

Floating City

# water architect van bueren

21 april 2011

Ir. Bart van Bueren

water architect  
van bueren

First price Deltacompetition 2006

# Background

Winner Haskoning Deltacompetition 2006



TU Delft Highlight

Onderzoek succes & faalfactoren

publics winner CasaNova

First Price Zuid-Hollandprijs Toekomst adaptief



cum laude architecture + building tech



IcoonProject Urgenda Sustainability agenda



2006

2011

300+ publications in magazines, papers, television worldwide

oprichter DeltaSync (directeur tot sept'08)

Winner NCRV klimaatshow



Building Paviljoen Rotterdam

World Expo 2010 Shanghai

Winner Young Technical Professional '08 kivi niria

patent light weight floating foundation



june 2009 Presentation to MP Balkenende



dec 2010 visit Maxima



## Projects

### - Government:

Zuid-Holland - Future Adaptation

TU Delft - Research plan floating city

InnovatieNetwerk - Future Floating Agriculture

### - Municipalities:

Rotterdam - Future harbor development

Shanghai - Expo Floating City

### - Private:

Waterwonen Rotterdam - Floating village

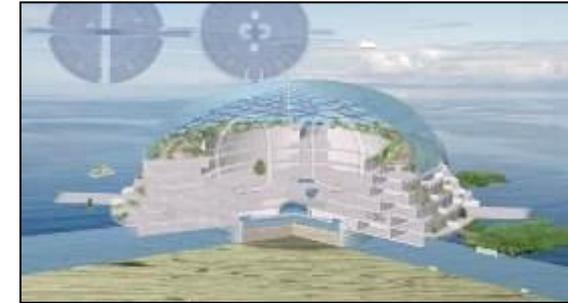
OVG Development - Floating Office and Pavilion

NIBA - Technical Feasibility Study

TBI Bouw, Contour - Alternative Case Study

SIGN - Floating Greenhouse patent

Gebroeders Das - Floating Pyramide



- Architecture

- Technical design

- Concepts



# Climate Change is an issue that must be addressed by our generation!

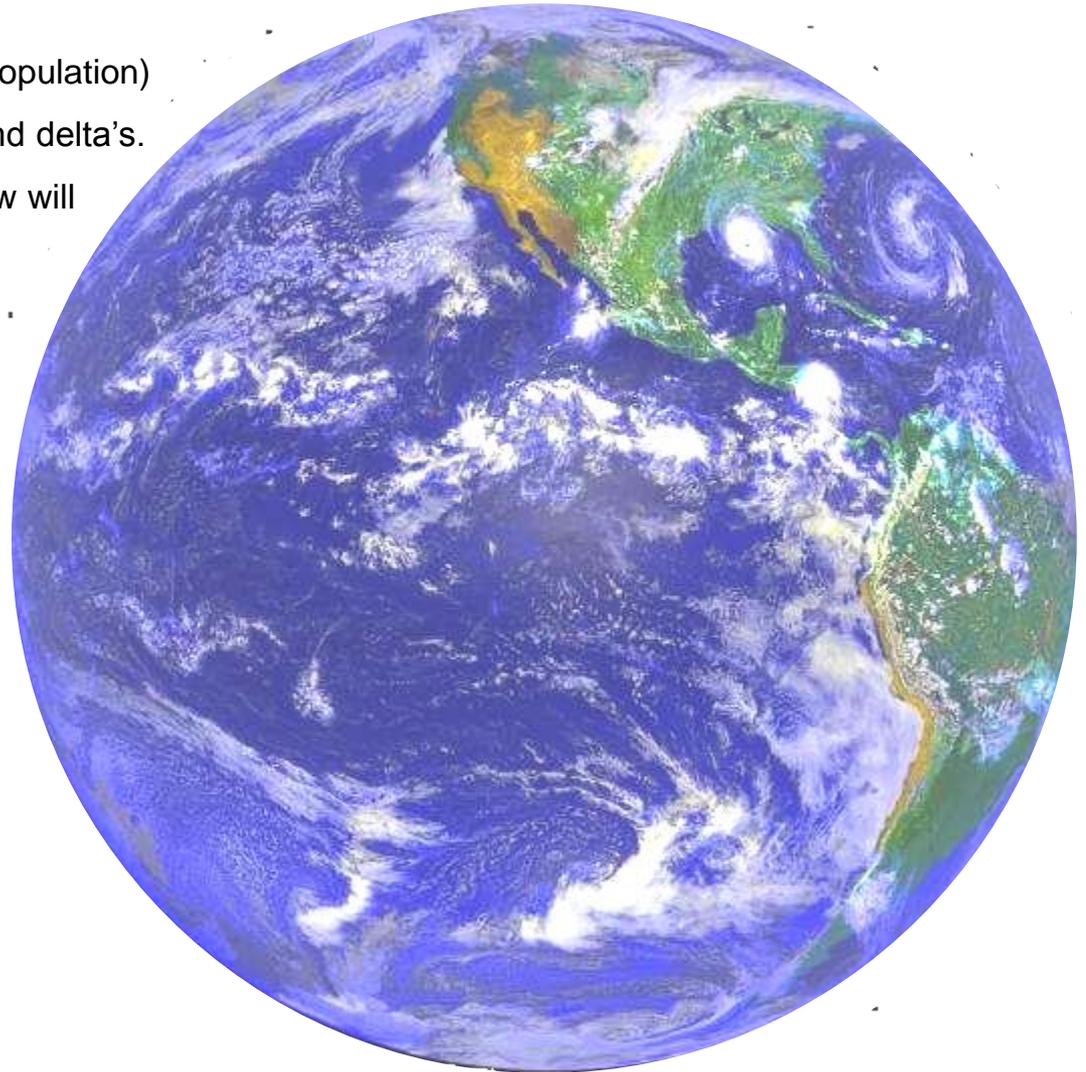
2005: 1.2 billion people (23% of world population)

lives <100km from coast in lowland delta's.

