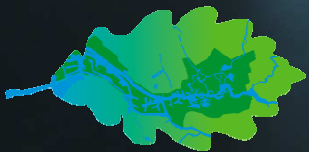


Rotterdam Climate Proof

Connecting water with opportunities

18 November 2011

Daniel Goedbloed





Rotterdam: city in a delta ...



... in and along the water





But water is sometimes a threat ...





... not only locally, but worldwide



**In Rotterdam a
threat from 4 sides**

PRECIPITATION



SEA LEVEL RISE



RIVER DISCHARGES



GROUNDWATER



AMBITIONS

50% CO₂-reduction
100% climate proof
in 2025
+
an attractive and
economically
successful city

STRATEGY

knowledge
development
+
taking action
+
exposure

Changing threats in opportunities for a better city



ROTTERDAM CLIMATE PROOF IN 2025

Incorporating Climate Change in spatial planning tools in order to continuously take into account these effects while developing Rotterdam



SYNERGY

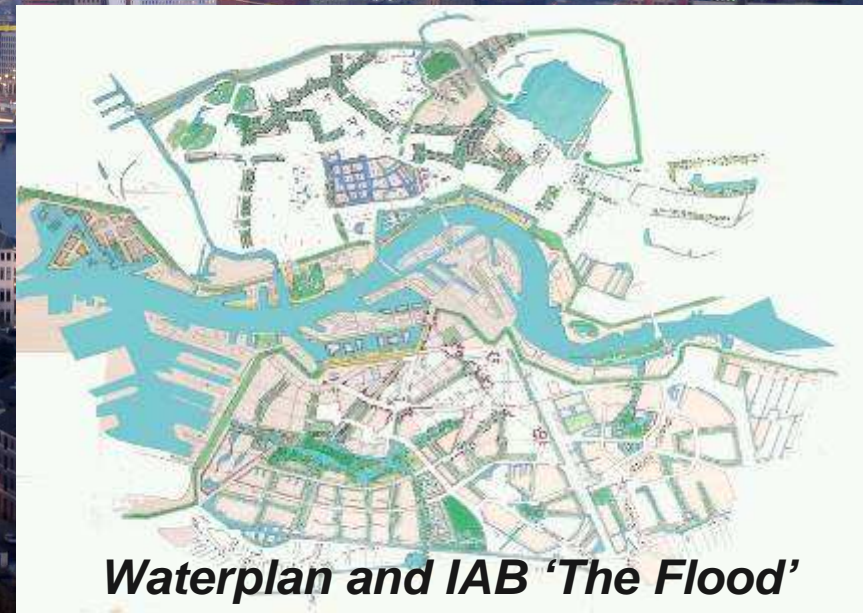
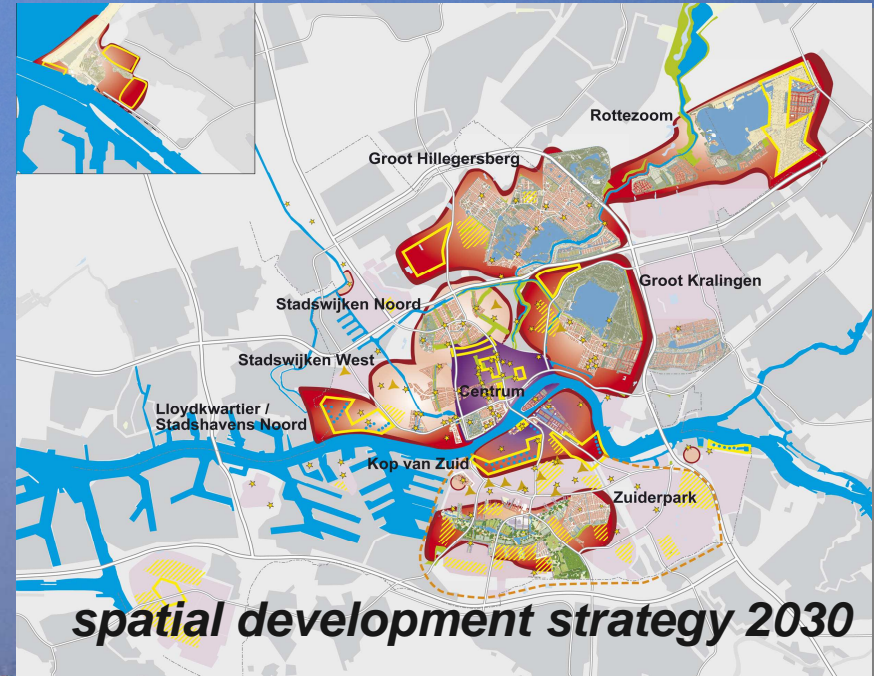
Water safety

Water quantity

Water quality

Urban planning

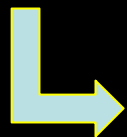
*Water =
opportunity for an
attractive and
economically strong city*





ADAPTATION: FIVE THEMES

- *Flood Management*
- *Urban Water System*
- *Urban Climate*
- *Adaptive Building*
- *Accessibility*



