



Climate App: urban climate adaptation measures



19-06-2014 > Climate App: the new tool for global urban climate adaptation measures How can we make cities safe against flooding, heavy rainfall, drought an...

Team selected as winner of Rebuild By Design



02-06-2014 > Bosch Slabbers, As part of the Interboro Team is pleased to announce that Living with the Bay, its resiliency plan for Nassau County's South ...

More news

> Adapting climate change Mississippi

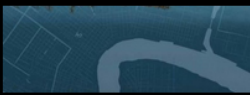
Steven Slabbers

Managing Director Bosch-Slabbers landscape + urban planning

Comprehensive Regional Resiliency Plan for Nassau County's South Shore. On Friday April 4th, our design team finis...

November 1st, our design team finished an extensive research and analysis process for the Rebuild By Design Competition. For this competi...

New Orleans Urban Water Plan



19-09-2013 > On Friday september 6th the report 'Building America's Water City' (location New Orleans) was presented. It is the result of

Report Louisiana awarded as Best Manual 2012



03-09-2013 > The report "Best practices for development in Coastal Louisiana" that Bosch Slabbers has drawn up in

Today's presentation

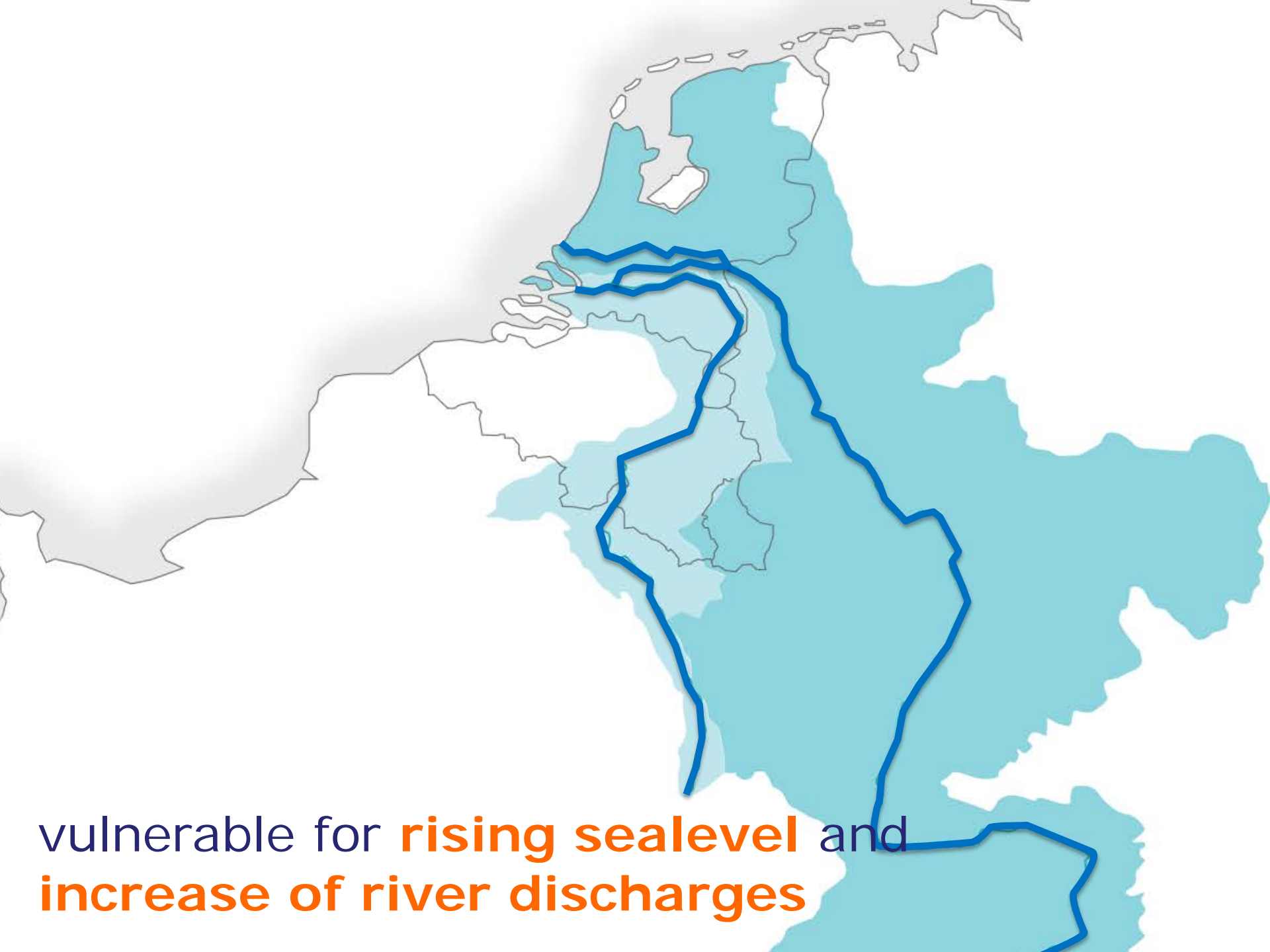
- Dutch design principles
- Applicability
- The genesis of Dutch Dialogues in New Orleans and elsewhere



Building levees since 1200

Today, building levees is only one measure of a much broader palet of strategies that we put in position.

Mostly the solution is found in a combination of larger and smaller measures that work together



vulnerable for **rising sealevel** and **increase of river discharges**

Sea level rise is a Sandy-like storm surge in slow motion, an inexorable, decade-by-decade phenomenon that never creates a sense of immediate crisis.

- **Start from a regional approach**
- **Look through the scales**
- **Develop a dot at the horizon**
- **Connect long term perspective with short term measures**

1953 North Sea flood

1956

Delta committee

1957

1970 Haringvliet Barrier

1971 Brouwersdam

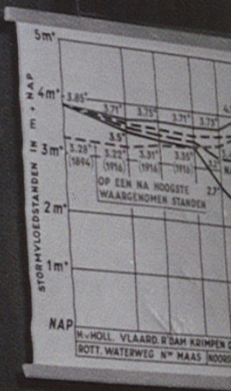
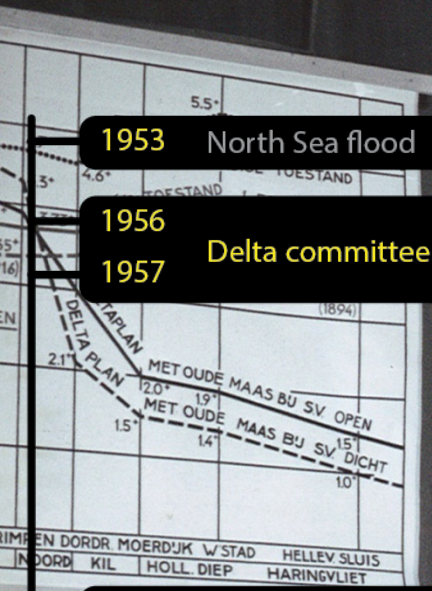
1986 Easterscheldt surgebarrier

1997 Maeslant Barrier

2010 Implementation prgm.

2010 Delta program





1953 North Sea flood

1956 Delta committee

1957

1970 Haringvliet Barrier

1971 Brouwersdam

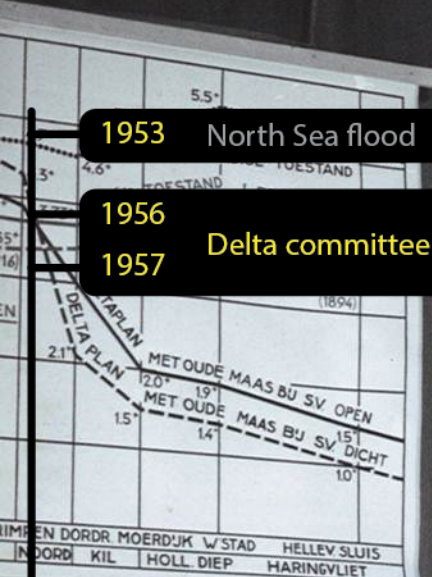
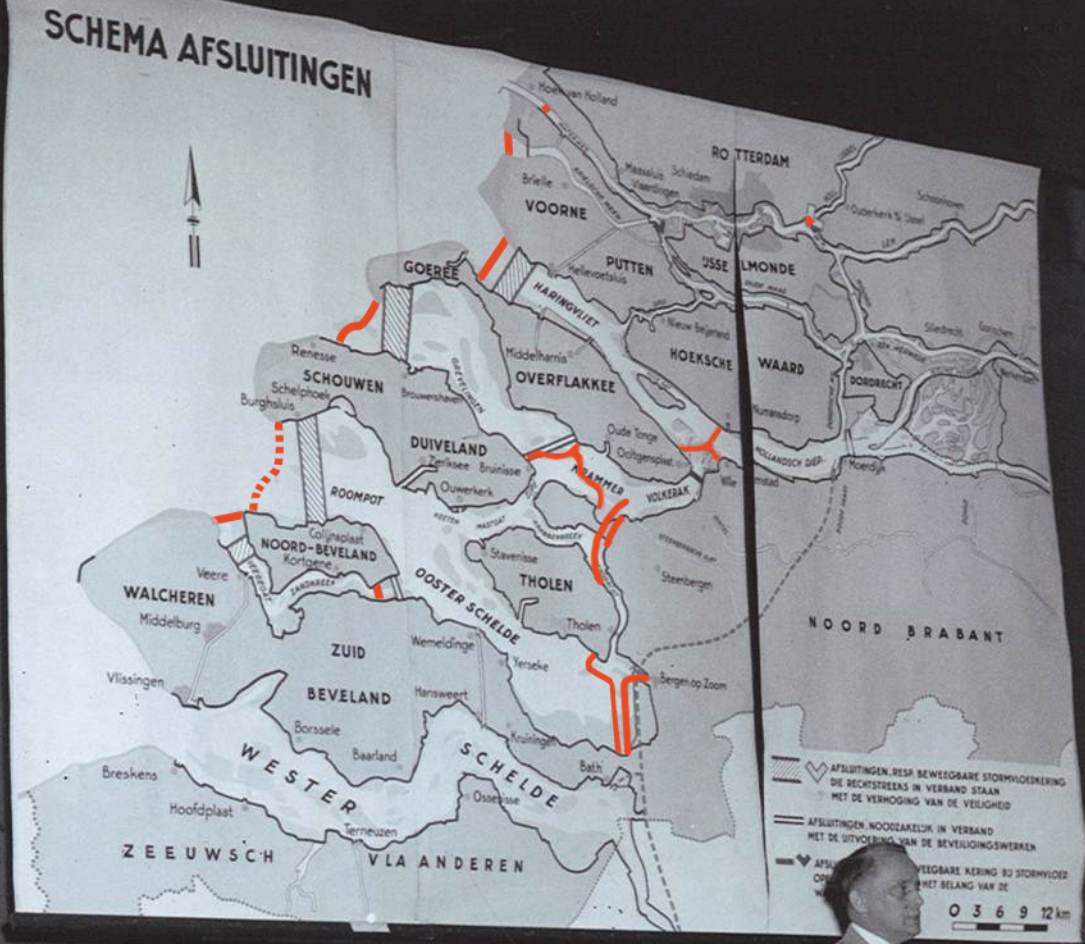
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1971 Brouwersdam