2030: 50% of the world population. Growth will

happen in most vulnerable area's

for flooding.\*



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# The Netherlands

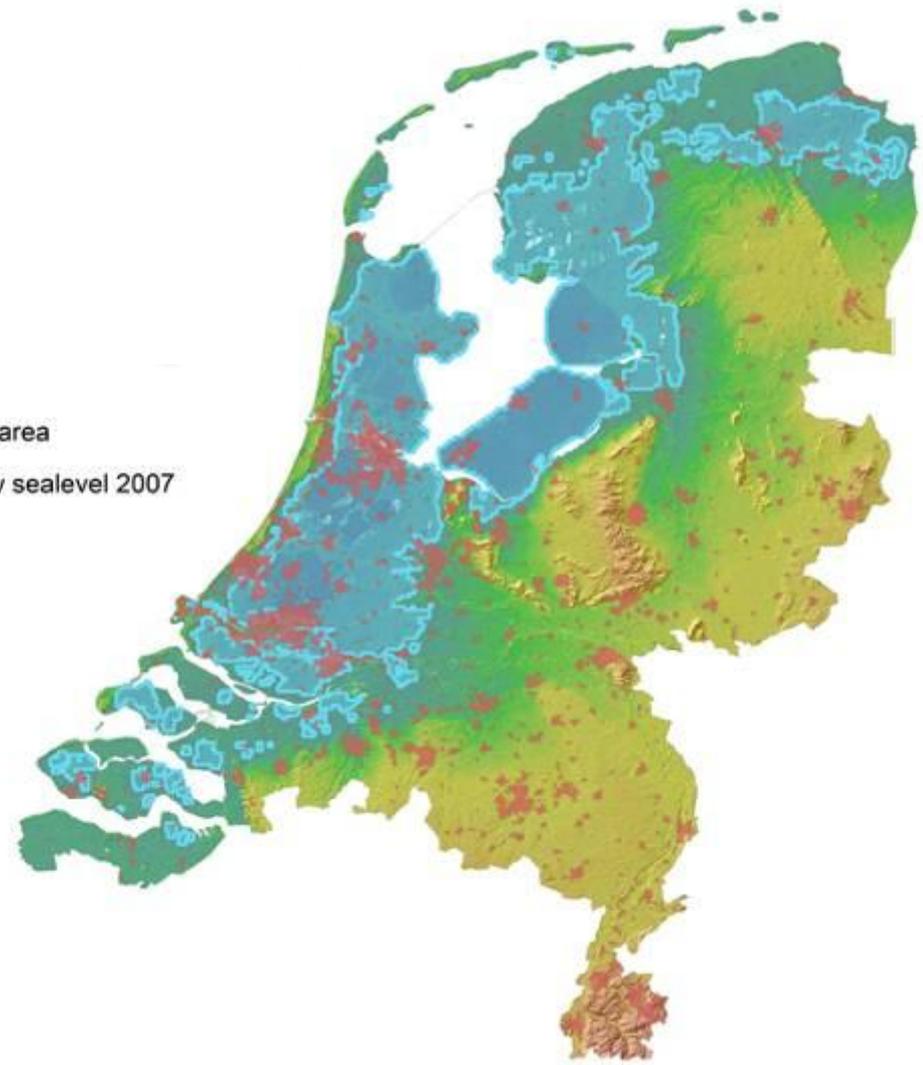
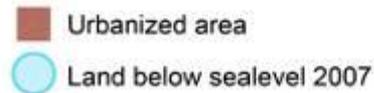
## Overstromingsrisico

2100: 65cm sealevel rise

15% winter rainfall increase

25cm land subsidence

7.5% river discharge increase



The Netherlands, not only a climate change issue; but a economic feasible business case

Urbanized area with scarcity of land

more flood basins are needed

living with water is great!