Adaptation Strategy



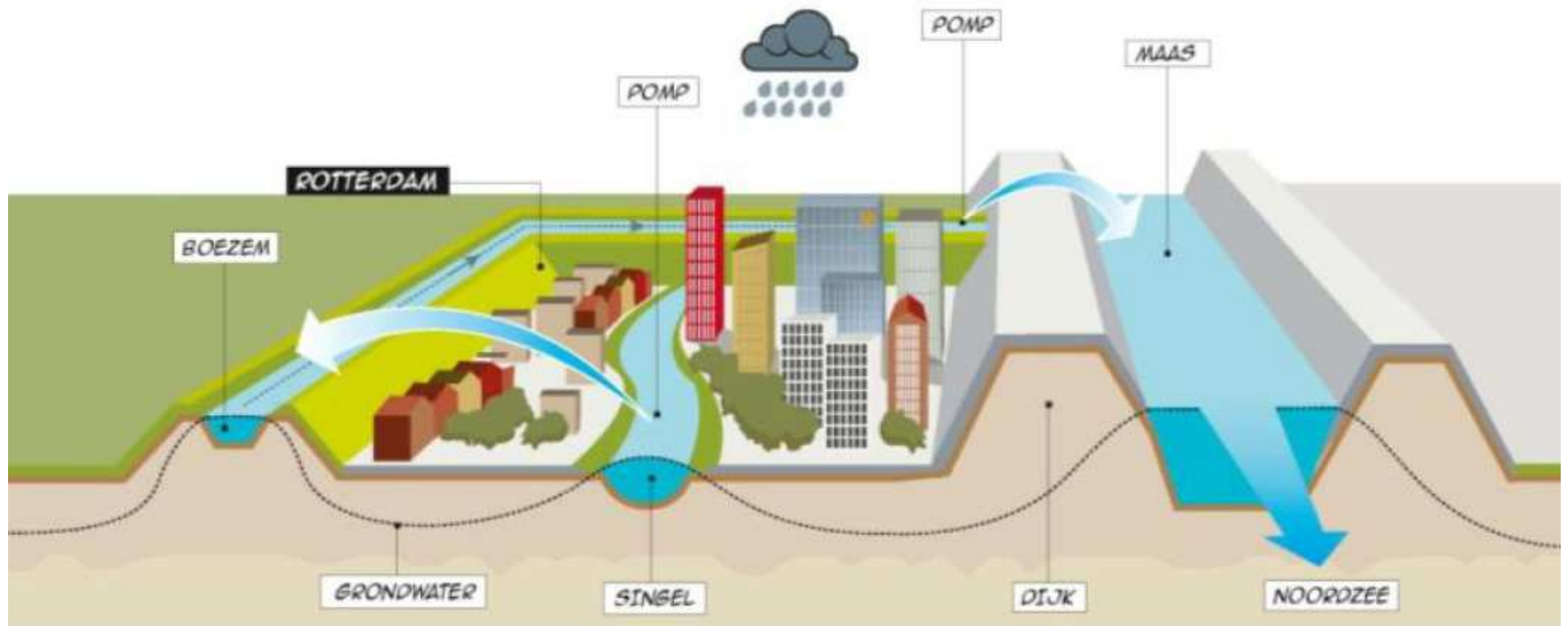
ROTTERDAM
THE ROTTERDAM CHALLENGE ON WATER AND CLIMATE ADAPTATION
CLIMATE PROOF

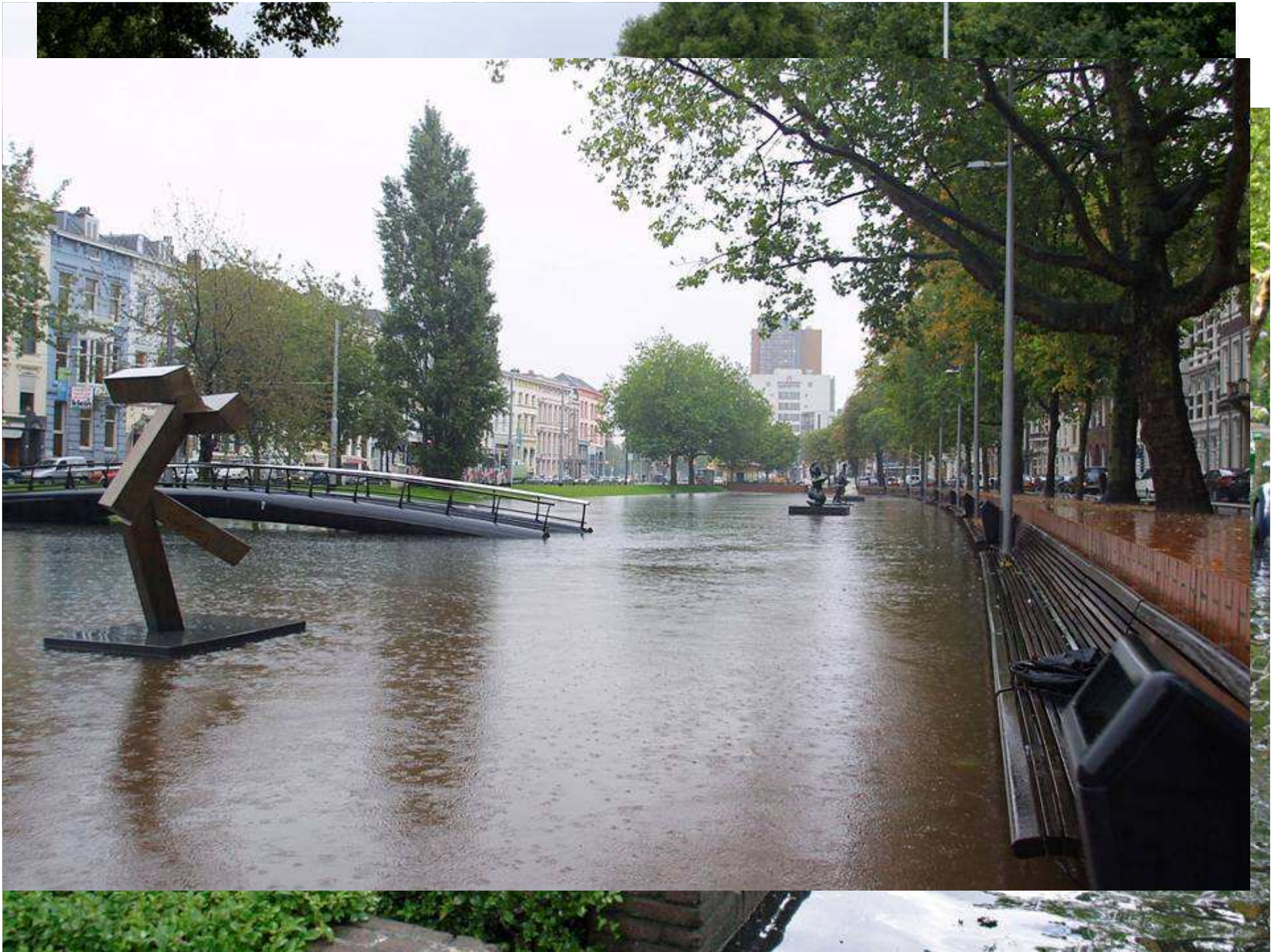




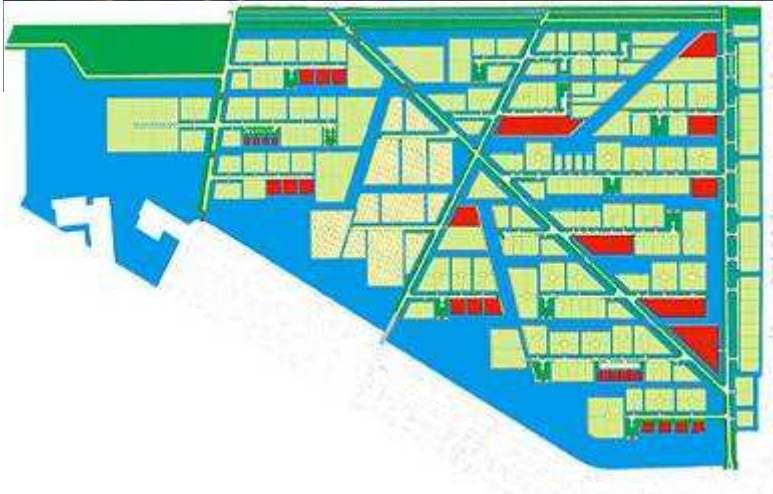