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What is realised?

bosch stabbers

1953 North Sea flood

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1986 Easterscheld surgebarrier

1997 Maeslant Barrier

2010 Implementation prgm.

2010 Delta program

Brouwersdam, entire closed, low technology, no failure

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1986 Easterscheld surgebarrier

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Easterscheld surgebarrier, half open, high tech, high maintenance

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Maeslant Barrier , entire open, higher tech, failure probability

Dare to be innovative

Sand-engine. Let nature finish the job



bosch stabbers













**Work with the system,
not against it.**

**Analyze the system,
when you understand how it works
you can work along with it**





OPTION 1

- *Heighten the levees with: 40-80 cm*



OPTION 2

- *Widen the area, create more space for the water*

Room for the river projects

are always an integrated design approach

Different circumstances - different focus

- Obstacle removal
- Floodplain excavation works
- Flood channel
- Dike shifting
- Summer bed lowering
- Dike improvement
- Groyne lowering
- Storage area
- Reclaimed land to be returned to the river
- Depot
- Area outside of the dike
- River kilometer



Dordrecht

Sometimes the solution is elsewhere



L R E G E R

ZUYDER ZEE.

N I C U M.



bosch stabbers

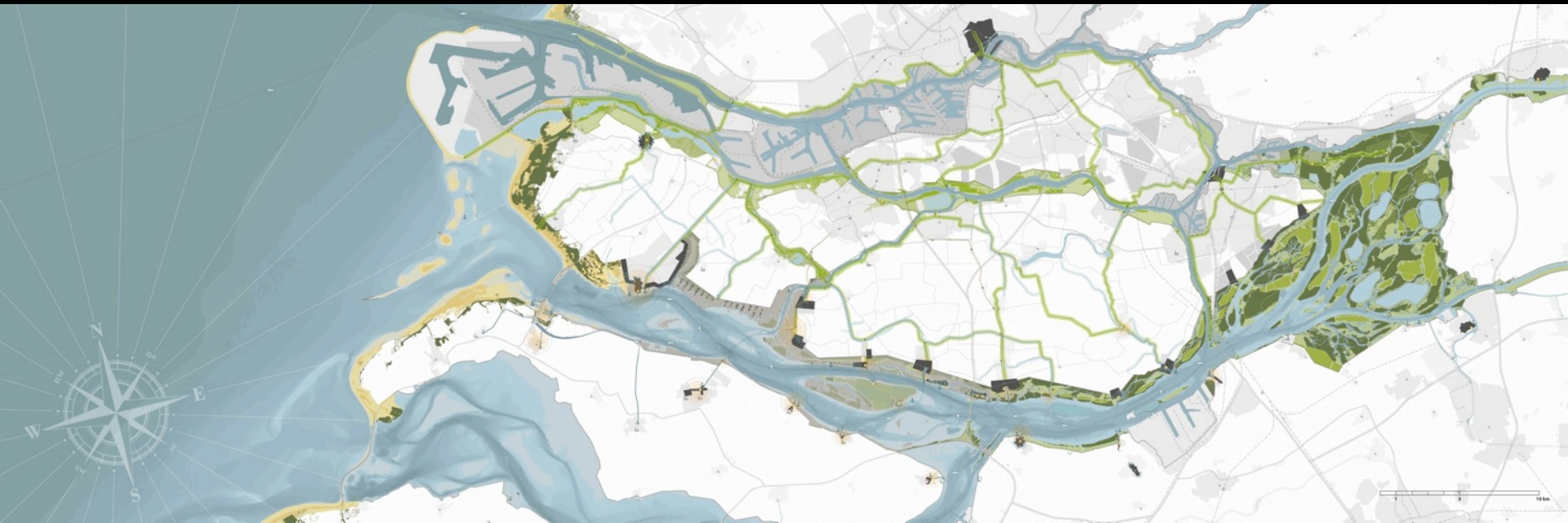


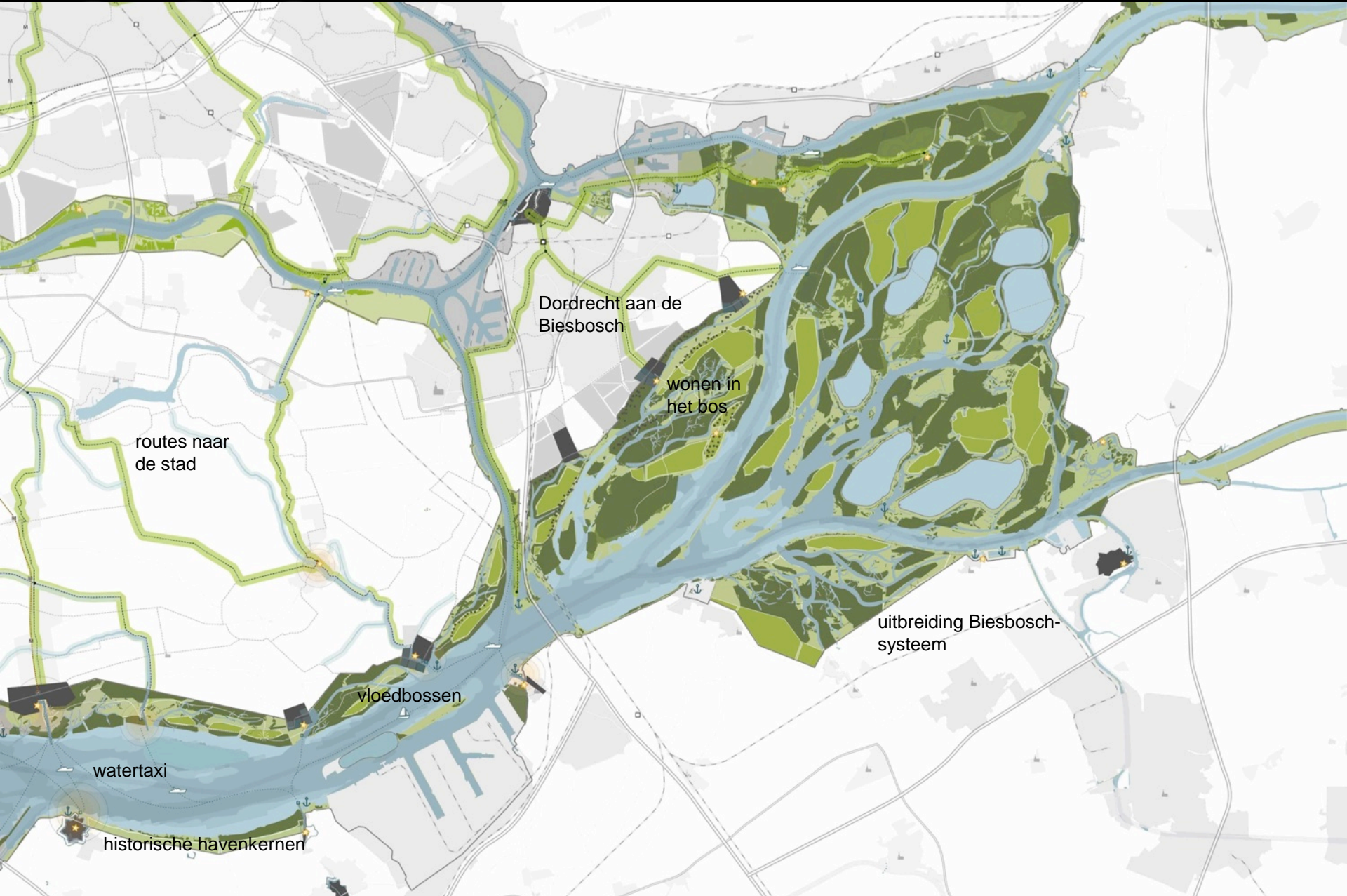




REPARATIE
MACHINEFABRIEK L. STRAATMAN. KETELMAKERS
NIEUWBOUW

Winkel
1711







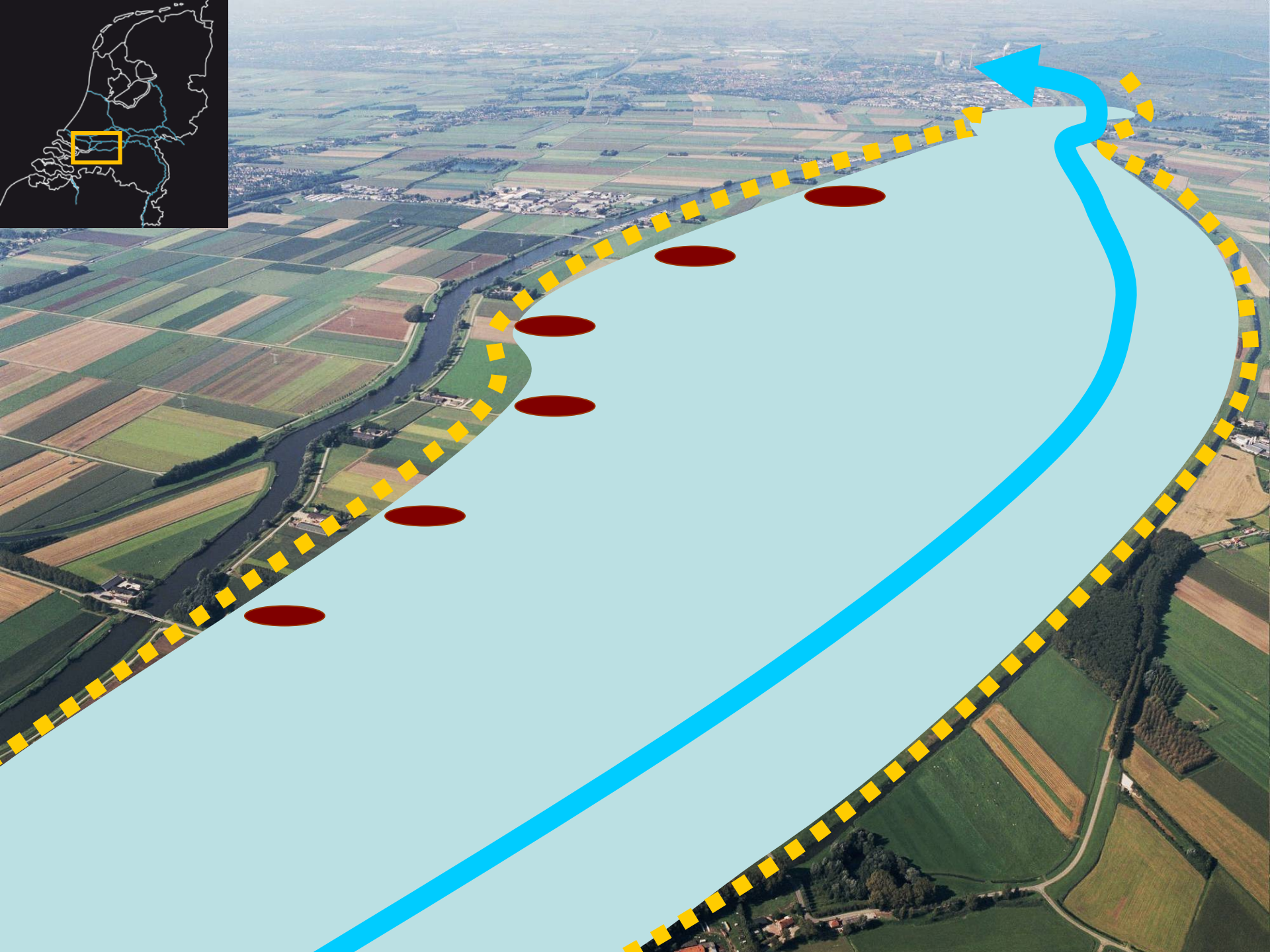
Overdiepse polder

New future for next generation farmers



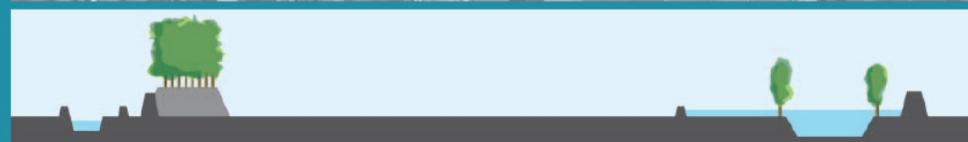
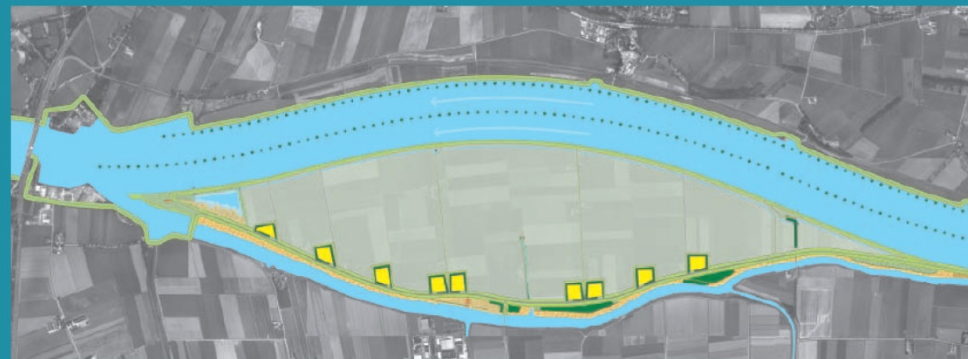




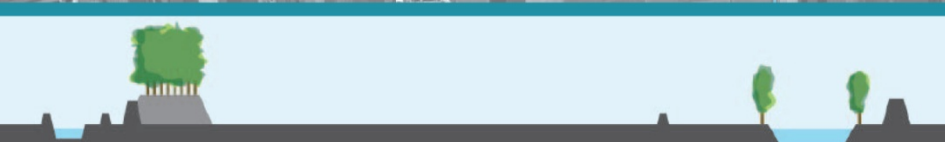




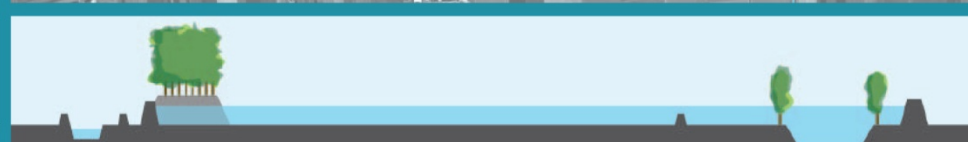
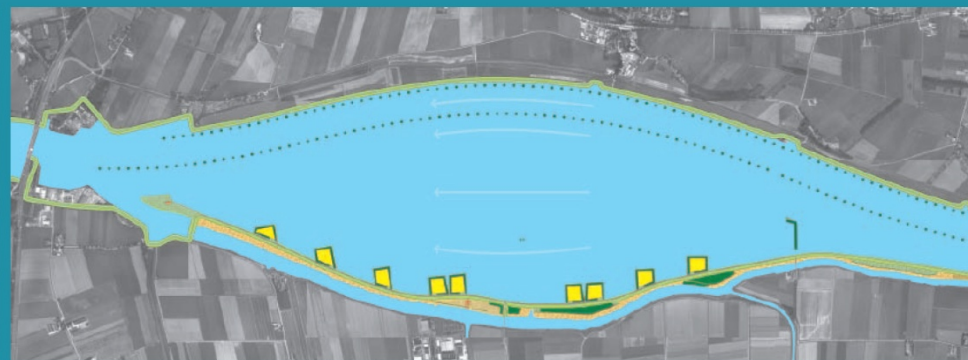
▲ de Overdiepse Polder, huidige situatie