**- Sustainable development**

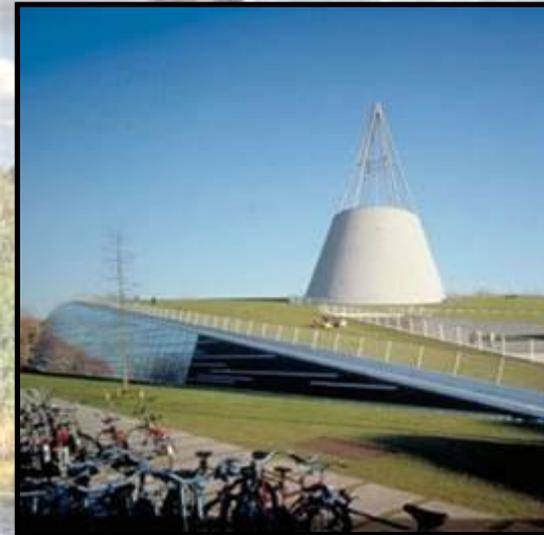
**- Architecture**

**- Delta technology**

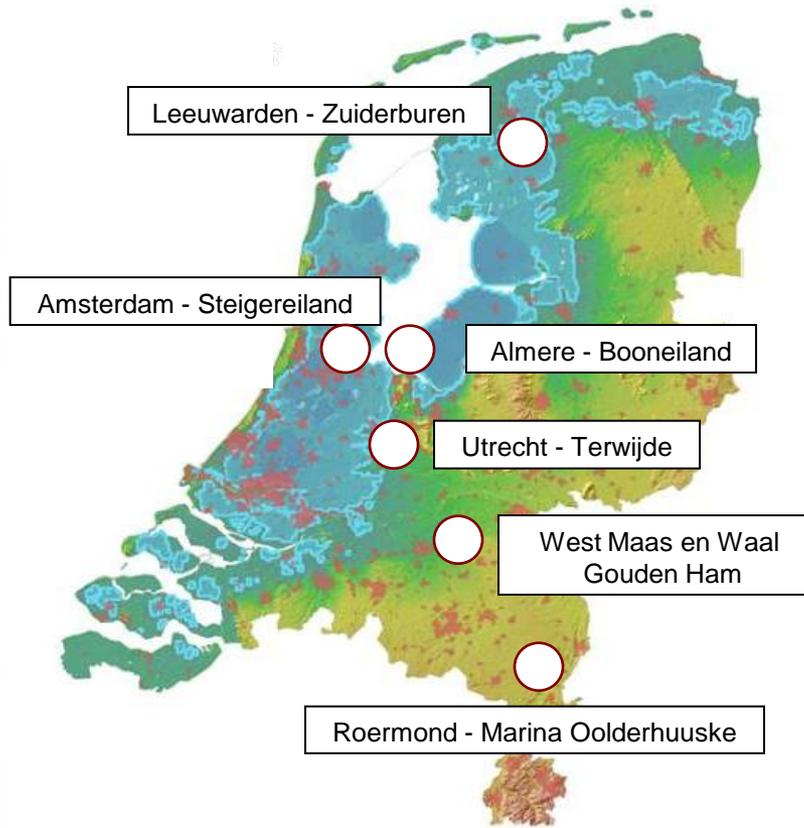
- Sustainable development

- Architecture

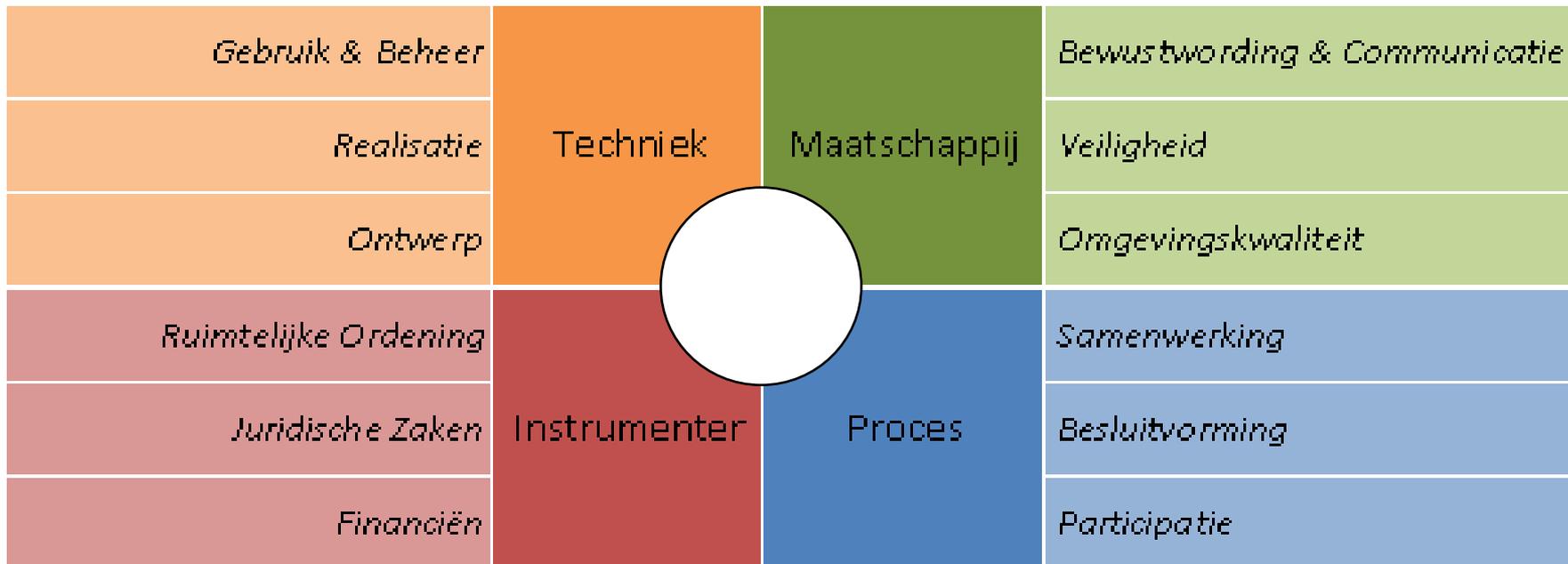
- Delta technology



# Gerealiseerde projecten Nederland



# waterwiel



succes en faalfactoren

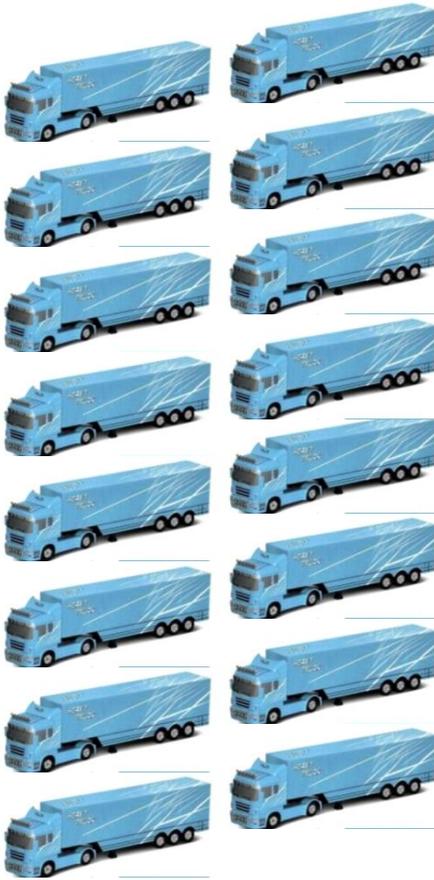
**ruim 30 factoren zijn relevant bij wonen op water:**

- **juridische status**
- **locatiekeuze/landschappelijke inpassing**
- **onbekend maakt onbemind**
- **processen zijn niet interactief**

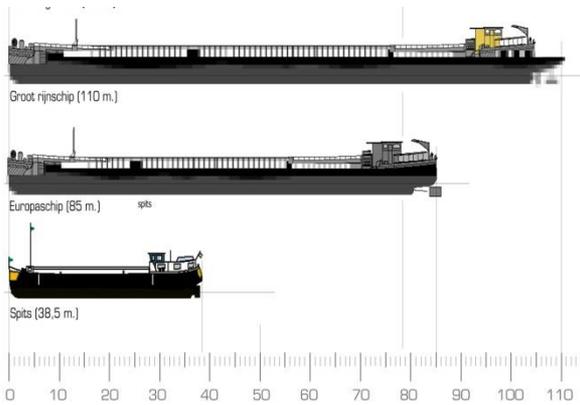
**oplossingsrichtingen voor bestuurders, waterbeheerders,  
ontwikkelaars en projectteams.**