ZOOMING IN....











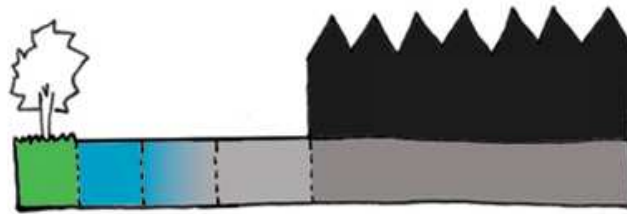
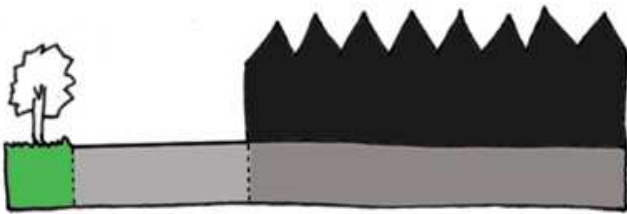
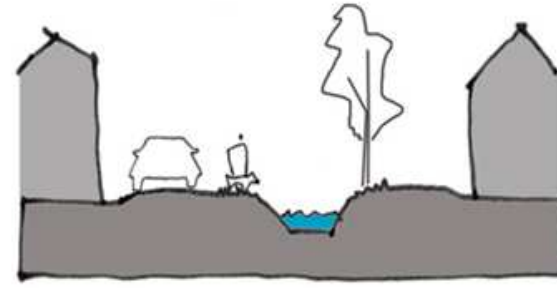
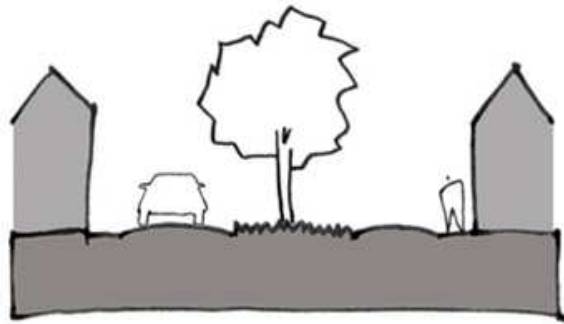