▲ situatie bij hoogwater



▲ situatie bij normale waterstand

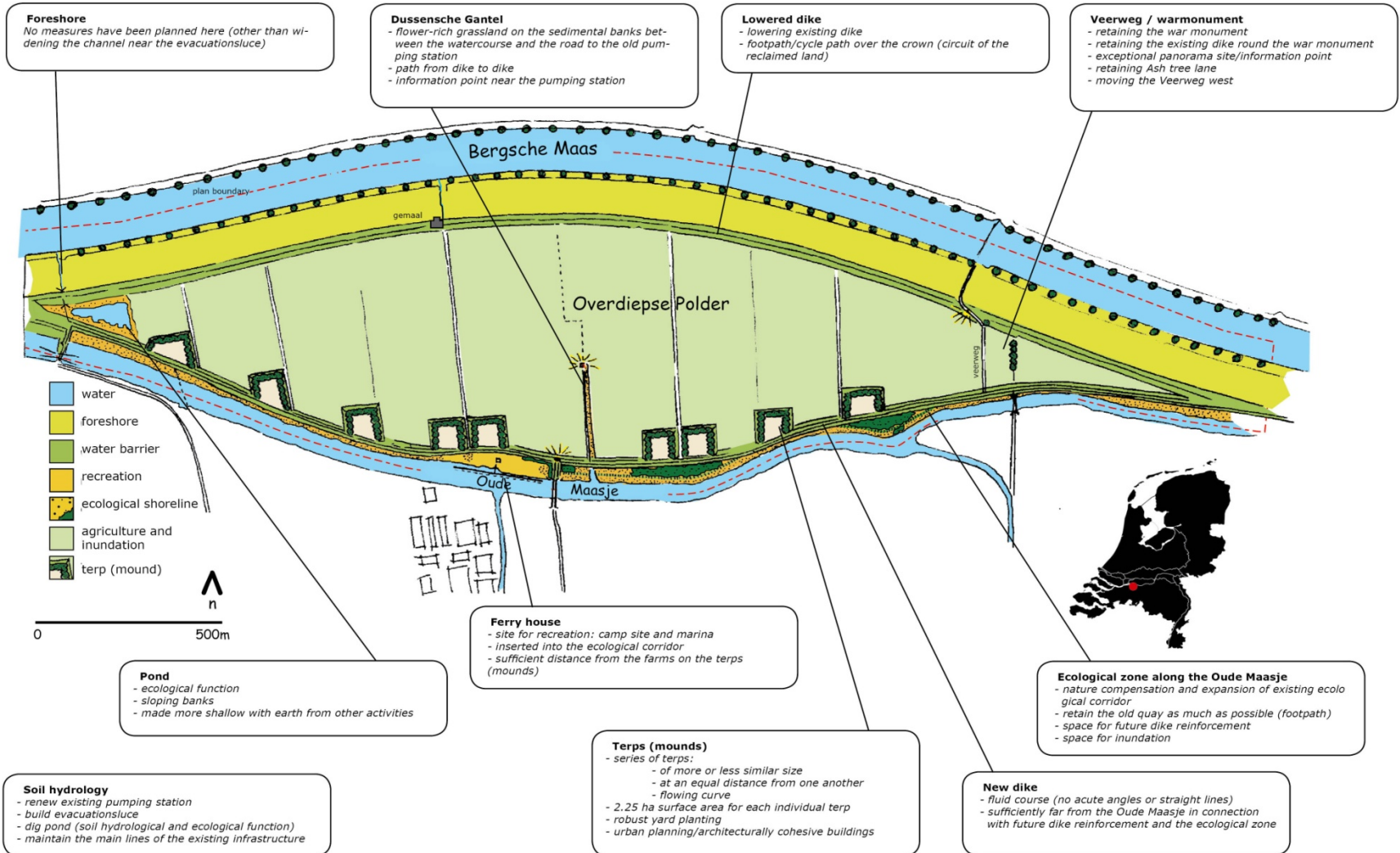


▲ situatie bij maatgevend hoogwater

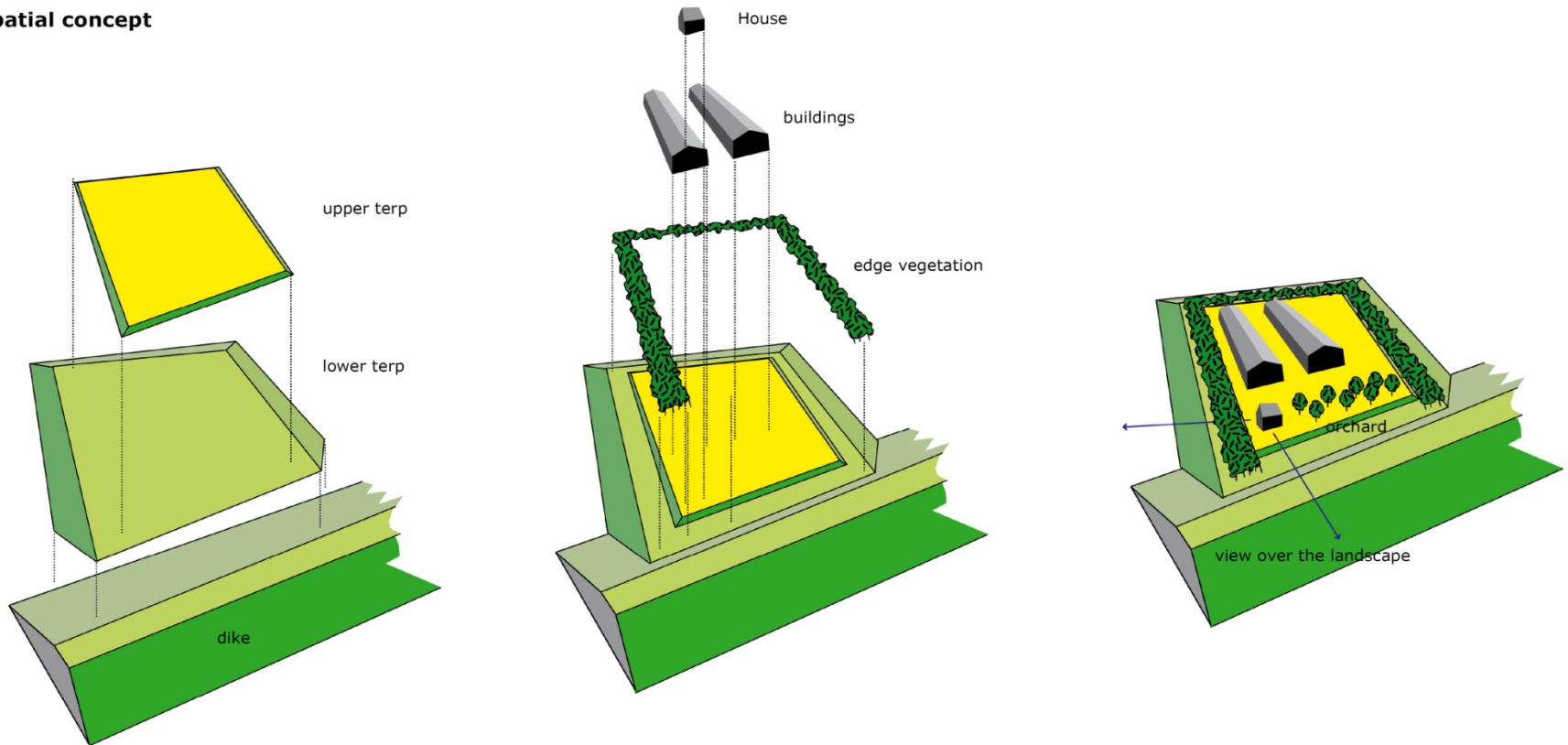
River widening Overdiepse Polder

Master plan project design

13 May 2008



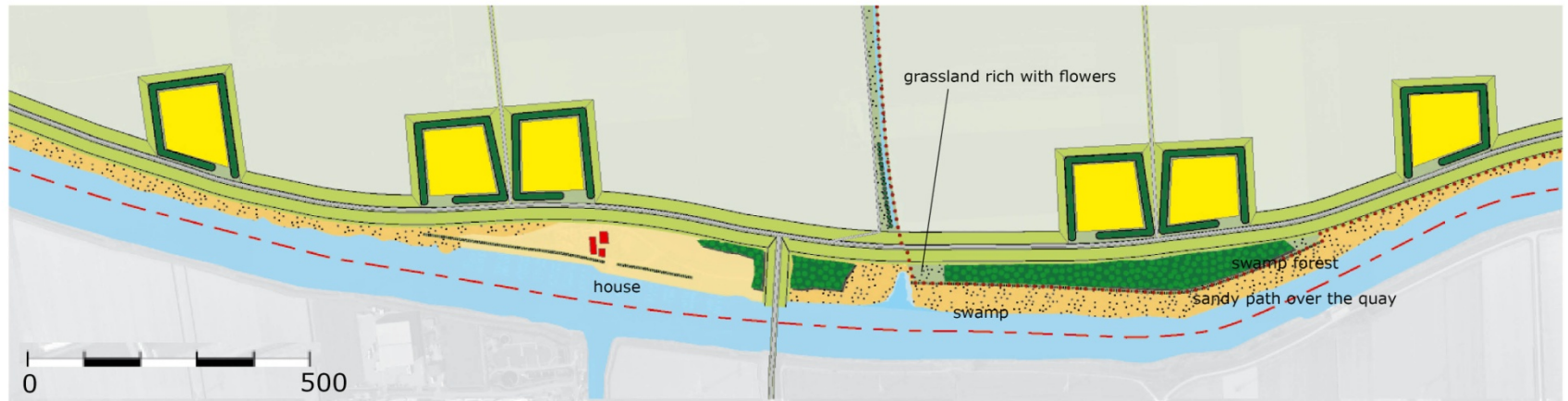
Spatial concept



1. The terp consists of two parts, the 'upper terp' and the 'lower terp'.

2. The 'upper terp' is not connected to the dike. Buildings, house and edge vegetation automatically find their place on the 'upper' and respectively 'lower' terp.

3. A solid green frame work surrounds the yard on three sides. A transparent orchard is planted at the front of the yard. The house is placed in front of the buildings and is clearly visible.