# Transport over water



# Ships are in all sizes



Houseboat



# Houseboat



water architect  
van bueren

water architect  
van bueren

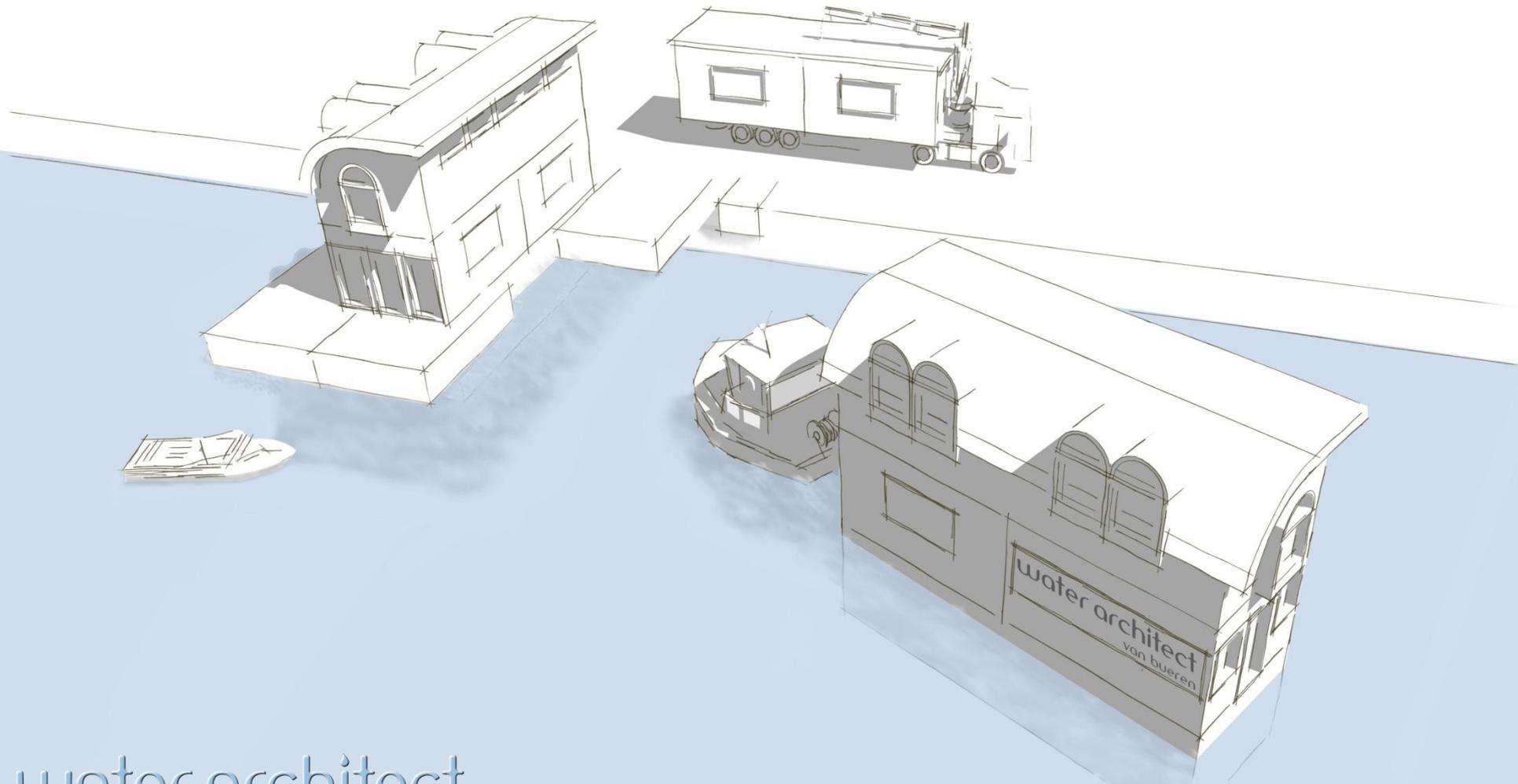
# Houses on the water



# Floating Villa



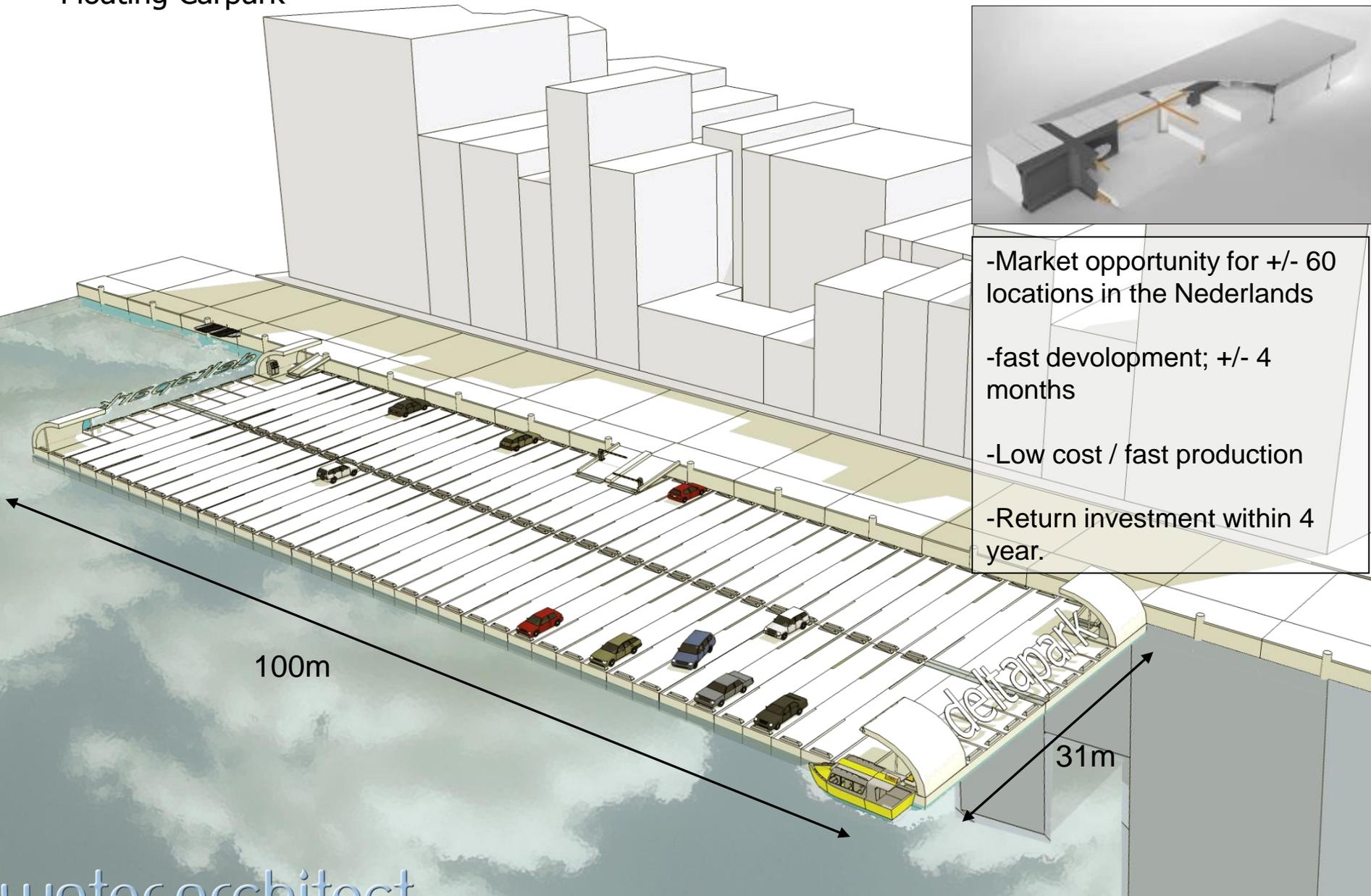
# Modulair building – transport over water



