinharter













Zielgebietsplattform / Klimawandel am Westgürtel

Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum

PlanSinn - Meinharter





## Projektinformationen:

- Beispielprojekt innerhalb eines Forschungsprojekts TURAS „Transitioning towards urban resilience and sustainability“
- Testmessungen
- „Spin-off“: das „mobiles grünes Zimmer<sup>®</sup>“
- Projektbeteiligte:
  - Helix Pflanzen GmbH
  - Universität Stuttgart
  - VRS Verband Region Stuttgart
  - ILPOE Institut für Landschaftsplanung und Ökologie
  - Stadt Ludwigsburg / Ludwigsburg Stadtentwicklung
  - Architekten Ludwig.Schönle







# Anpassung an den Klimawandel im öffentlichen Raum / MOBILES GRÜNES ZIMMER<sup>®</sup>



Foto: © Helix Pflanzen GmbH

Zielgebietsplattform / Klimawandel am Westgürtel  
Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum  
PlanSinn - Meinharter

7.6.2018

12





Foto: © Helix Pflanzen GmbH

Zielgebietsplattform / Klimawandel am Westgürtel  
Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum  
PlanSinn - Meinharter









Foto: © de urbanisten

## Projektinformationen:

- Initiative zum „Climate Proof District“
- Kooperative Weiterentwicklung eines Stadtteils
- Basierend auf mehreren gesamtstädtischen Strategien
  - 2005 – Rotterdam Watercity 2035
  - 2007 – Rotterdam Waterplan 2
  - 2014 – Rotterdamse adaptiestrategie
- Projektbeteiligte:
  - de urbanisten
  - Gemeente Rotterdam
  - Rotterdam Climate Initiative – Climate Proof
  - Valorisatieprogramma / Deltatechnologie & Water
- - und viele viele mehr !!!



# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“



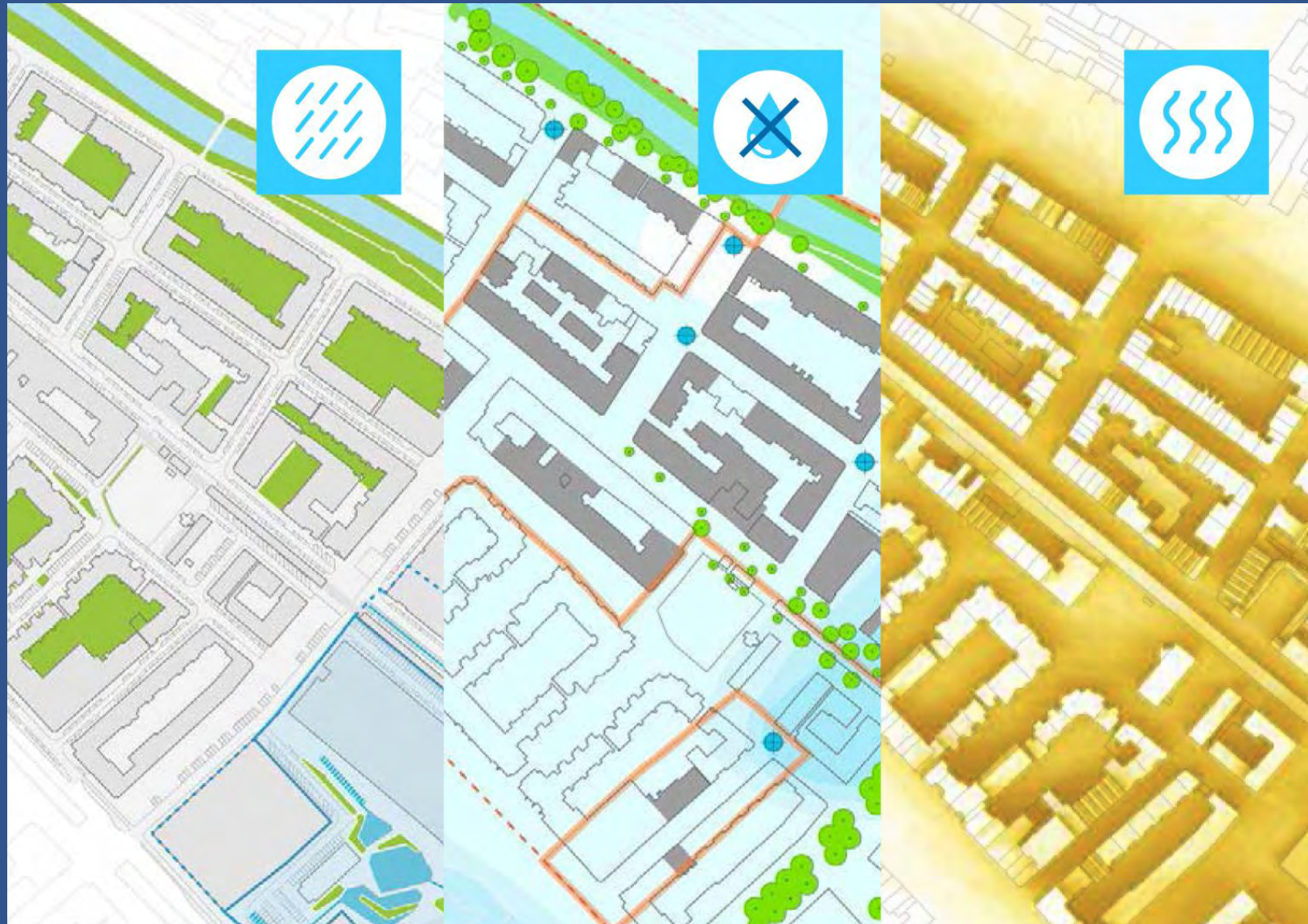
Foto: © de urbanisten

Zielgebietsplattform / Klimawandel am Westgürtel

Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum

PlanSinn - Meinharter









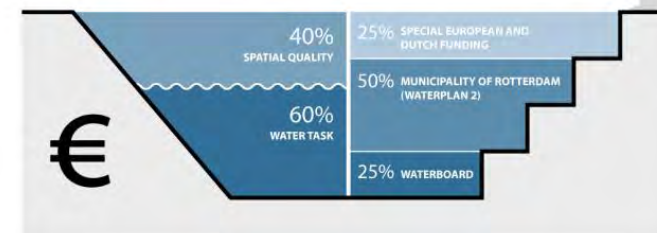


## BENTHEMPLEIN WATERSQUARE

The water square combines temporal water storage with the improvement of the quality of urban public space. The water square can be understood as a twofold strategy. It makes money invested in water storage facilities visible and enjoyable. It also generates opportunities to create environmental quality and identity to central spaces in neighbourhoods. Most of the time the water square will be dry and in use as a recreational space.

Year	2011-2014
Client	City of Rotterdam; Rotterdam Climate Initiative Waterboard Schieland & Krimpenerwaard
Design	De Urbanisten
Status	Realized
Collaborators	Rotterdam Engineering Bureau
Project management	Rotterdam Project Management Bureau
Construction supervision	Rotterdam Engineering Bureau
Construction works	Wallaard
Costs	4 million euros
Surface area	9.500 m <sup>2</sup> (incl. street and parking) square: 5.500 m <sup>2</sup>
Storage capacity	1.800 m <sup>3</sup>
DE URBANISTEN	Initiative, concept, design, workshops, supervision

Composition of financial contributions to the water square







*View on the central basin of the watersquare  
photo palleh + azarfane*

Foto: © de urbanisten

Zielgebietsplattform / Klimawandel am Westgürtel  
Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum  
PlanSinn - Meinharter

