



hoogheemraadschap
**Hollands
Noorderkwartier**

European Union  The European Regional Development Fund

**The Interreg IVB
North Sea Region
Programme**

*Investing in the future by working together
for a sustainable and competitive region*



Hoogheemraadschap Hollands Noorderkwartier &



Climate Adaptation Mainstreaming through Innovation

8th October 2014
Arjen Grent



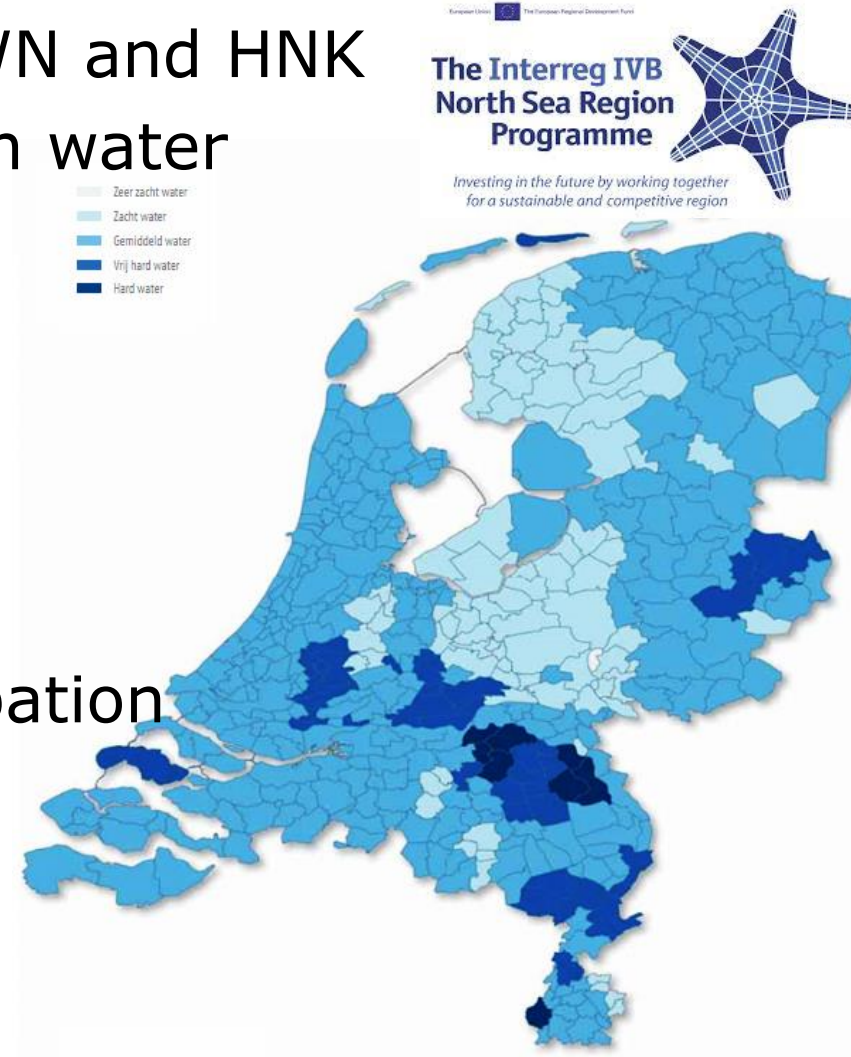
Survey on detergents use



Climate Adaptation Mainstreaming through Innovation



- Drinking water company PWN and HNK work together on low carbon water
 - Less detergents
 - Less oxygen
 - Less sewage sludge
- Regional survey
- National survey
- Communication and participation



Survey on detergents use



Climate Adaptation Mainstreaming through Innovation



- 65% of NL can start tomorrow
- Save 4 € pp py
- Break even (social cost-benefit) at 1% participation
- Potentially 50 M€ py
- National symposium
- Communication strategy
- Nudge: sustainable consumers platform