Modulair building - Building in factory



# Floating Carpark

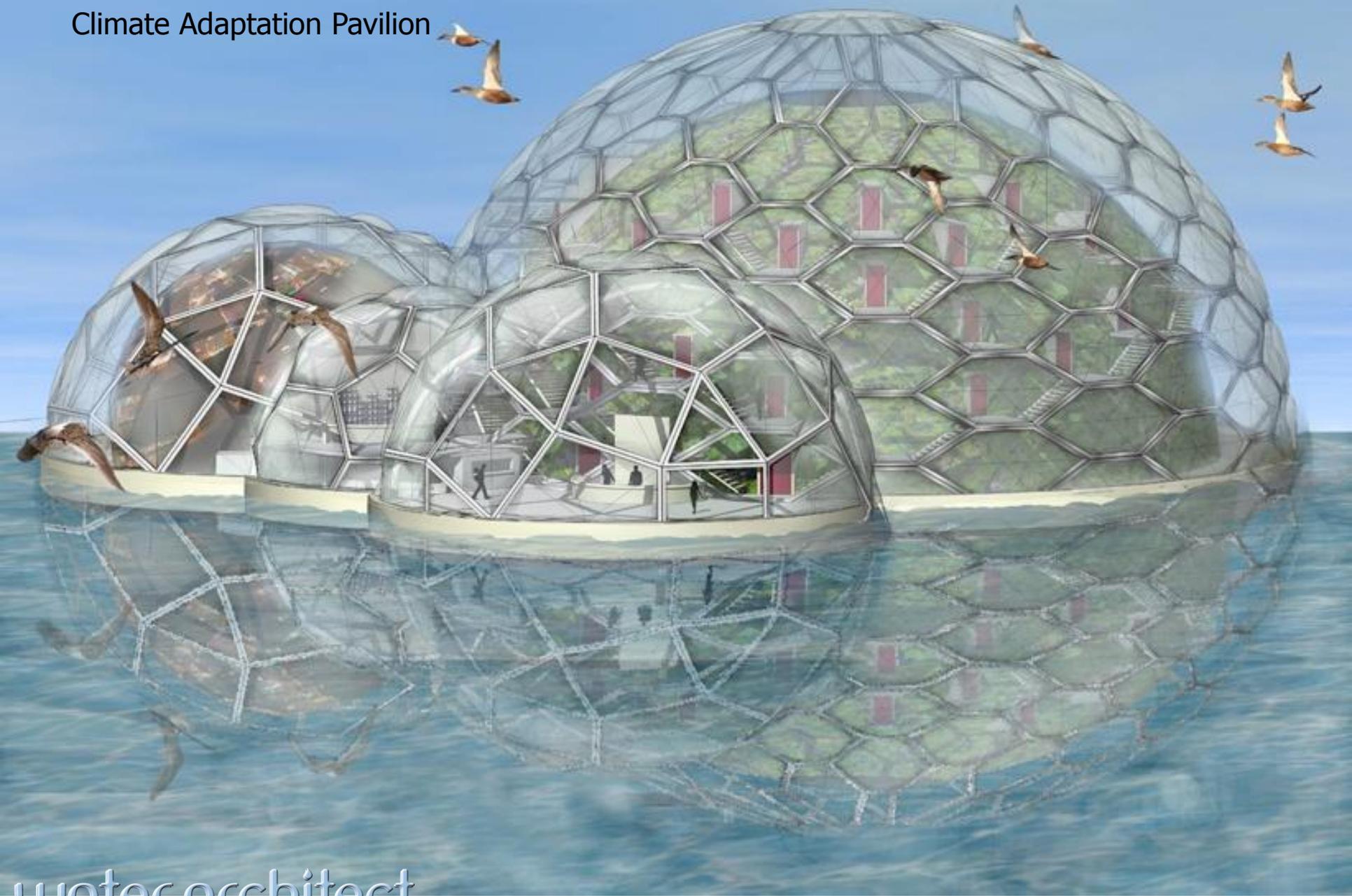


- Market opportunity for +/- 60 locations in the Netherlands
- fast development; +/- 4 months
- Low cost / fast production
- Return investment within 4 year.

# Floating Restaurant and Shop



# Climate Adaptation Pavilion





# 智慧型浮动城市

**威胁:**  
供水威胁和城市的扩张

**解决办法: 第一个步骤**  
上海浮动薄层

**目标解决方案**  
浮动城市, 未来生活



随着全球水资源的短缺, 2017年成人均用水量比上一次调查人口增长前增长20%以上。城市扩张, 以及城市基础设施的扩张, 使得水资源短缺问题日益严重。缺水、污染和气候变化, 以及全球变暖, 正在加剧水资源短缺问题的严重性。城市扩张, 使得城市居民数量增加, 城市扩张, 使得城市居民数量增加, 城市扩张, 使得城市居民数量增加...

上海浮动薄层, 是第一个步骤。它旨在解决水资源短缺问题, 并提供一个可持续发展的解决方案。它旨在解决水资源短缺问题, 并提供一个可持续发展的解决方案。它旨在解决水资源短缺问题, 并提供一个可持续发展的解决方案...