7.6.2018

21





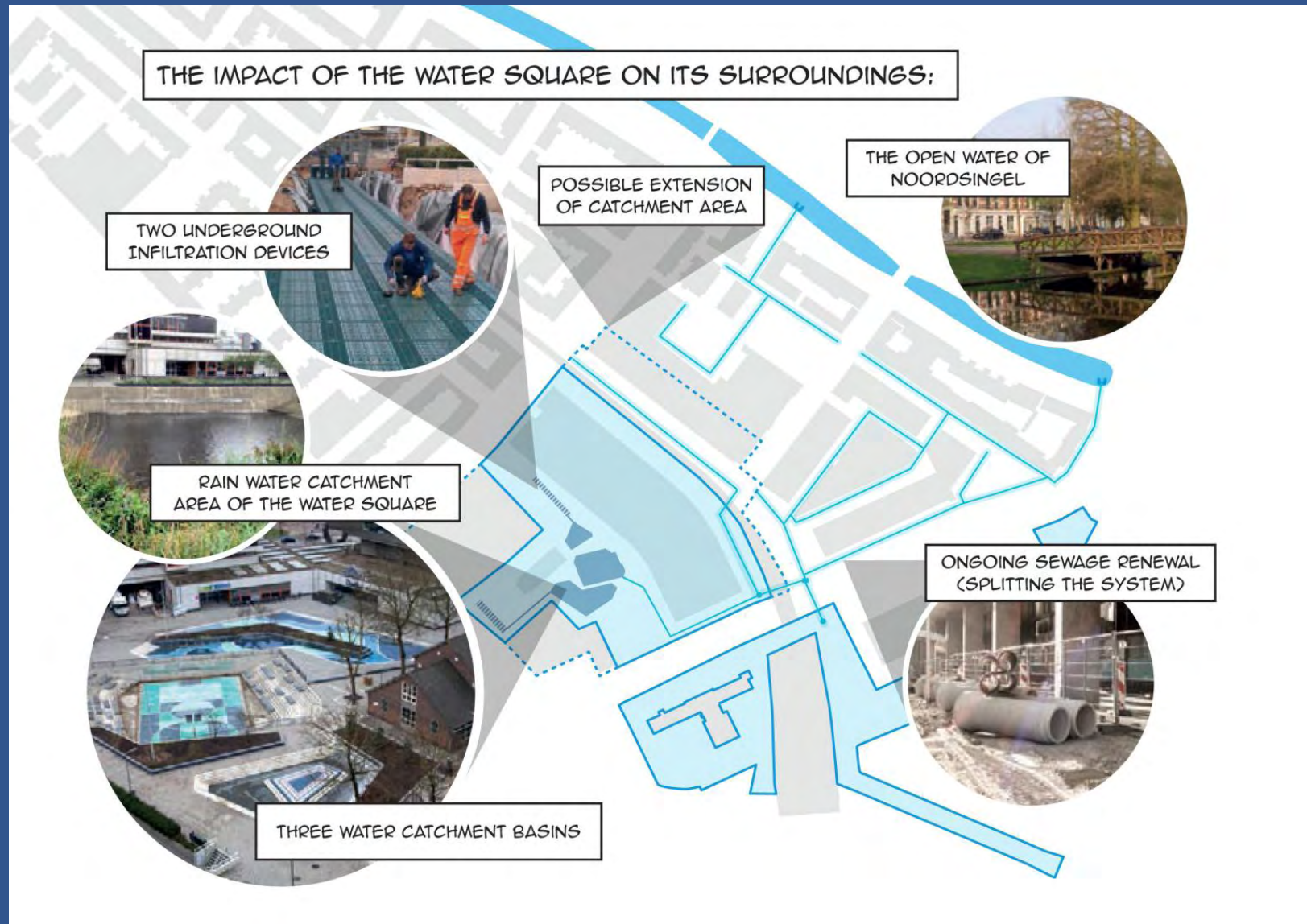




Foto: © de urbanisten

Zielgebietsplattform / Klimawandel am Westgürtel  
Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum  
PlanSinn - Meinharter



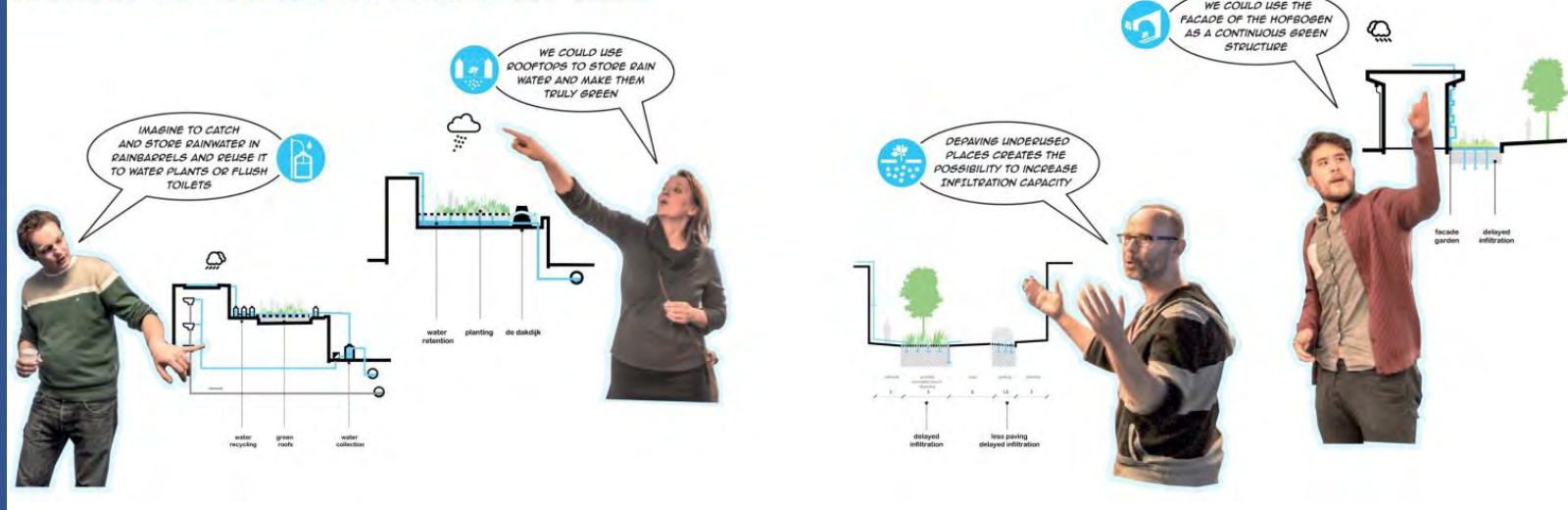




# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“



## TOGETHER WE CAME UP WITH SOME BRIGHT IDEAS

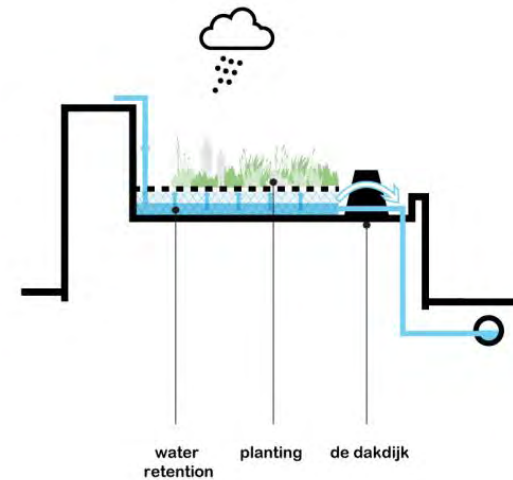




## POLDER ROOF

The Polderroof project proposes the transformation of the roof of the 'Katshoek' parking garage into an attractive green roof that stores and reuses rainwater from the nearby buildings in a controlled way. The Polderroof takes the rainwater out of the sewage system and into the ZOHO-raingarden to infiltrate. It also is a collective place for urban agriculture, everyday recreation and small outdoor events. By doing this, the Polderroof adds new social, economic, environmental and ecological values to the ZOHO district.