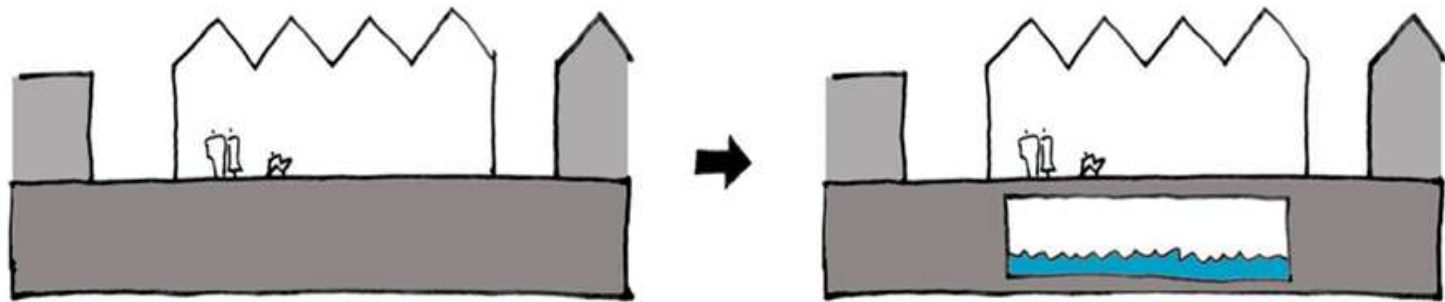
Zuiderpark

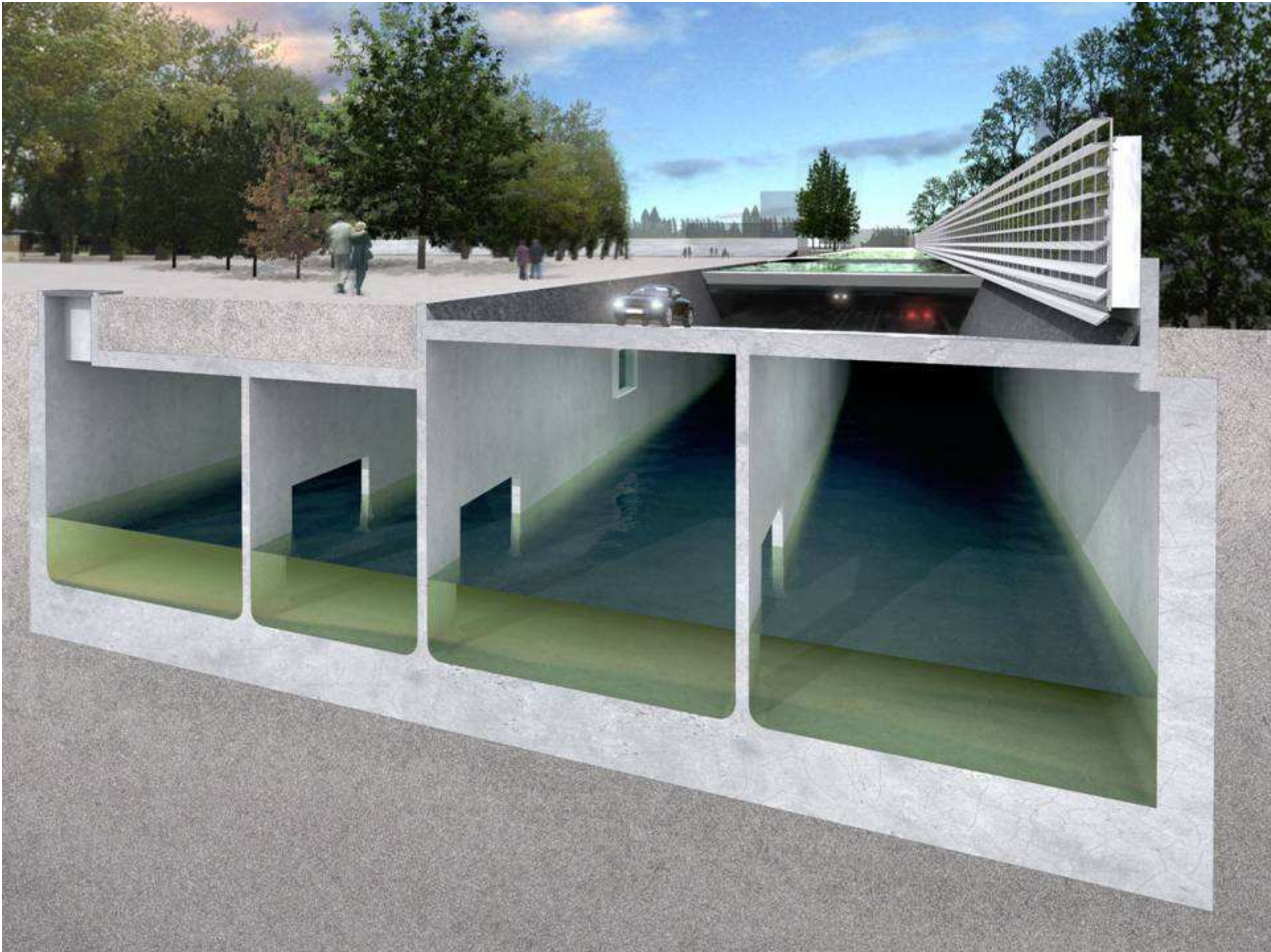


Lepelaarssingel

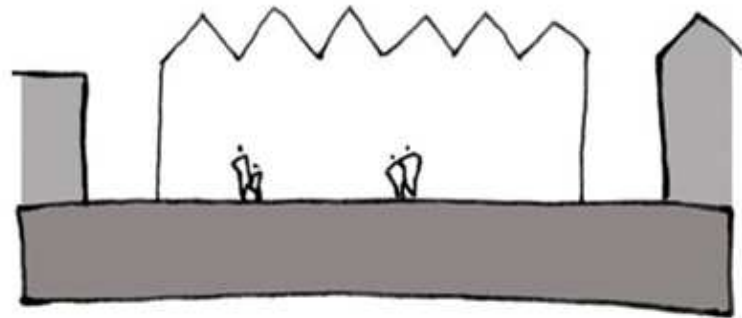


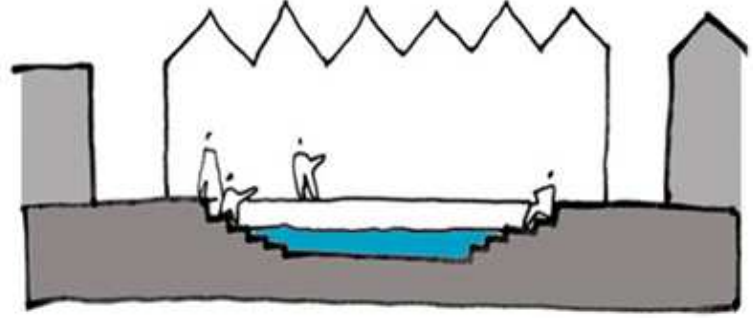
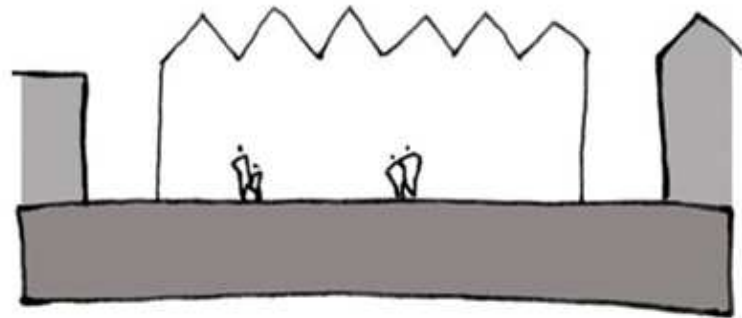