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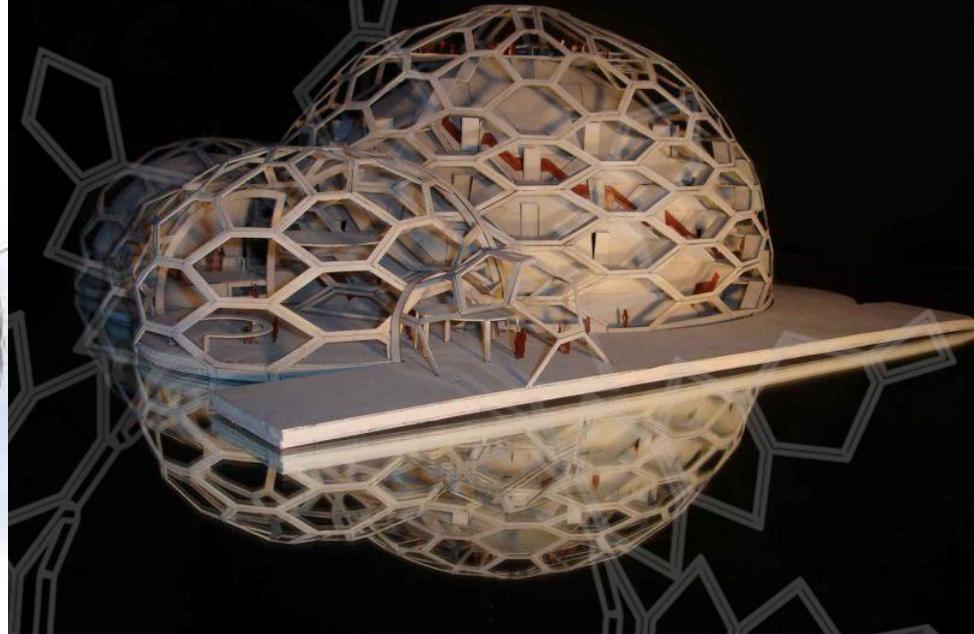
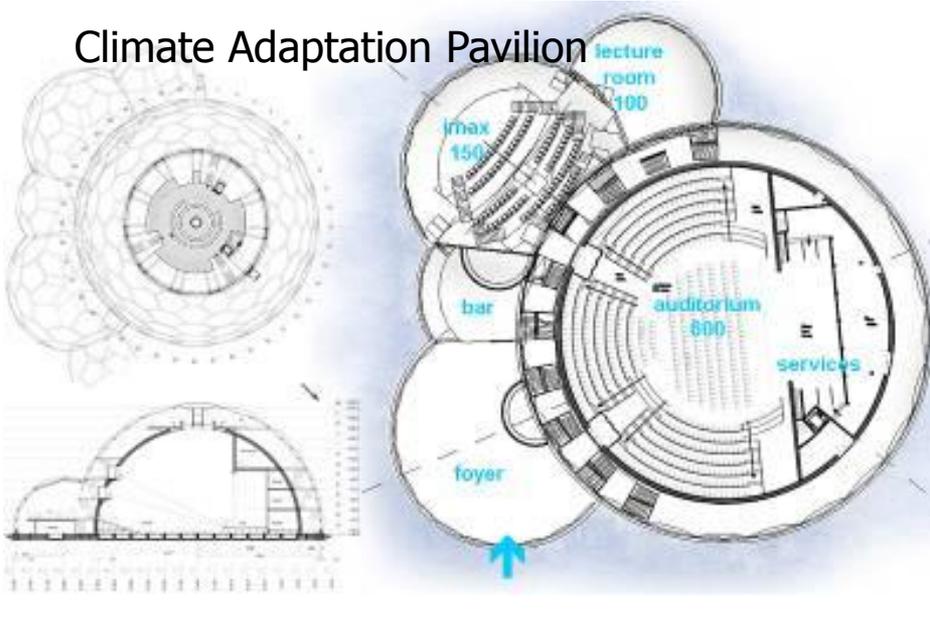
water architect  
van bueren

2020

2030

2040

# Climate Adaptation Pavilion



# Climate Adaptation Pavilion



# Floating Agriculture

water architect  
van bueren

water architect  
van bueren

Bart van Buuren  
dec. 2008



# Floating Agriculture

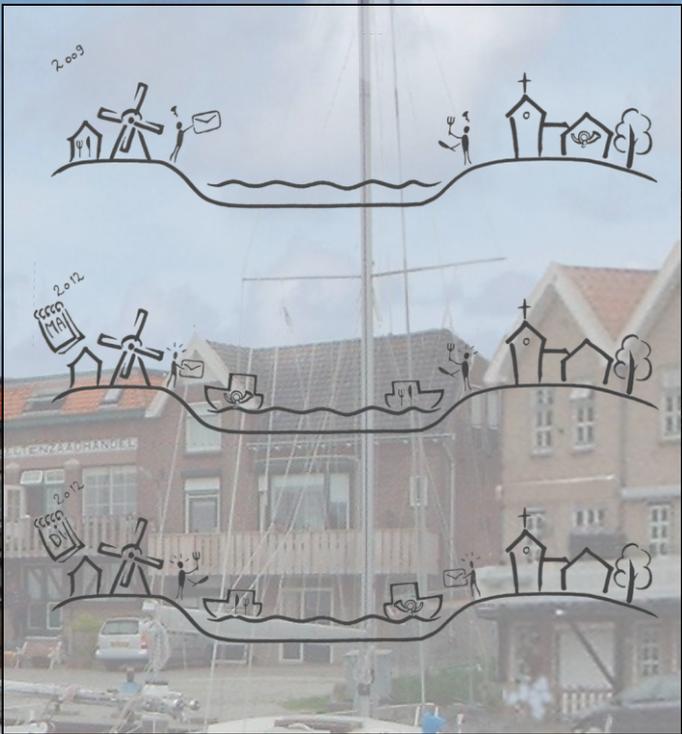


water architect  
van bueren

# Floating Agriculture



# Mobile Services



Postkantoor BankEuro

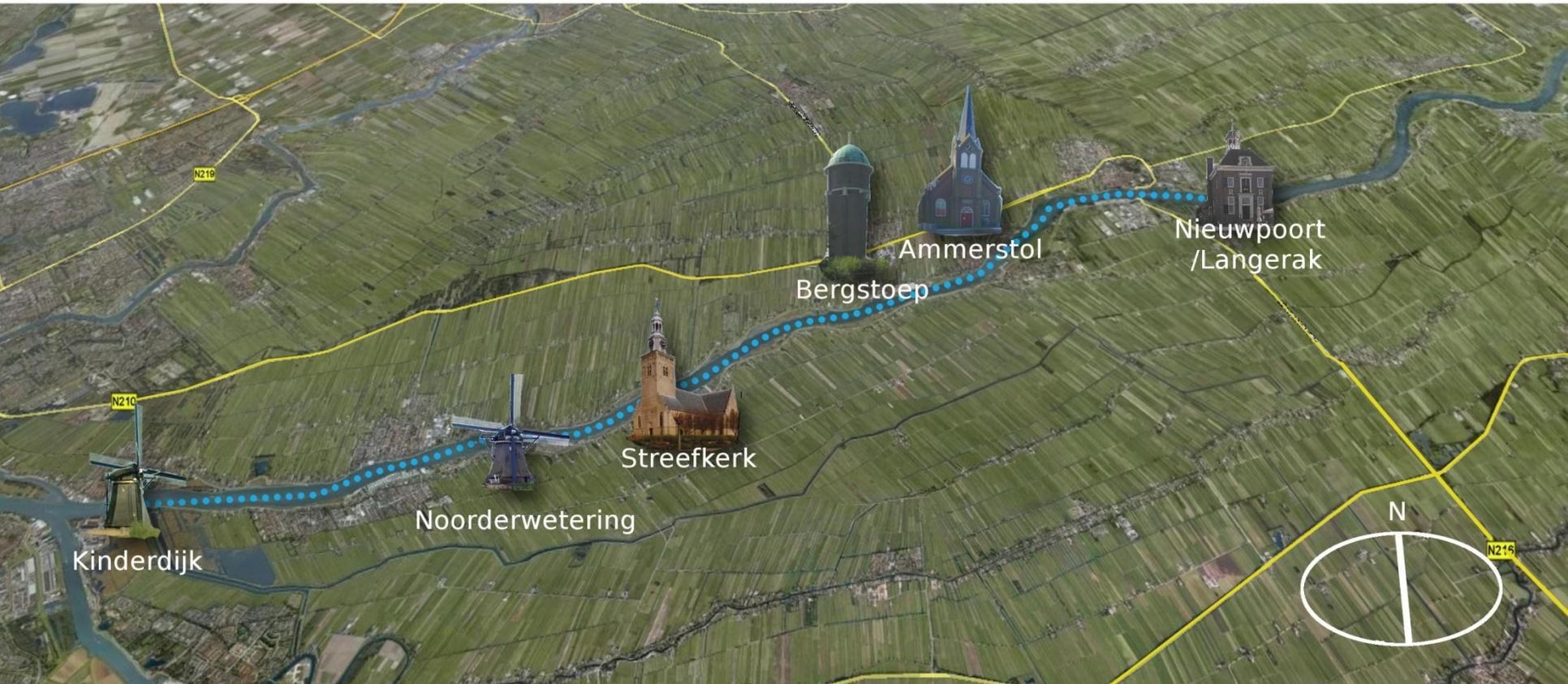
NEDERLAND  
postzegel  
actie  
drijvende  
post