Year	2014-ongoing
Client	City of Rotterdam
Status	Feasibility study
Collaborators	Basement bv Valorisation program Deltatechnology & Water Dakdokters
Costs	412.000 euros (estimated)
Catchment area	5.570 m2
Storage capacity	365 m3
DE URBANISTEN	Initiative, research & design



Gemeente Rotterdam



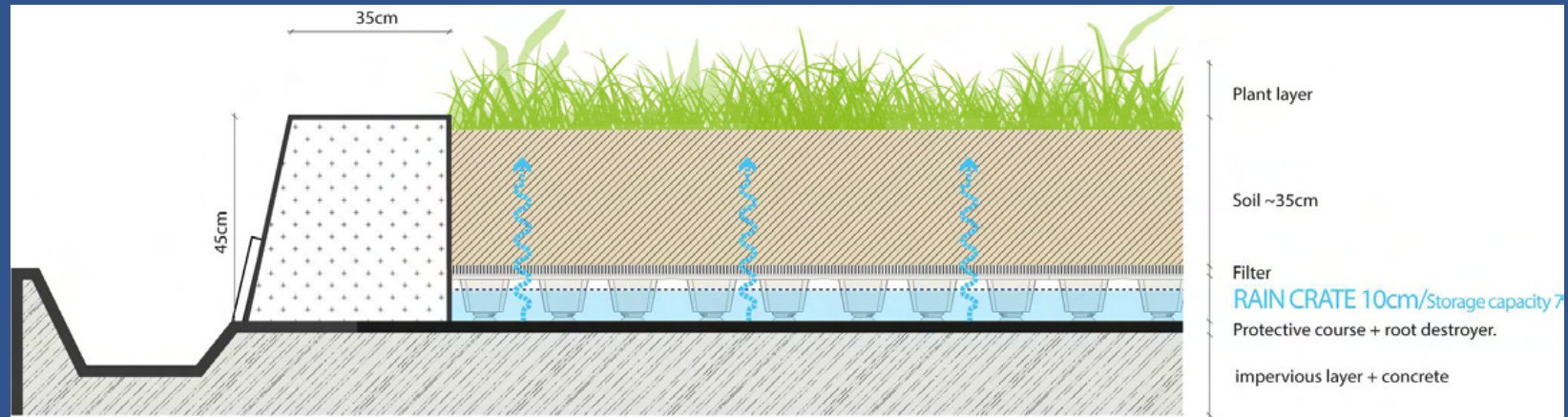
VALORISATIEPROGRAMMA  
DELTA TECHNOLOGIE & WATER