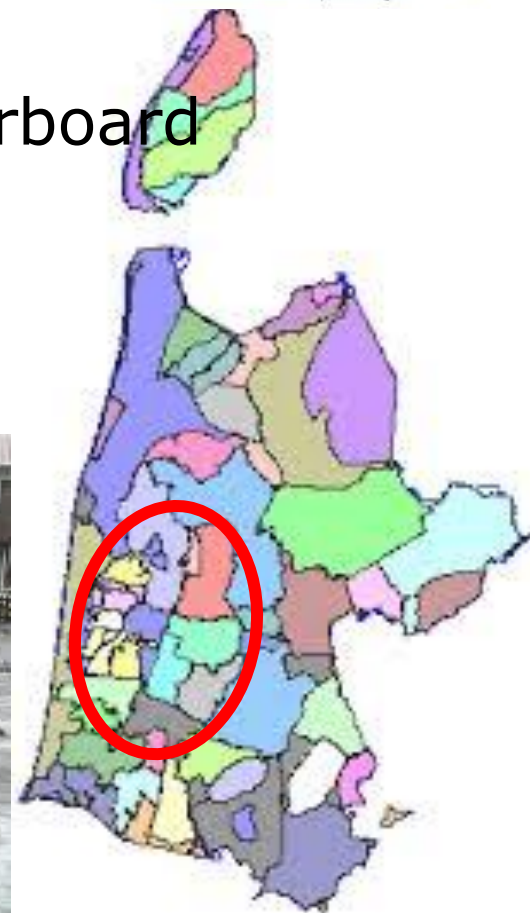
Multi Layer Safety Marken

- Participation of citizens



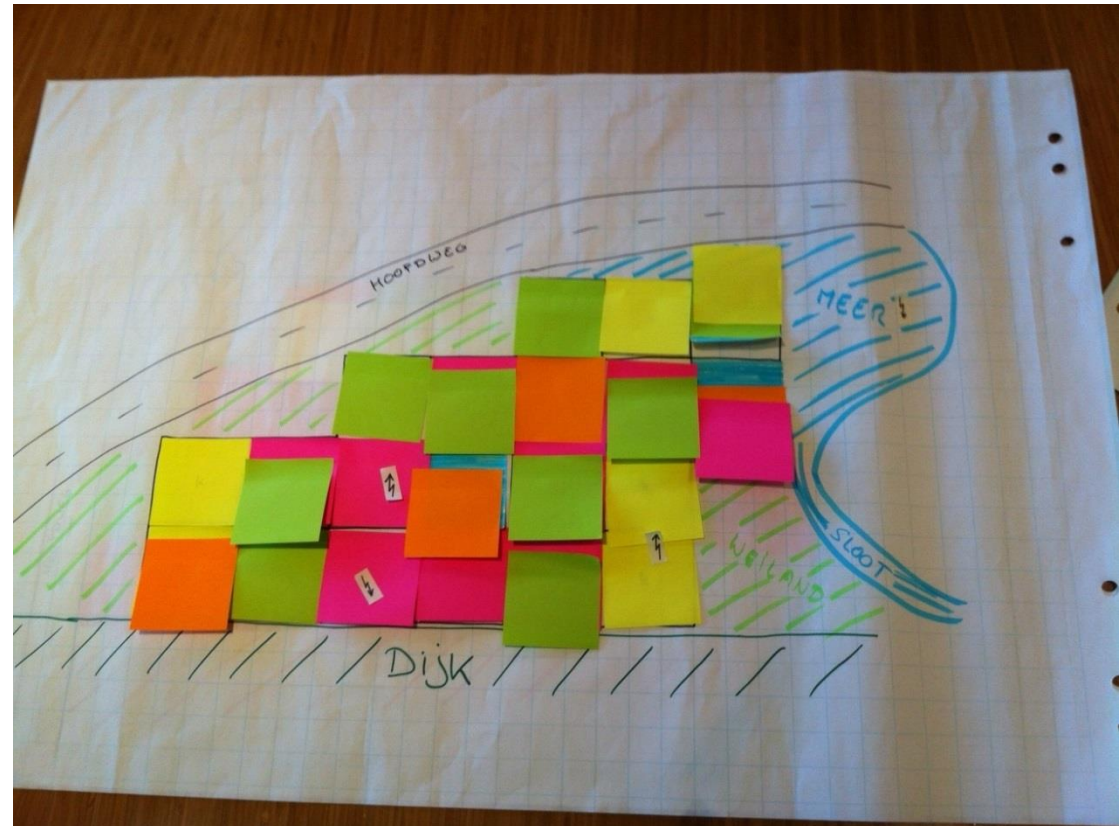
Climate active city

- Climate proof cities
- Stress test: water and heat
- Workshops in preparation
- Collaboration municipalities and waterboard
- Bergen, Uitgeest, Castricum, Heiloo, Heerhugowaard, Alkmaar, Langedijk
- But no show cases yet