de regenwolk

bedieningspaneel

waterpomp

hemelwater wordt verzameld
en in gescheiden goten naar het
waterplein geleid

het waterplein

afvoer-
mechanisme



DE URBANISTEN



DE URBANISTEN



DE URBANISTEN



DE URBANISTEN

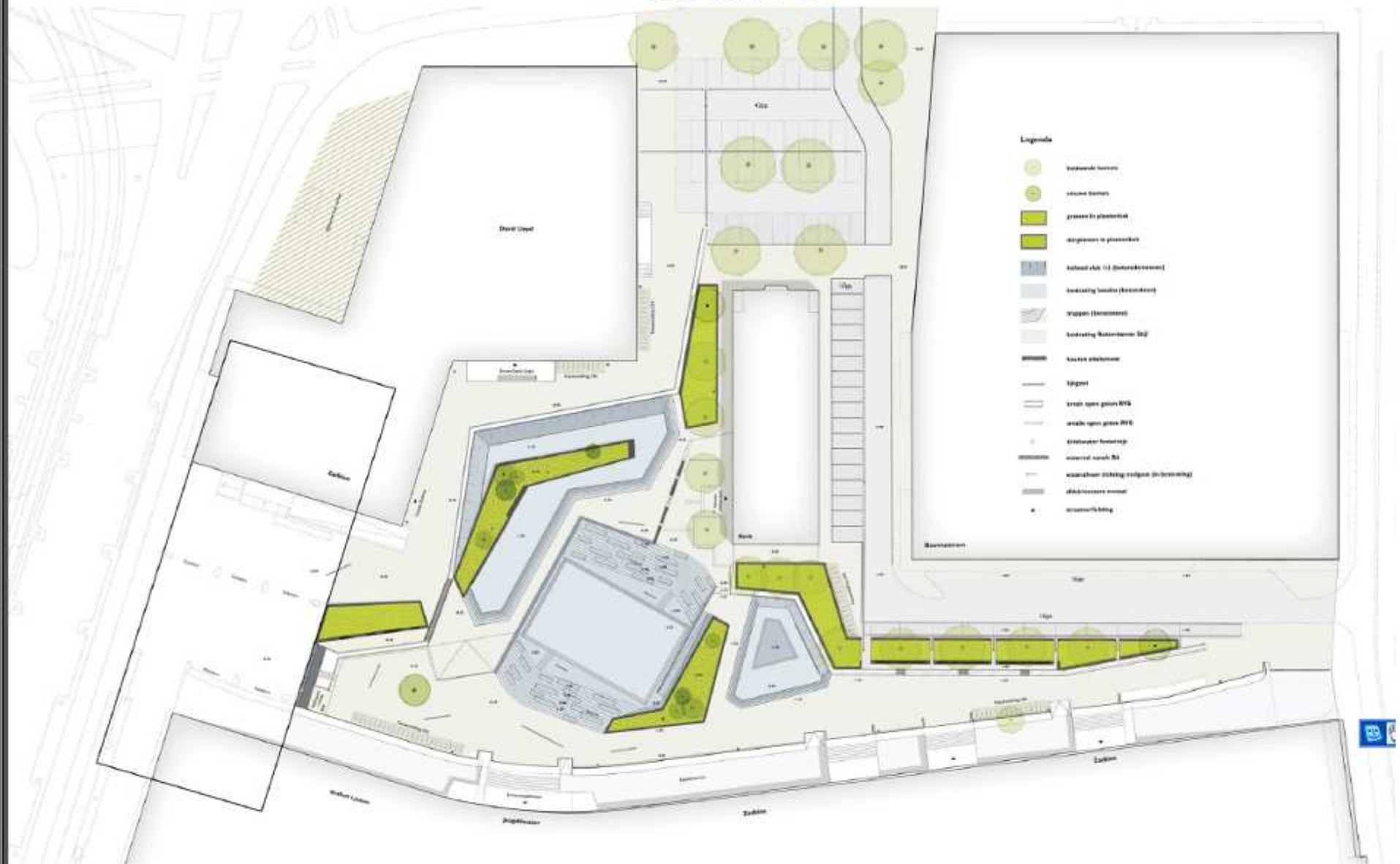




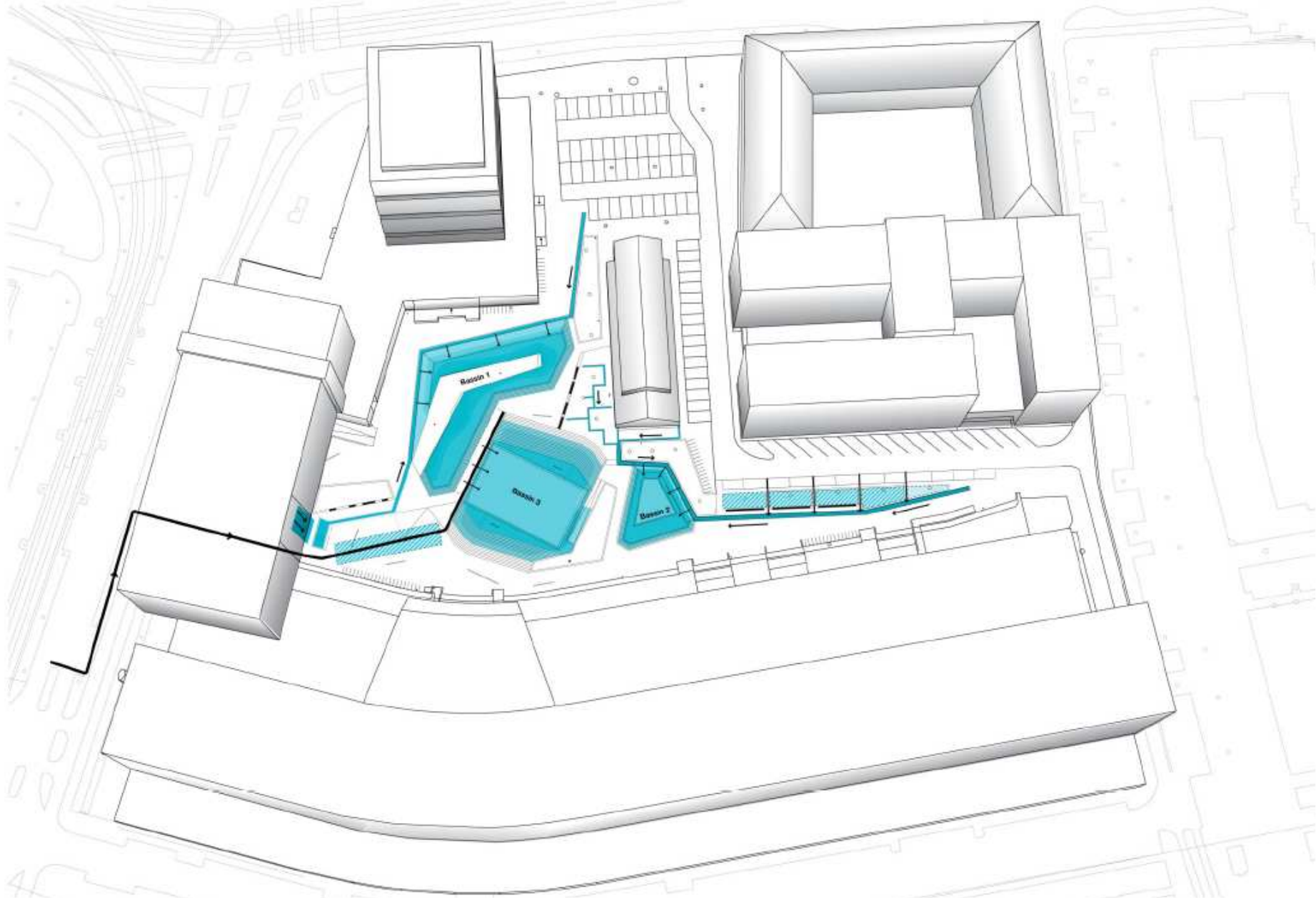


DEFINITE DESIGN

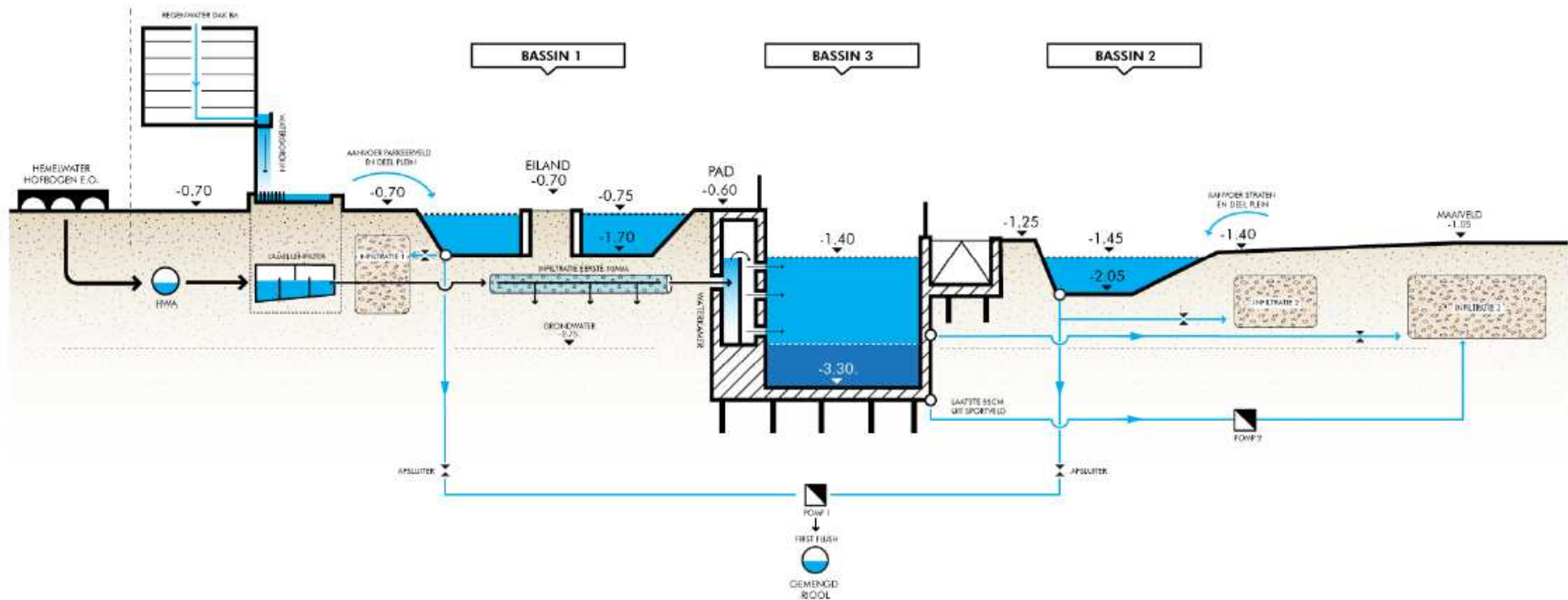
31 Oktober 2011



Frequency of flooding: this will occur rarely (rain storms > 10 mm, appr. 15 times a year)