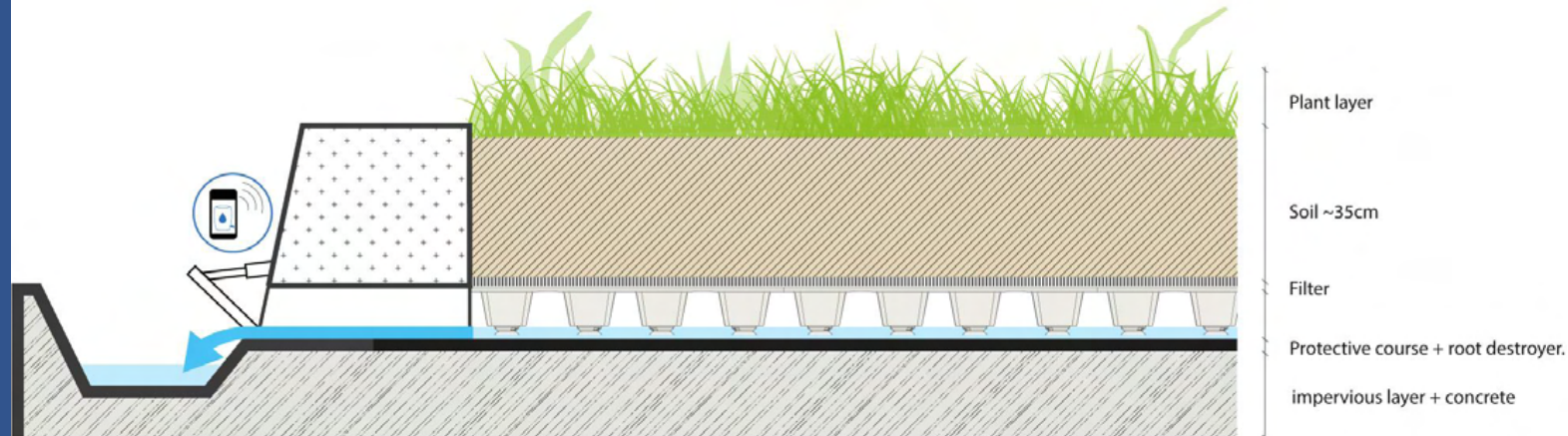
DE URBANISTEN



# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“



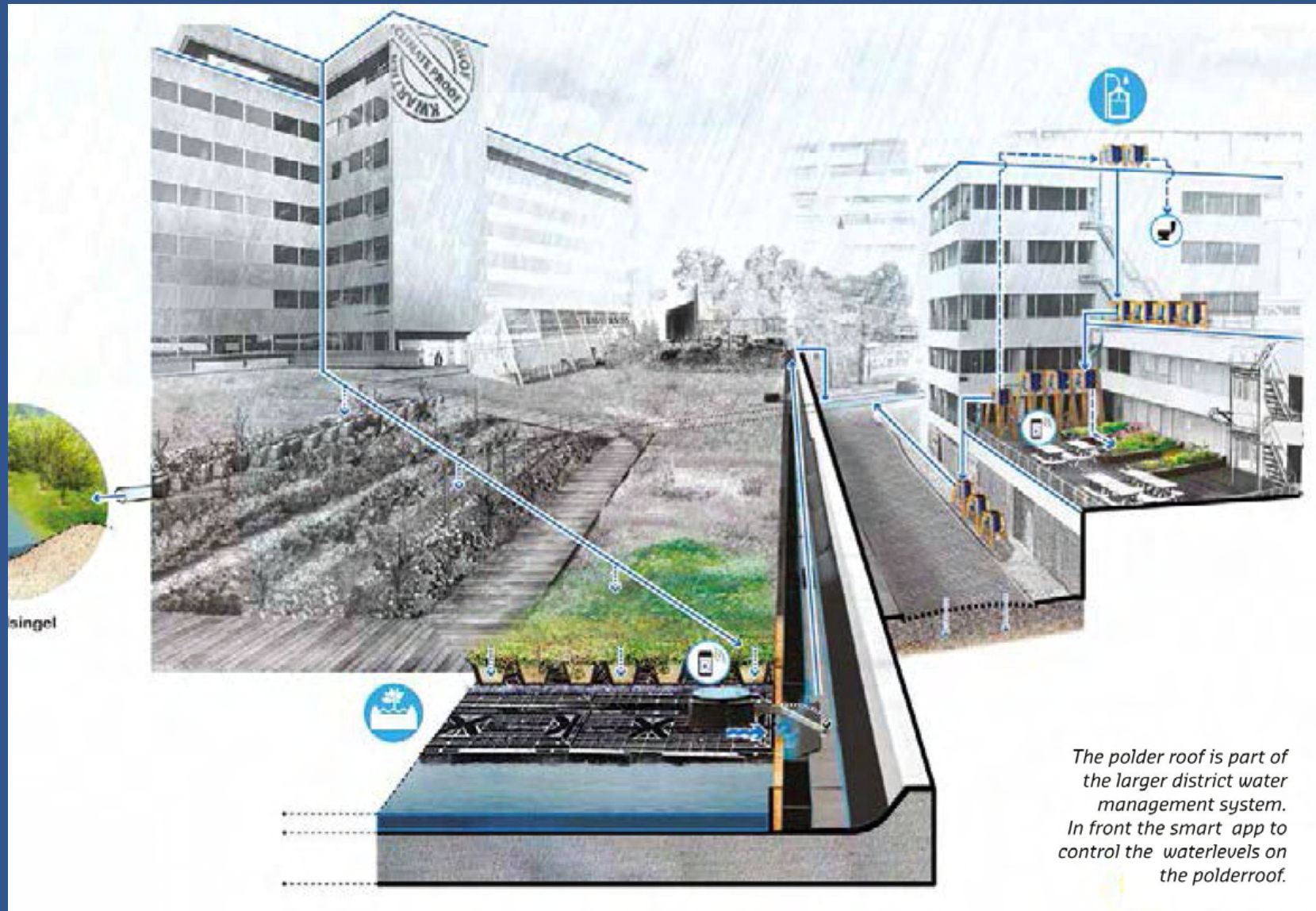
Stored rainwater can be used to water the roof gardens



With a smart-app, the water capacity in the system can be controlled to create storage space when extreme weather events are expected