water architect  
van bueren

FAK  
2009

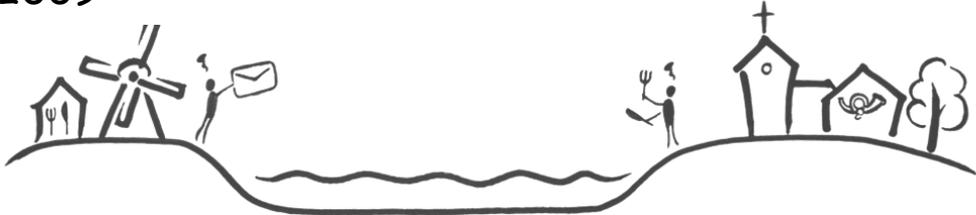
Regio: De Lek

Wateraders

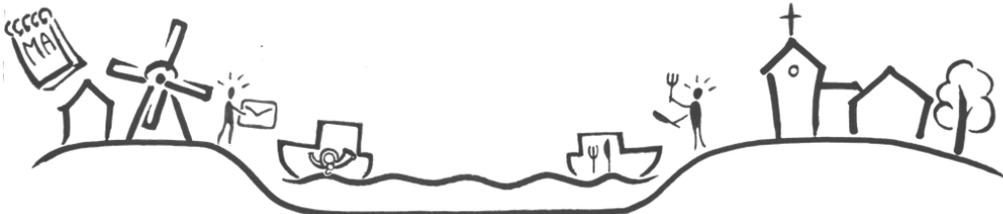


# Drijvende voorzieningen

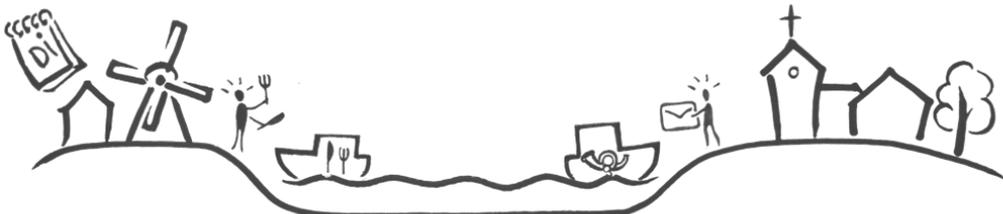
2009



2012

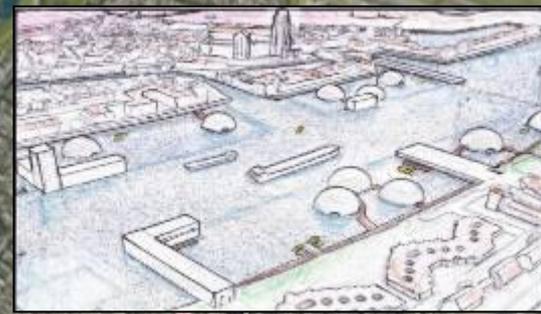


2012



Dordrecht Municipality

Merging 3 cities



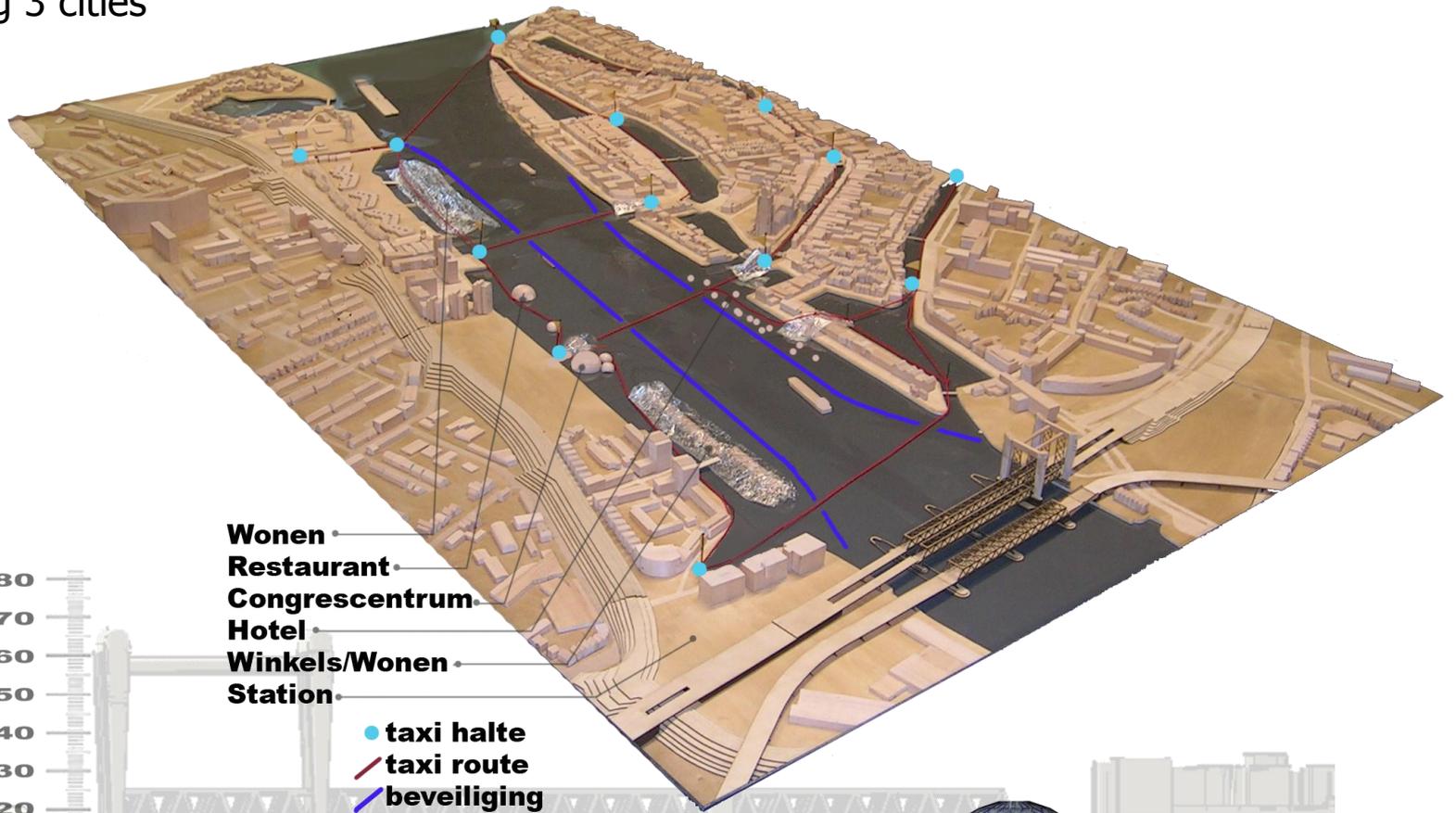
Zwijndrecht

Dordrecht



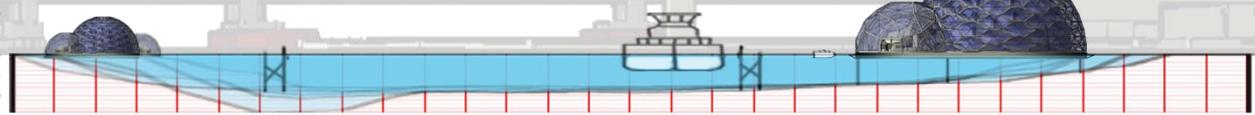
# Dordrecht Municipality

## Merging 3 cities



- Wonen
- Restaurant
- Congrescentrum
- Hotel
- Winkels/Wonen
- Station

- taxi halte
- taxi route
- beveiliging



Rotterdam Municipality  
Future Harbour Development