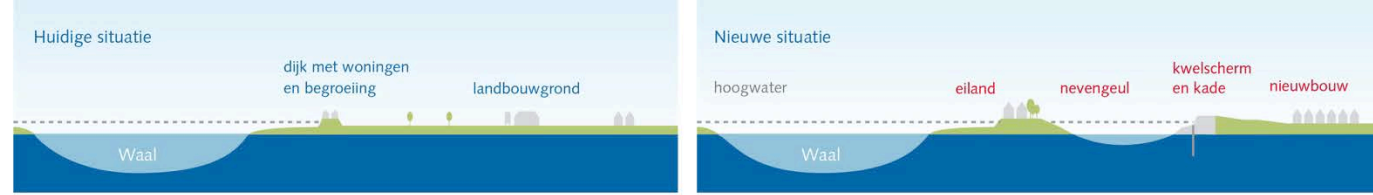


Nijmegen

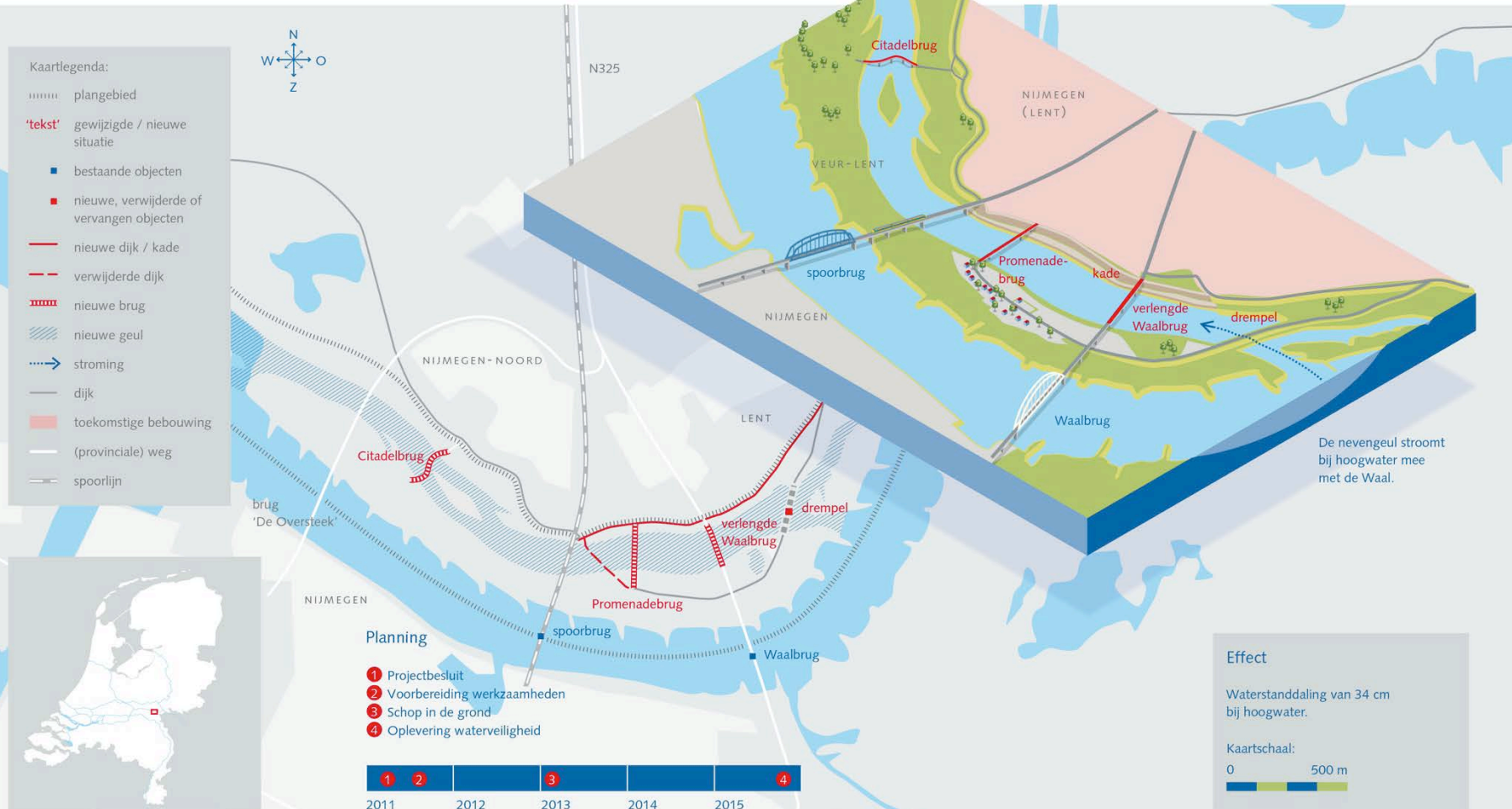
Extension of city life

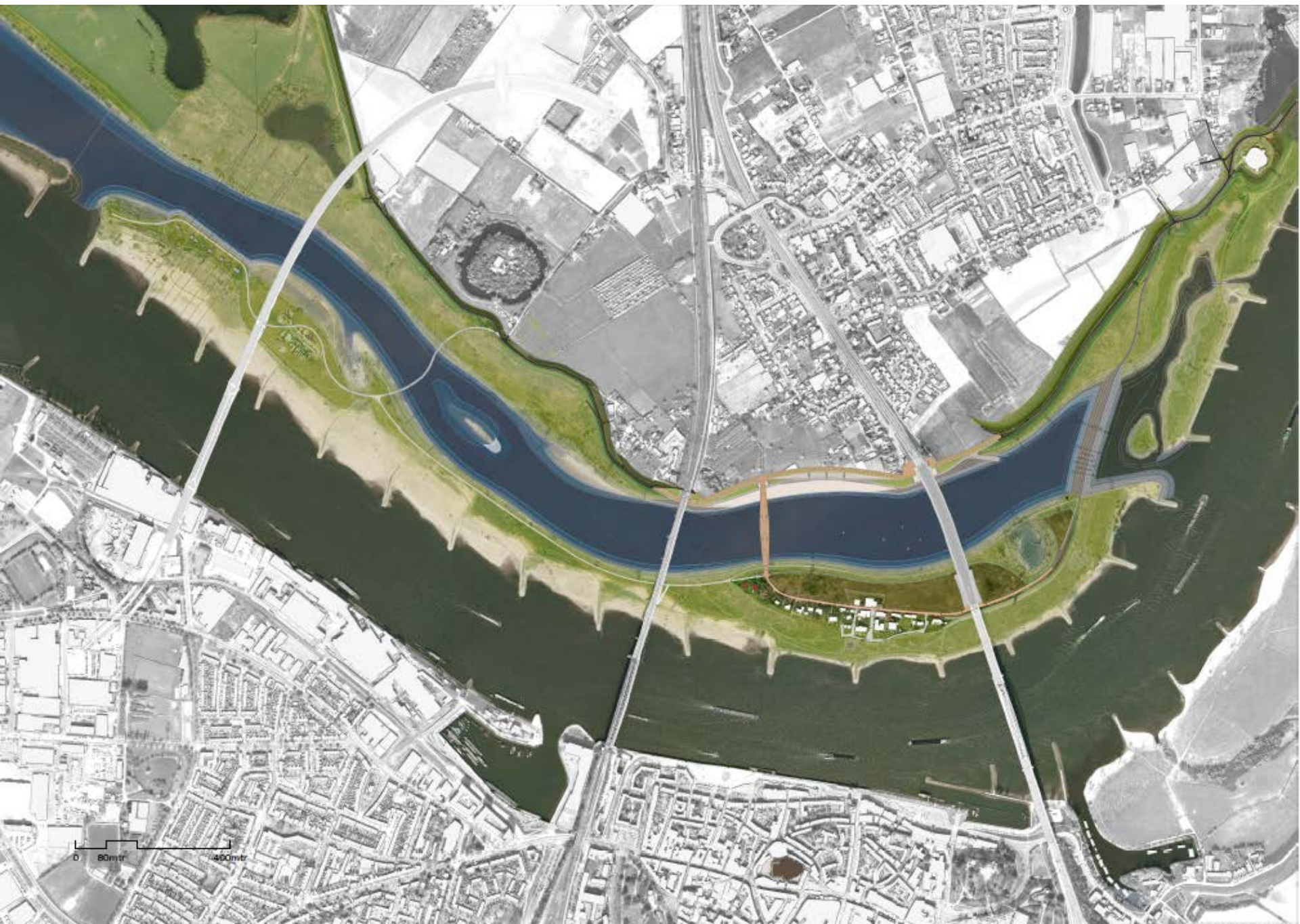
Dijkteruglegging Lent (Ruimte voor de Waal Nijmegen)

Bij Lent wordt de bestaande dijk landinwaarts verplaatst en een geul aangelegd. Deze ingreep verruimt de vernauwing in de Waalbocht tussen Nijmegen en Lent waardoor de rivier bij hoogwater beter doorstroomt.



Er ontstaat een stedelijk rivierenpark met natuur en recreatie.
Op een deel van het nieuwe eiland is ruimte voor woningbouw.