Foto: © de urbanisten





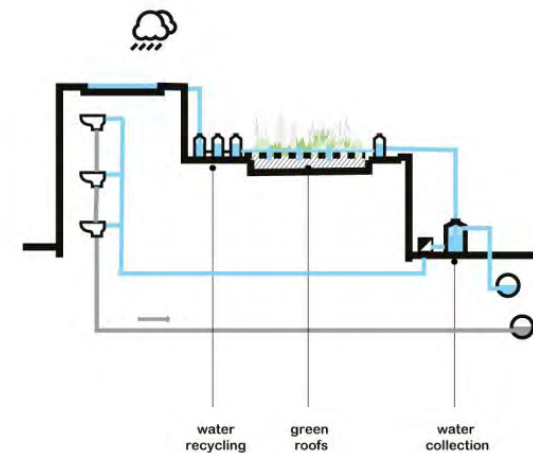


## ZOHO-RAINBARREL

The ZOHO-rainbarrel is a participative water storage system. It is designed to be an icon for ZOHO and a smart solution for rain water reuse and storage at the same time. The ZOHO rainbarrel will be produced in the district by local businesses. It creates awareness and a shared community feeling with the users. The system also will be used in educational programs on climate adaptation at schools. A smart control device - (B)Rainbarrel - makes it possible to control storage capacity within the system.

Year	2014-ongoing
Client	RVO
Initiative	Rien Hilhorst, Studio Bas Sala
Status	Feasibility study
Design	Studio Bas Sala
	TU Delft / PJ van Overloop

DE URBANISTEN	Start-up support
---------------	------------------



STUDIO BAS SALA

DE URBANISTEN

# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“

The diagram illustrates the functionality of the BrainDrain system in two rows: 'Without BrainDrain' and 'With BrainDrain'. Each row contains three panels representing different weather conditions: sunny, cloudy, and rainy. In the 'Without BrainDrain' row, water levels in a reservoir (represented by a bottle) rise steadily during rain, potentially overflowing. In the 'With BrainDrain' row, the system (represented by a blue line and a pump icon) actively manages the water level, preventing overflow even during heavy rain. Below the diagrams, a smartphone screen displays the BrainDrain app interface, showing a water level gauge at 57.80% and a forecast of 82-70% precipitation. To the right, two photographs show physical prototypes: a scale model of a greenhouse and water reservoir on a table, and a real-world installation of the BrainDrain system on a rain barrel.

**Without BrainDrain**

**With BrainDrain**

**Prototypes**

*a scale model of greenhouse and waterreservoir*

*The BrainDrain on a rainbutt*

*Brain Drain is a smart app to predict the water storage capacity needs*

Foto: © de urbanisten



# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“

*Studio Bas Sala developed 3 different prototypes to fit the requirements*



Foto: © de urbanisten

Zielgebietsplattform / Klimawandel am Westgürtel  
Internationale Projekte zur Klimawandelanpassung im öffentlichen Raum  
PlanSinn - Meinharter

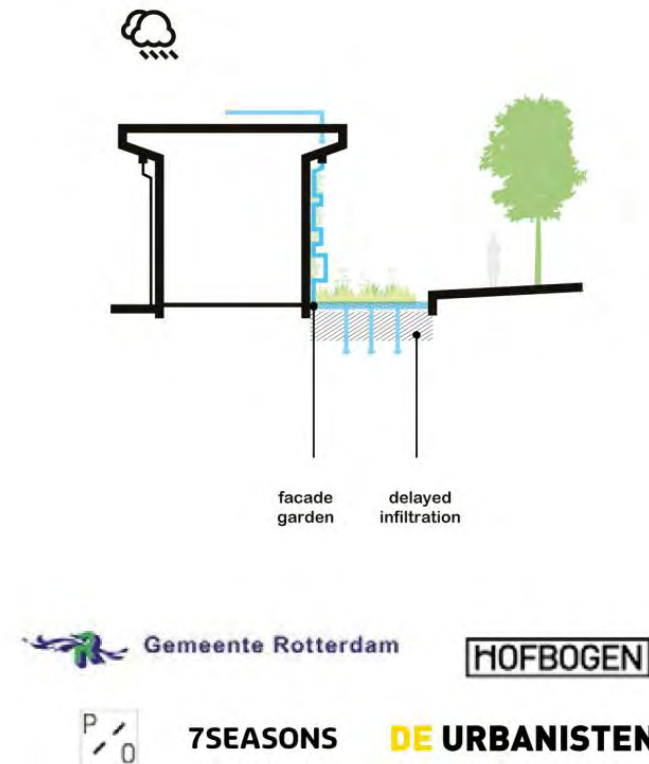
7.6.2018

31

## GREENING HOFBOGEN

Greening Hofbogen aims at climate proofing the monumental structure of the 'Hofpleinlijn'. While waiting for a long term vision, the Hofbogen are approached from a bottom up perspective, starting at street level. Analyses show, that there is a potential for a substantial greening of the facades and sidewalks. Rain water from the roof is used for irrigation purposes and local infiltration. Moreover, Greening the Hofbogen is about placemaking. Illustrative in this is the Post-Office (SCHOP) project. The intervention on their 'Hofboog' facade addresses issues like restoring urban ecosystems, edible growth, rainwater reuse and public urban furniture.