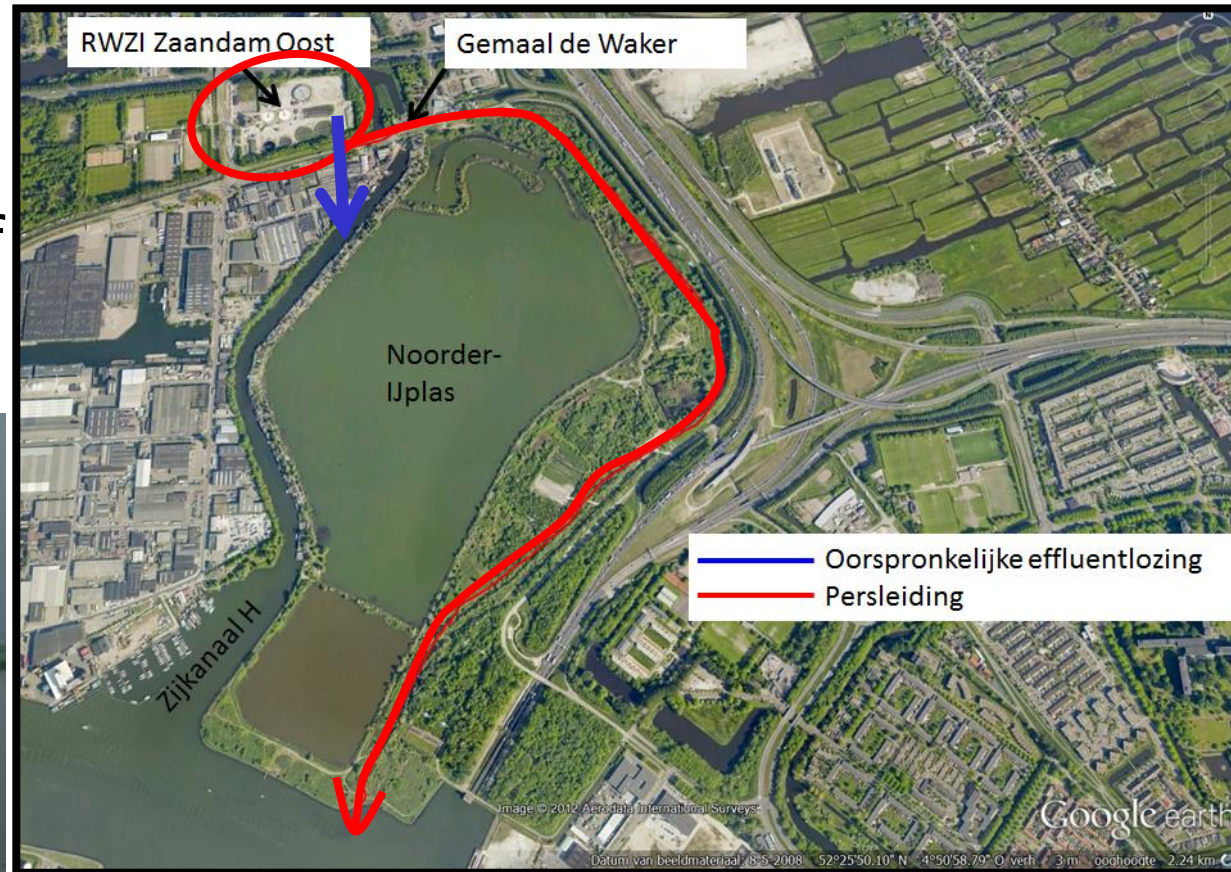
Workshop on climate proof design

- University of Applied Sciences Utrecht
- History of water management
- Excursion to City of the Sun
- Workshop
- It is about the story
- Awareness!



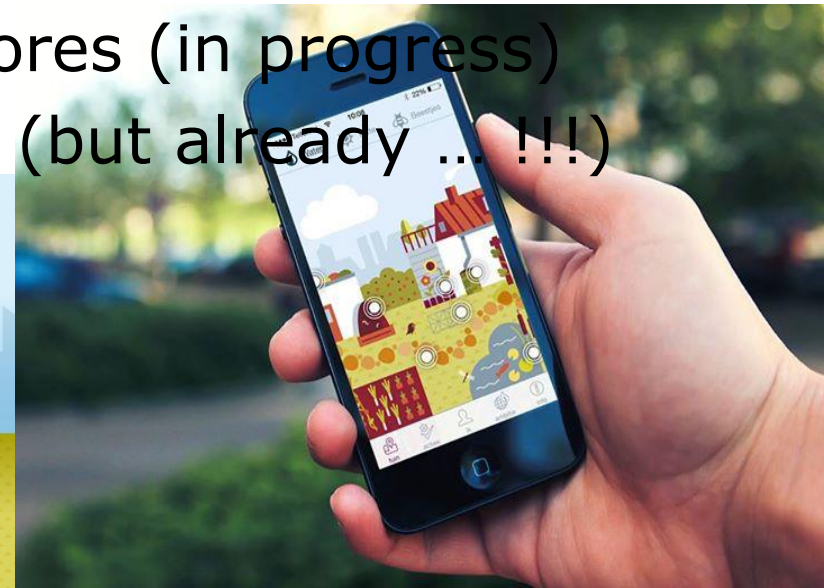
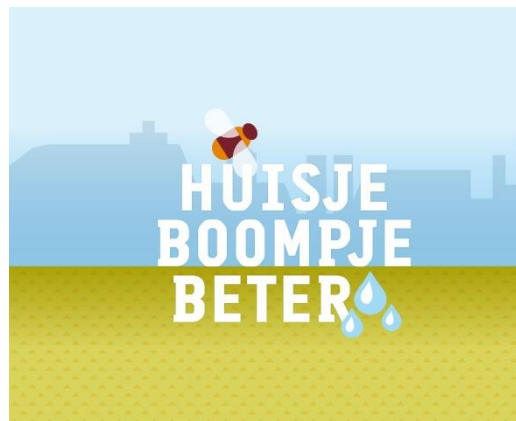
Sewage treatment plant Zaandam-East

- € 120.000 py and 600 ton CO₂
- € 1.000.000 every 50 years
- WFD, fish ways, etc.
- 63 houseboats
- Communication
- Investing part of savings in area?



Huisje Boompje Beter App (Former worktitle: I go ECO app)

- House Tree Better App
- Citizens can take measures themselves
- Climate proof house, garden, street
- Measures, tips & tricks, costs, difficulty, effects
- Water and heat
- Biodiversity and Food from your own garden later on
- Working together with DIY stores (in progress)
- Available from 9th October on (but already ... !!!)



Huisje Boompje Beter App (Former worktitle: I go ECO app)



Huisje Boompje Beter App (Former worktitle: I go ECO app)



Already finished

- www.urbangreenbluegrids.com
- Metropolitan Region Amsterdam
- Lecture on urban green blue grids
- Flooding insurance in The Netherlands
- Workshop on climate proof design



URBAN GREEN-BLUE GRIDS
for sustainable and resilient cities