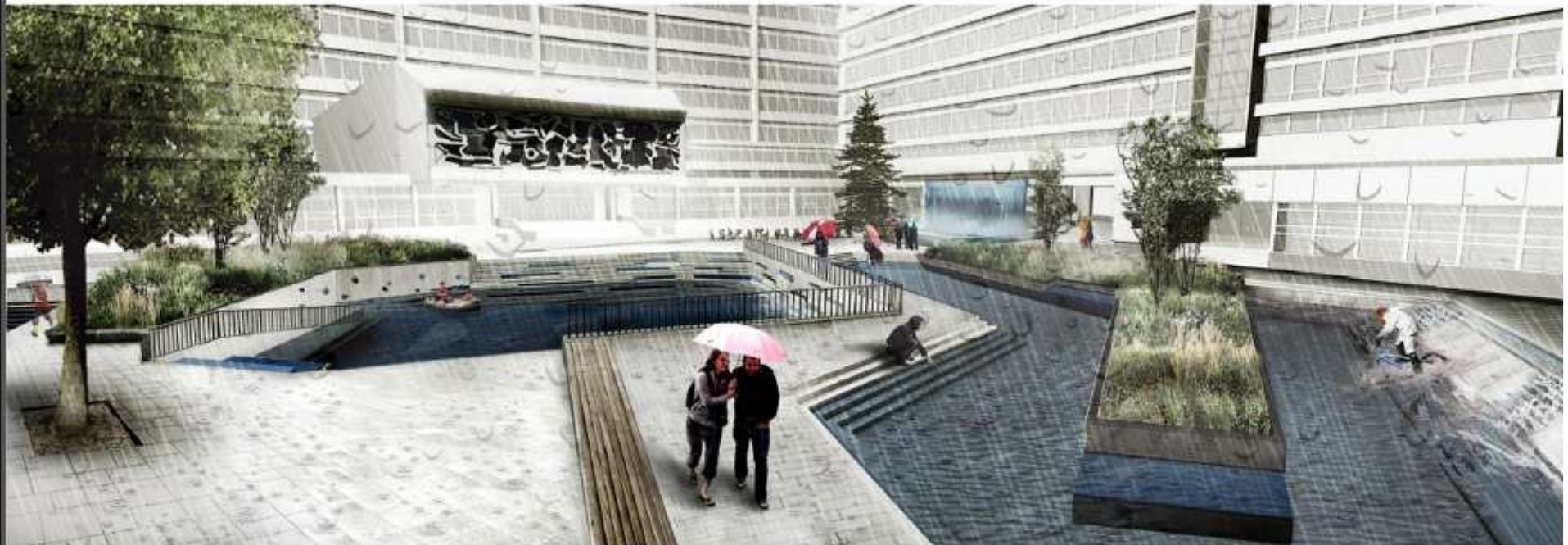
Overall organisation of the water system