0 80mtr 160mtr









**Do not accept solutions
that only work**

**Strive for solutions that
both work and add value**

Scheveningen

The levee as a chance





5

Zeilroiv

ESCU BE



MUSEUM BEELDEN AAN ZEE









Kustwerk Katwijk

Cars covered by dunes

















Rotterdam

Adaptive & attractive



KLIMAATBESTENDIG 100 X MHW

WBZ1 MAX MHW

HUIDIGE SITUATIE MHW

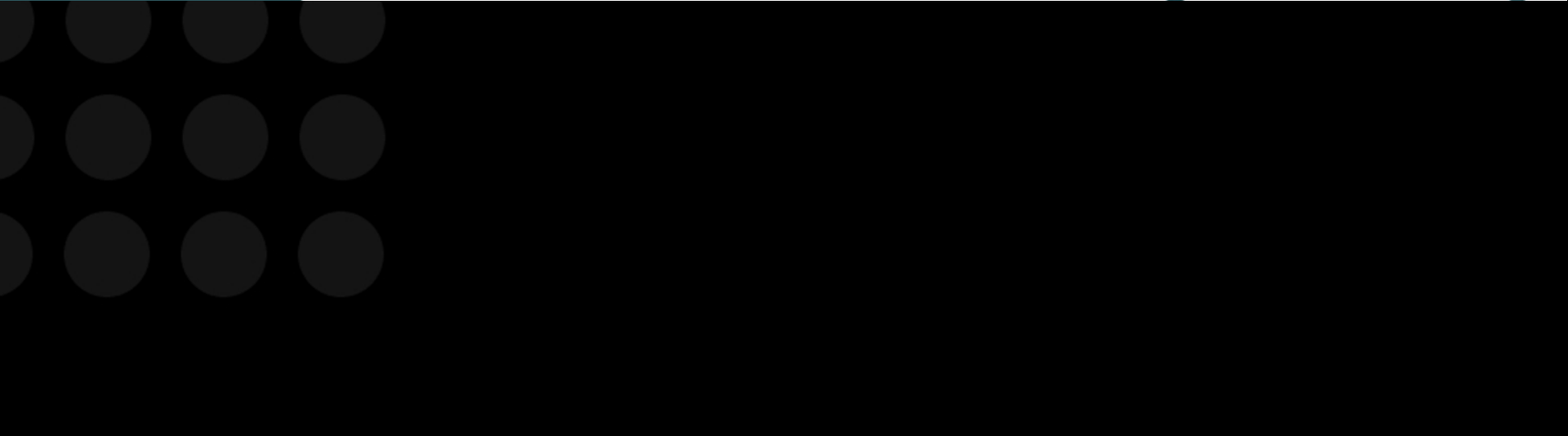
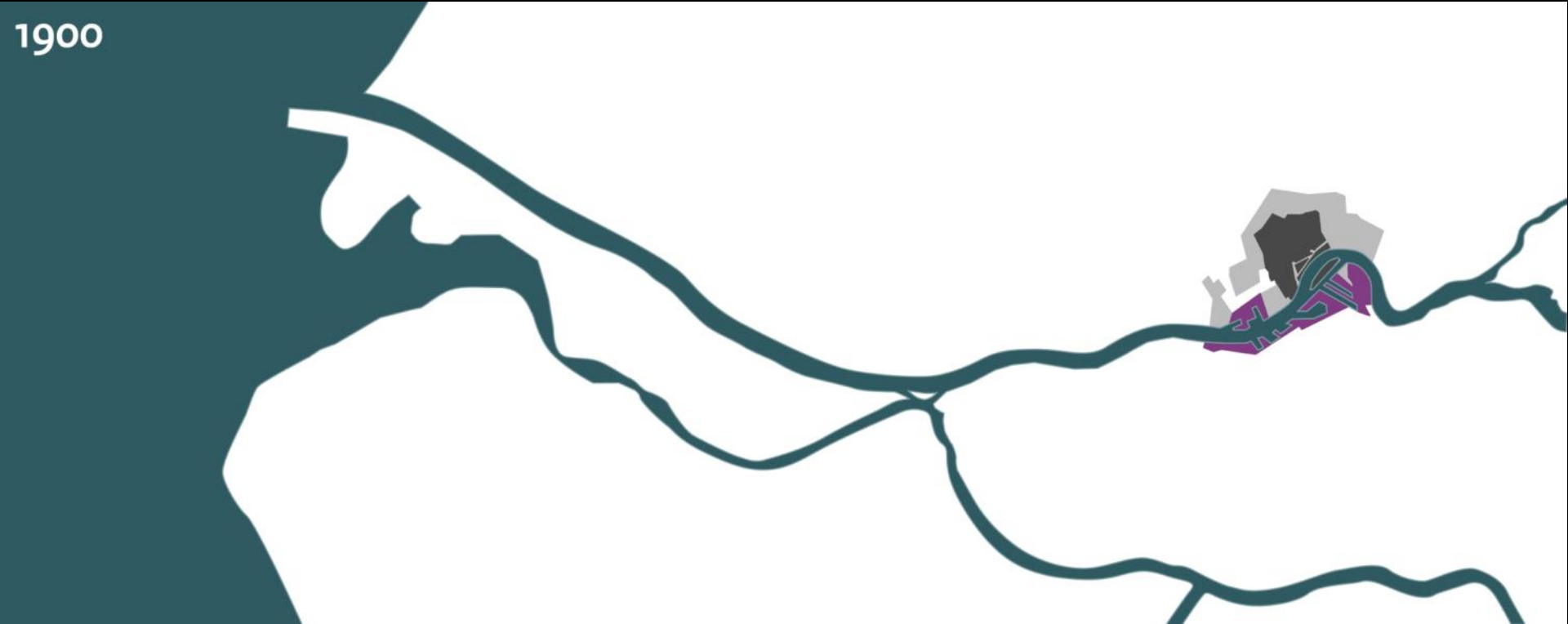
WATERSTAND HAAS

NAP

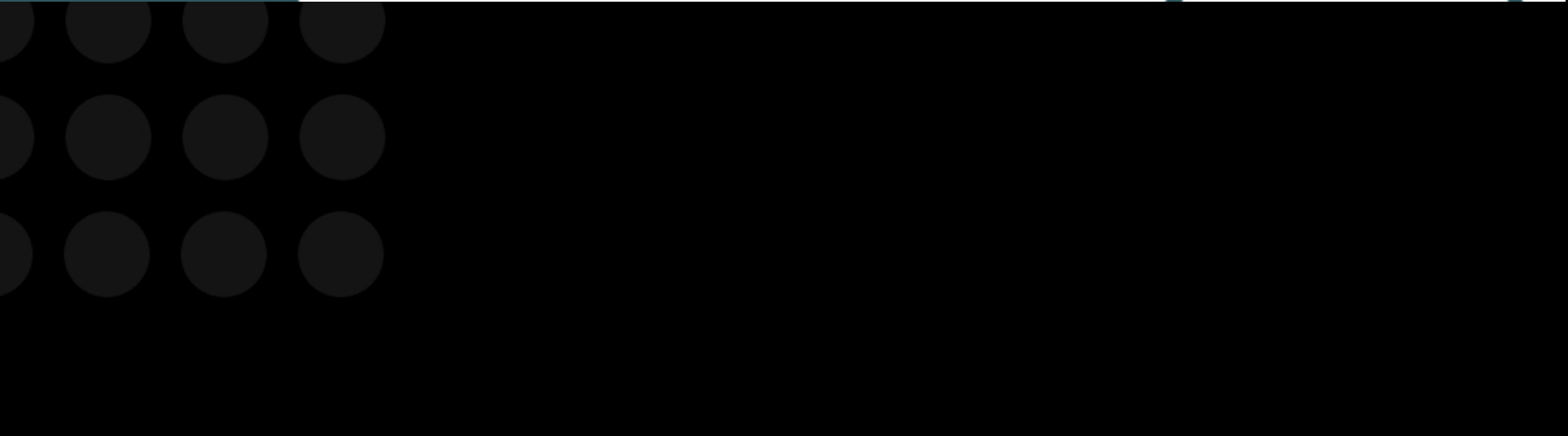
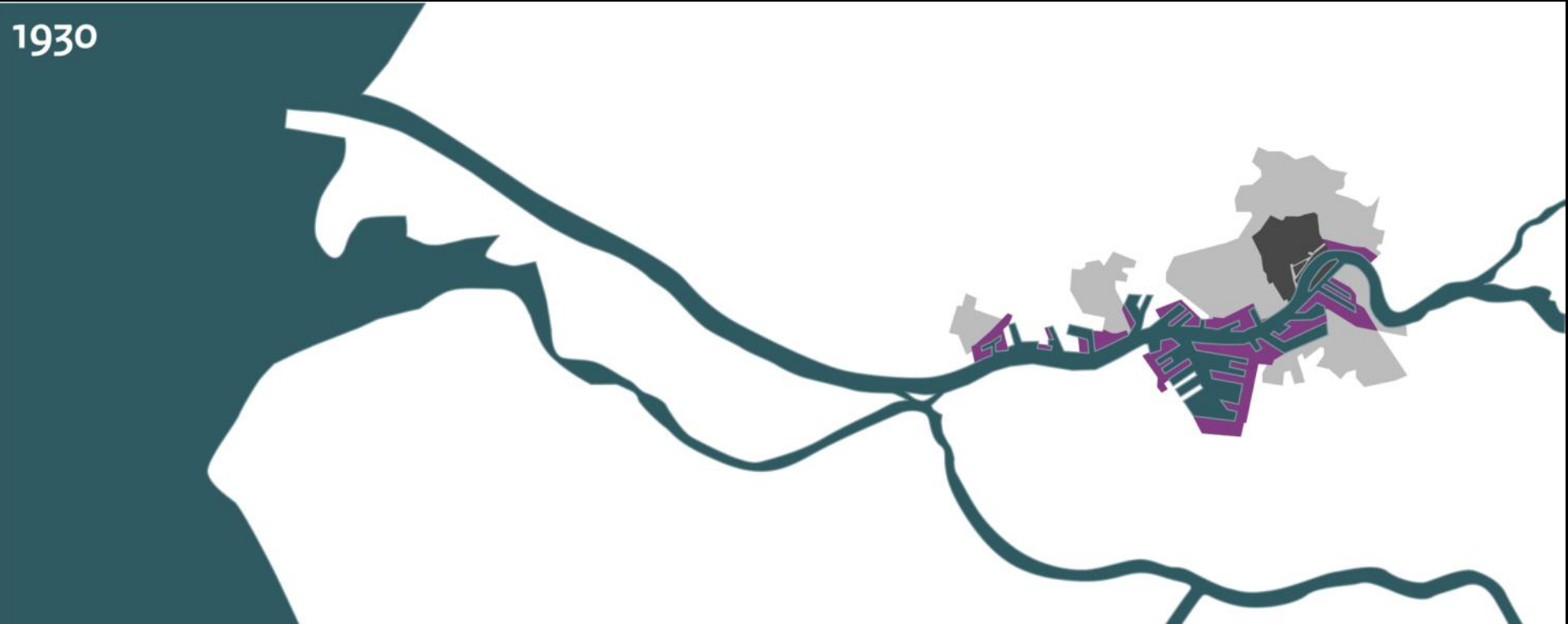
GRONDWATER