Rotterdam



Oost

Amsterdam Municipality

Eastwing connection to Almere

Landsmeer

Waterland



Amsterdam

Floating Cities - IJmeer, The Netherlands

Almere

Diemen

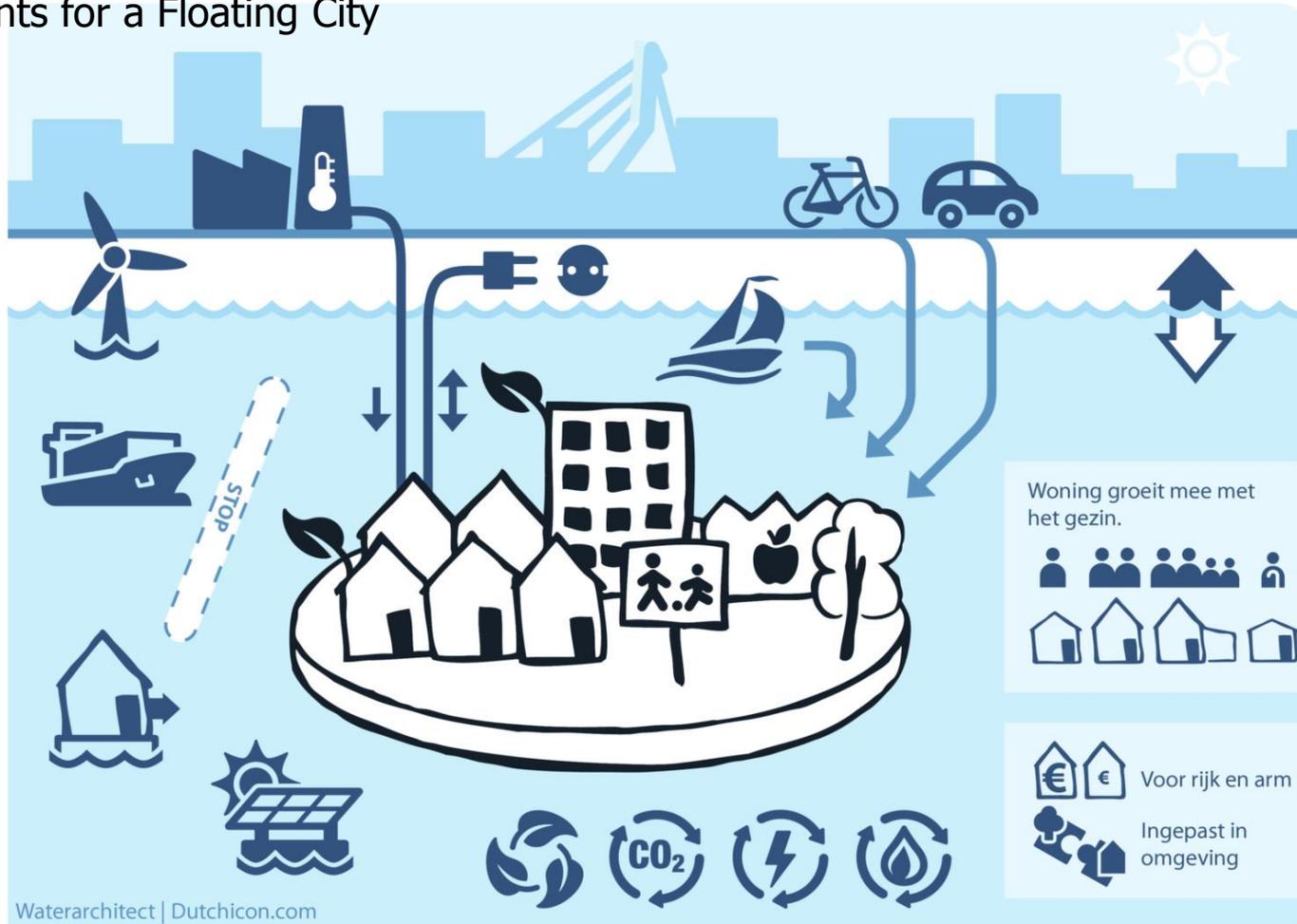
Duivendrecht

Muiden

water architect  
van bueren



# Ingredients for a Floating City



Kindvriendelijk

Adaptief

Windmolen

Restwarmte stadsverwarming

Groene ruimte

Energie neutraal

Ecologisch

Adaptieve stedenbouw

Bereikbaarheid <50m

Water recycling

Zonnecellen

Veilige ligplaatsen

# Floating City



Thank you for your attention.

ir. Bart van Bueren

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water architect  
van bueren