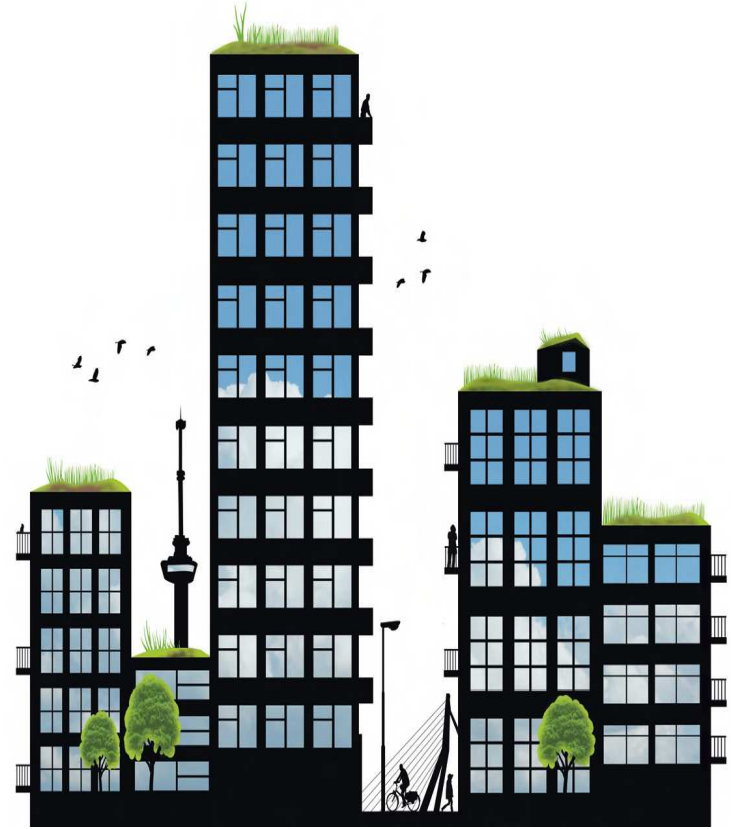


Impression dry situation



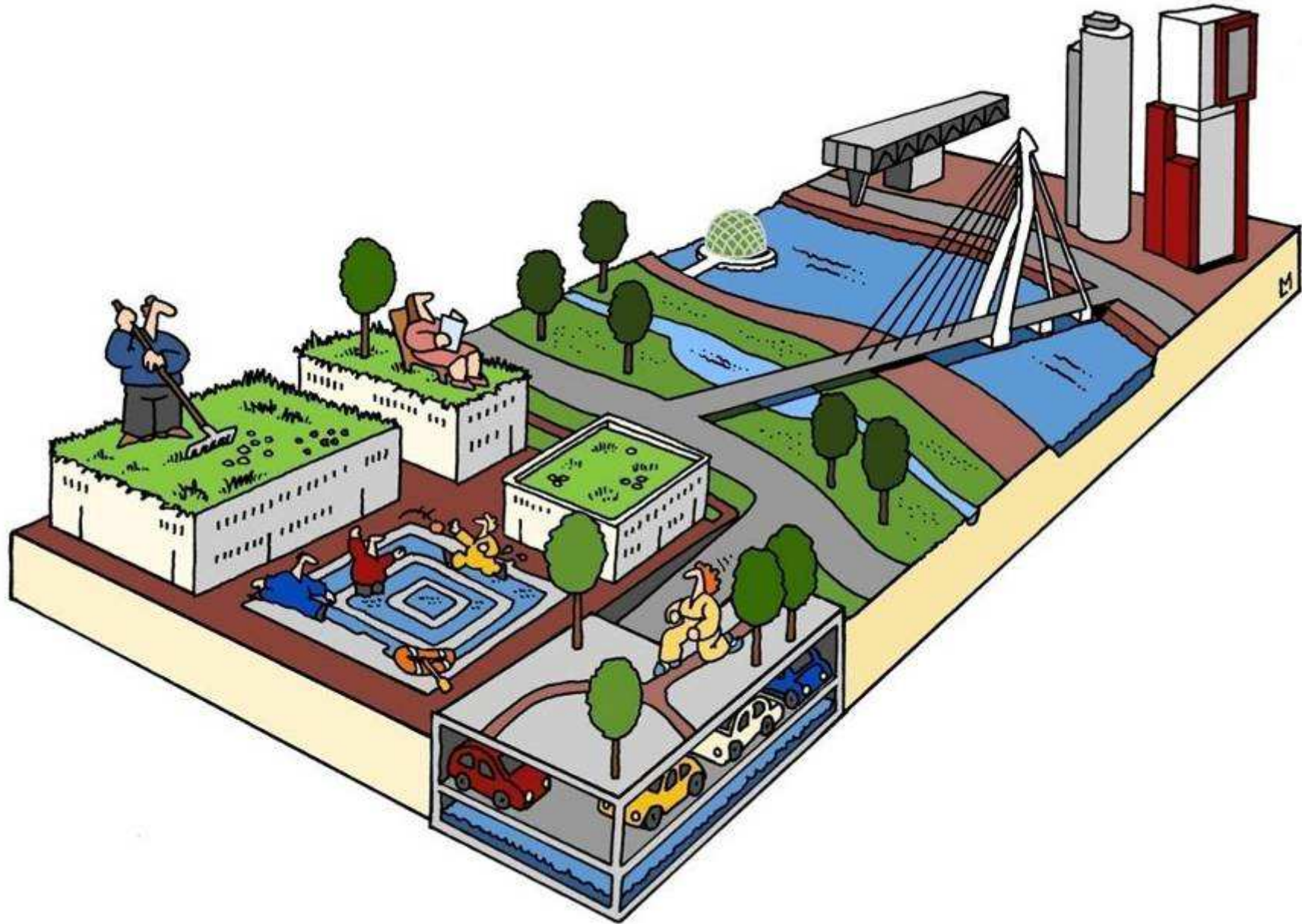
Impression situation when heavy rain storm occurs





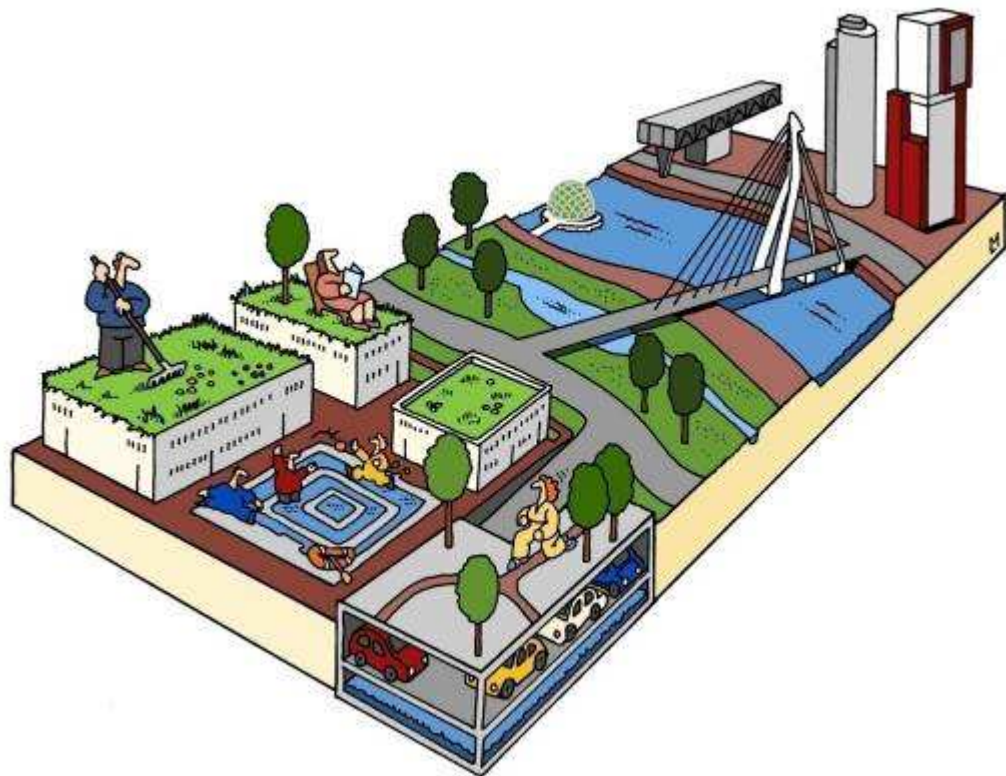
Green Info Roof Old Trading building Roof terras Café Engels





THE ROTTERDAM APPROACH

- Water management meets urban planning
- Mitigation meets adaptation
- Protection meets economy
- Threats meet innovative solutions





THANK YOU FOR YOUR ATTENTION

www.rotterdamclimateinitiative.nl