Development of Rotterdam Harbour

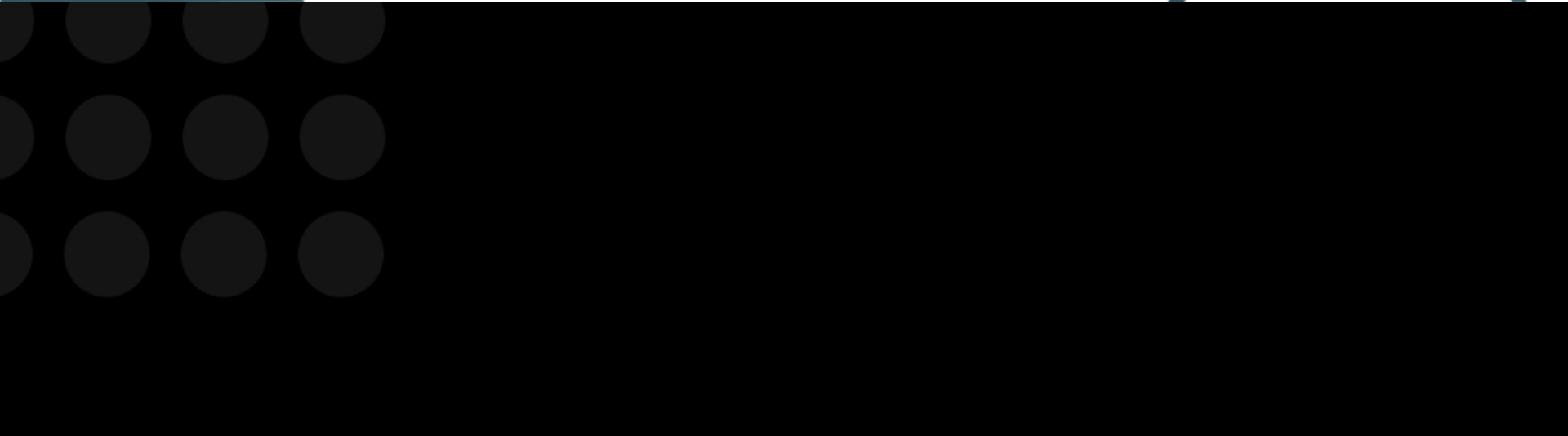
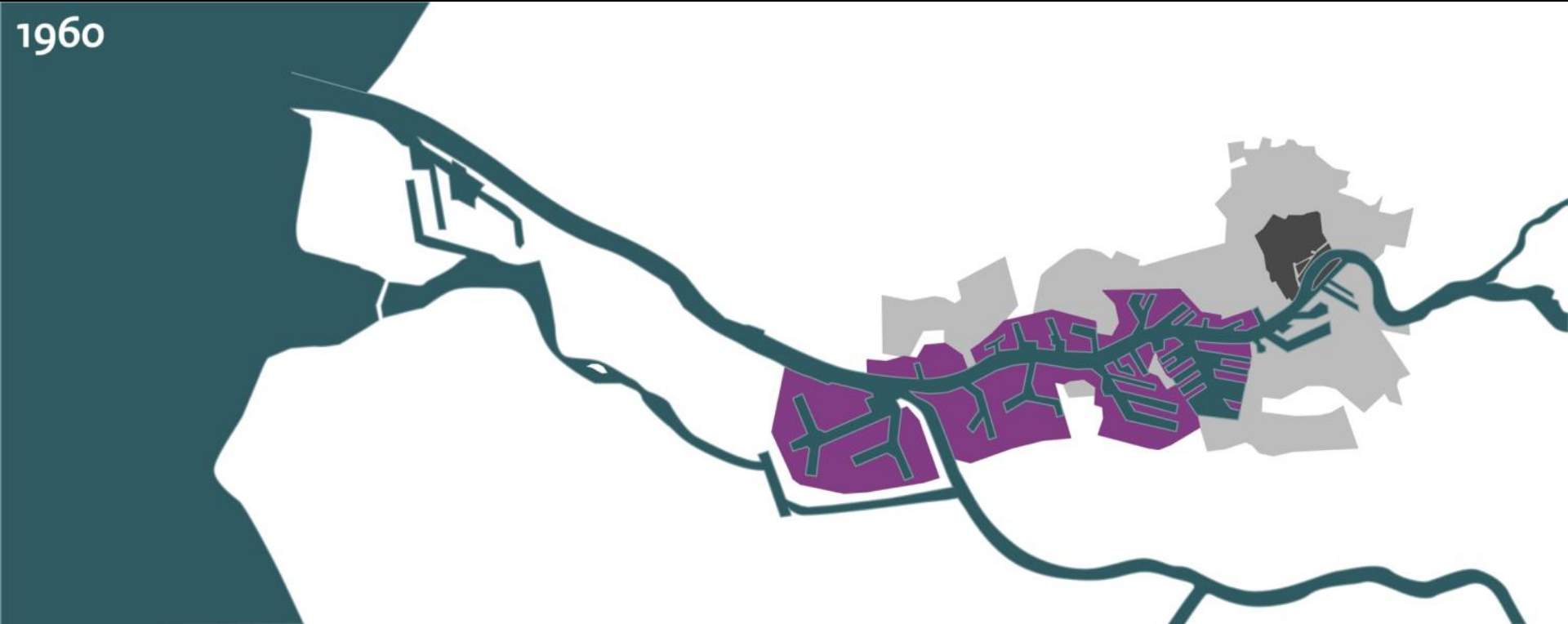
bosch stabbers