Year	2014-ongoing
Client	City of Rotterdam
Design	DE URBANISTEN Post-Office (SCHOP)
Status	Study and test-site
Collaborators	Post-Office 7 seasons Hofbogen BV
Costs test site	700 euro (material costs)
DE URBANISTEN	Research by design, support of test-site







# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“

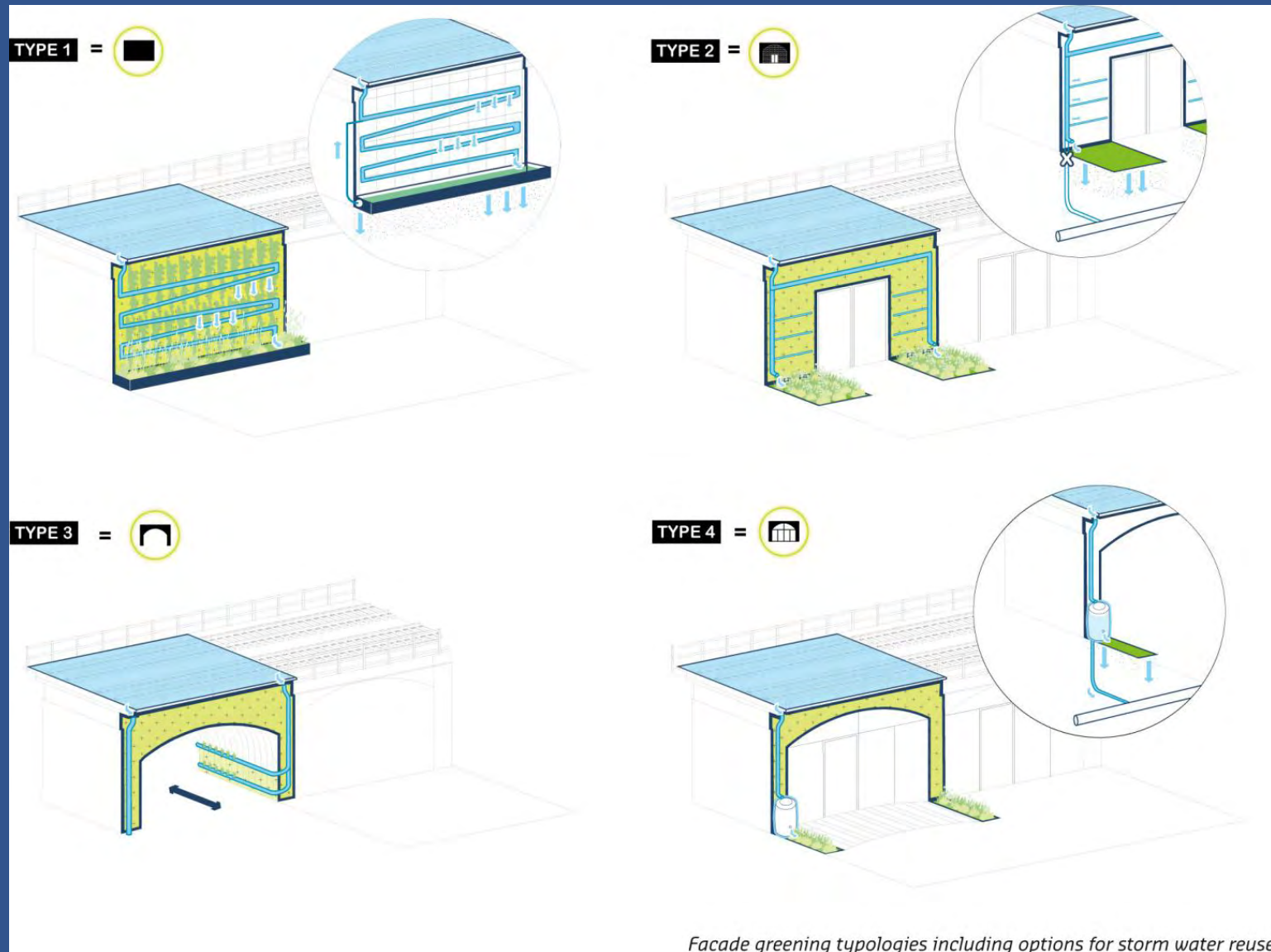


Foto: © de urbanisten



# Anpassung an den Klimawandel im öffentlichen Raum / Beispiele / „ZOHO“



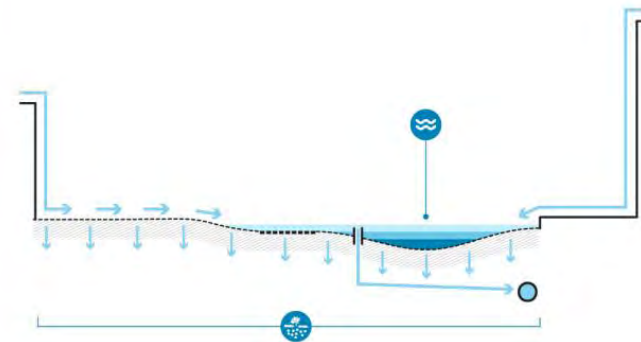
Foto: © de urbanisten

## ZOHO-RAINGARDEN (1ST PHASE)

The small pop-up ZOHO raingarden illustrates the potential of climate proofing ZOHO. Two parking lots and a large part of the wide sidewalk are turned into a small but sumptuous garden in only two days. The garden is planted with a rich variety of plants that can handle the condition of dry and wet. The facade of Hofbogen is planted with creepers. Left over tiles are reused to make clear edges around the garden and for a storm water gully that meanders through the garden. The raingarden is maintained by the NAS.

Year	2014
Client	Initiative by De Urbanisten
Design	De Urbanisten
Status	Realized
Collaborators	Van Dijk Maasland GreenSand Municipal Nursery of Rotterdam
Maintenance	NAS (Nico Adriaans Stichting)
Surface area	100 m <sup>2</sup>
Costs	0 euro

DE URBANISTEN Initiative, landscape design, planting, construction supervision



Gemeente Rotterdam



DE URBANISTEN





Foto: © de urbanisten



## ZOHO Climate perspective 2020

A wide range of easy-to-apply climate adaptive measures ...

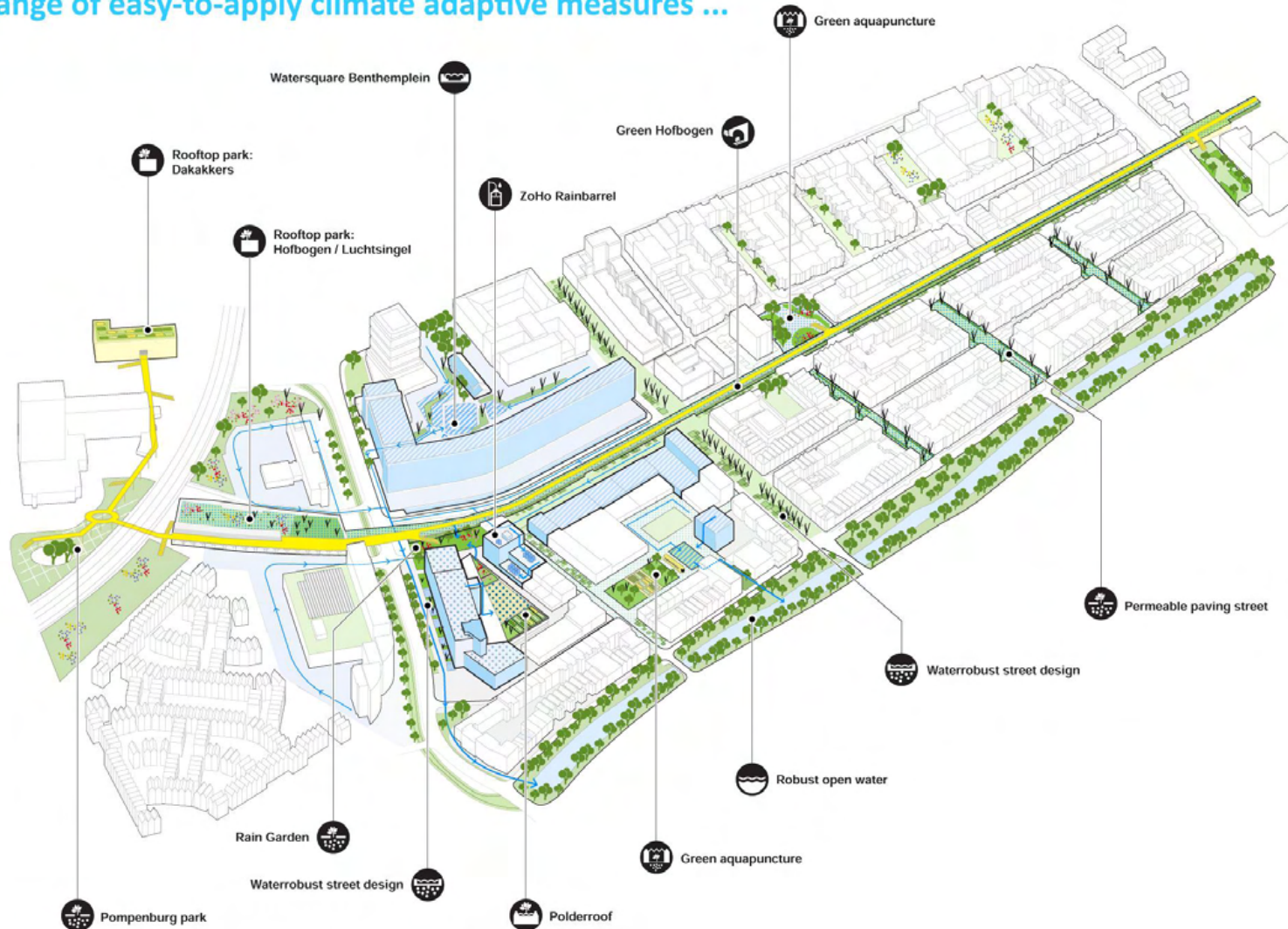


Foto: © de urbanisten





Foto: © de urbanisten