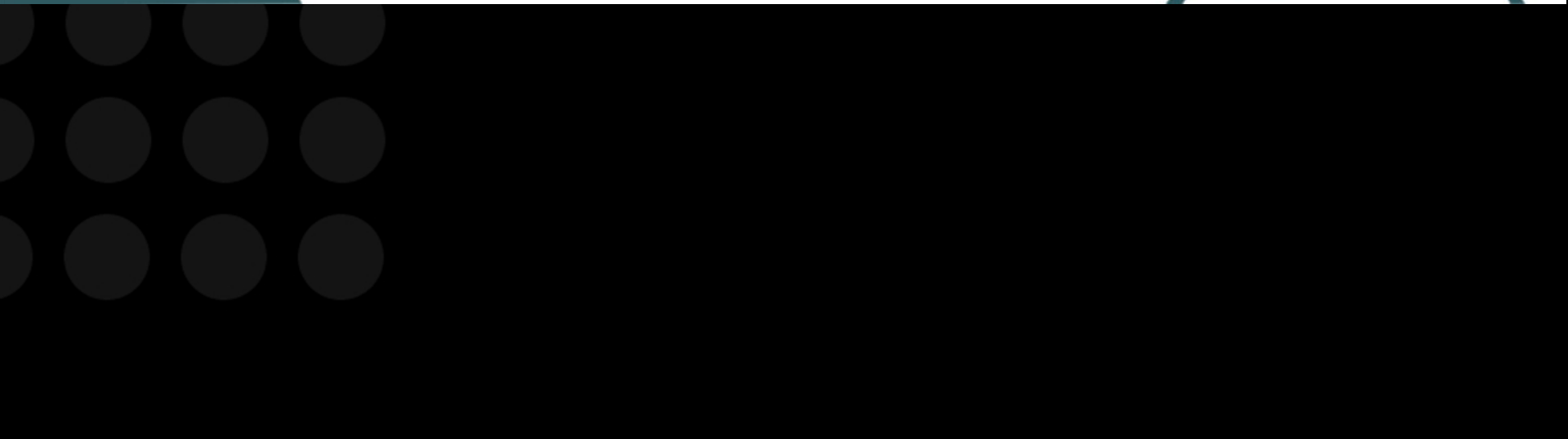
1930



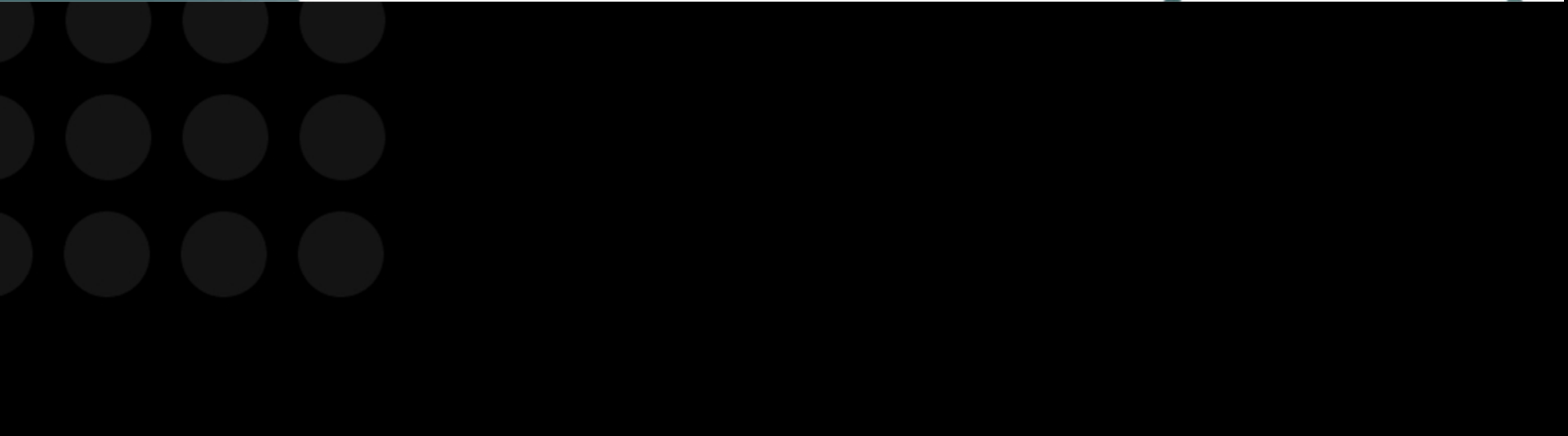
1960



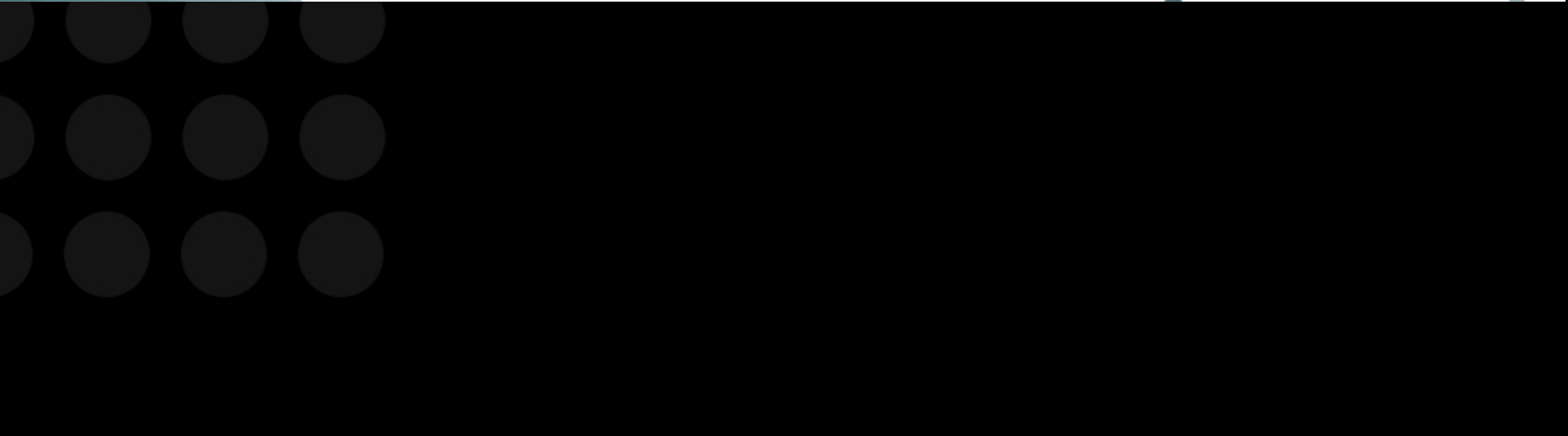
1970



2000



2020



















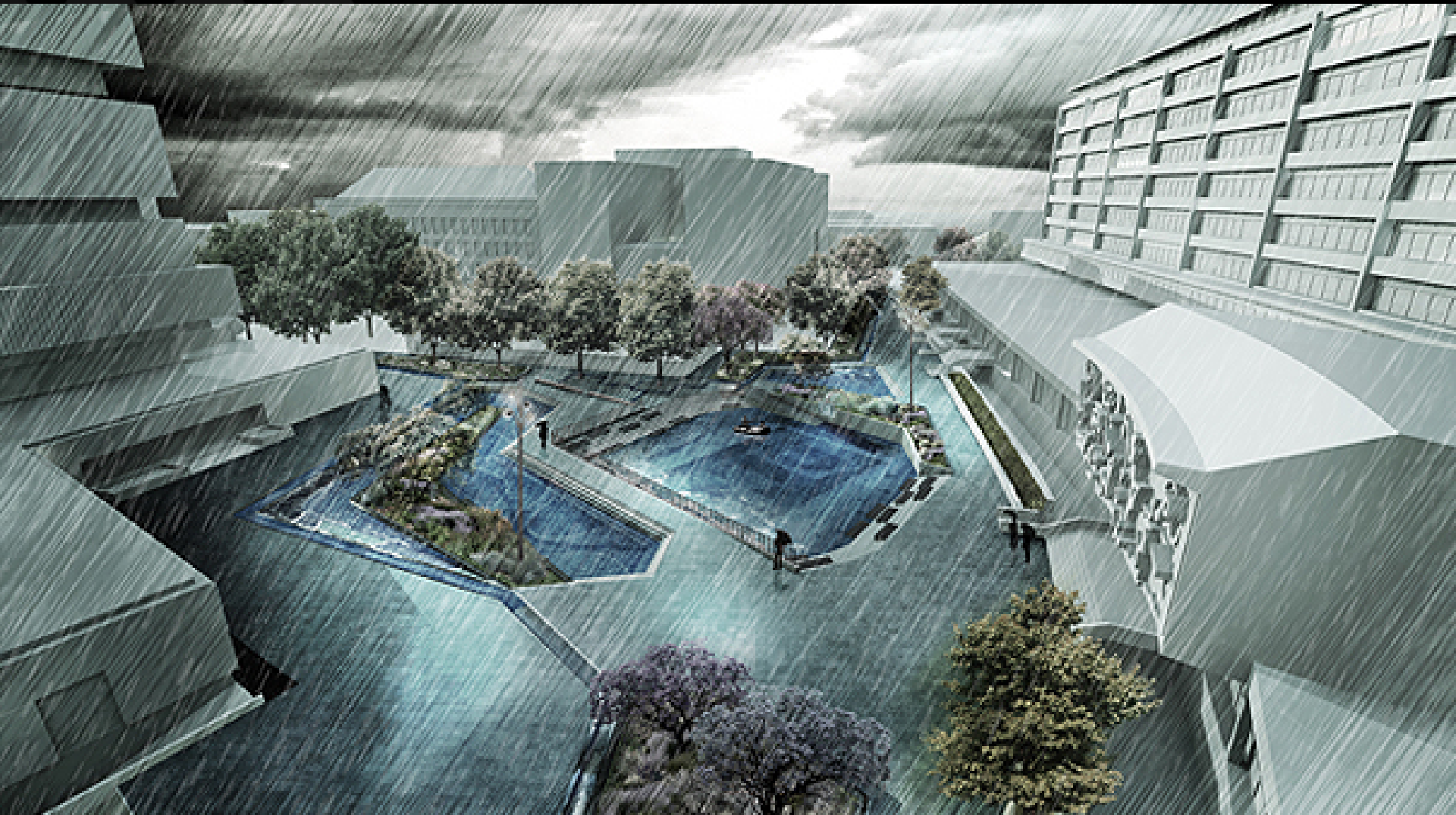




Waterstorage in the underground









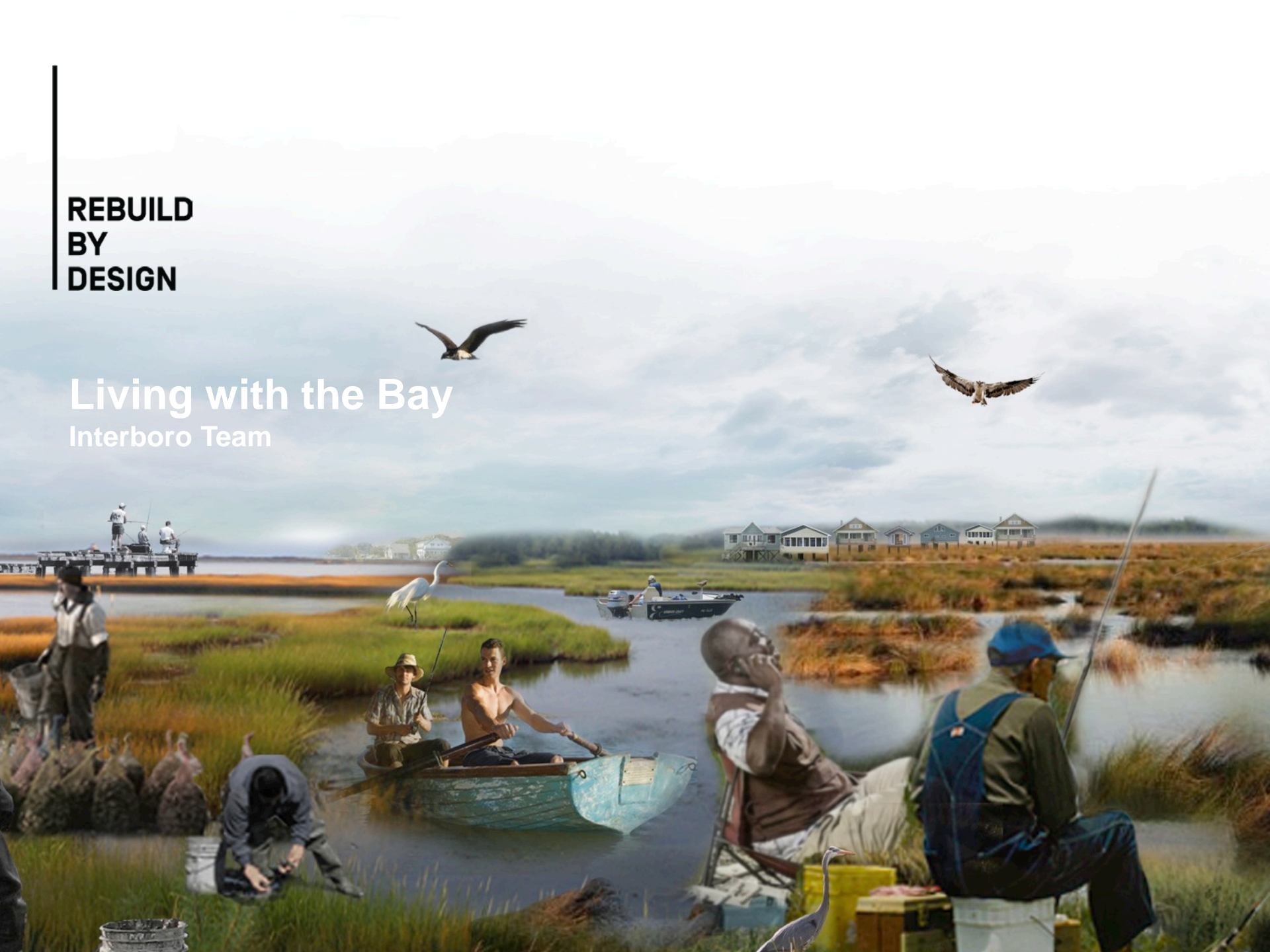
Applicability in US

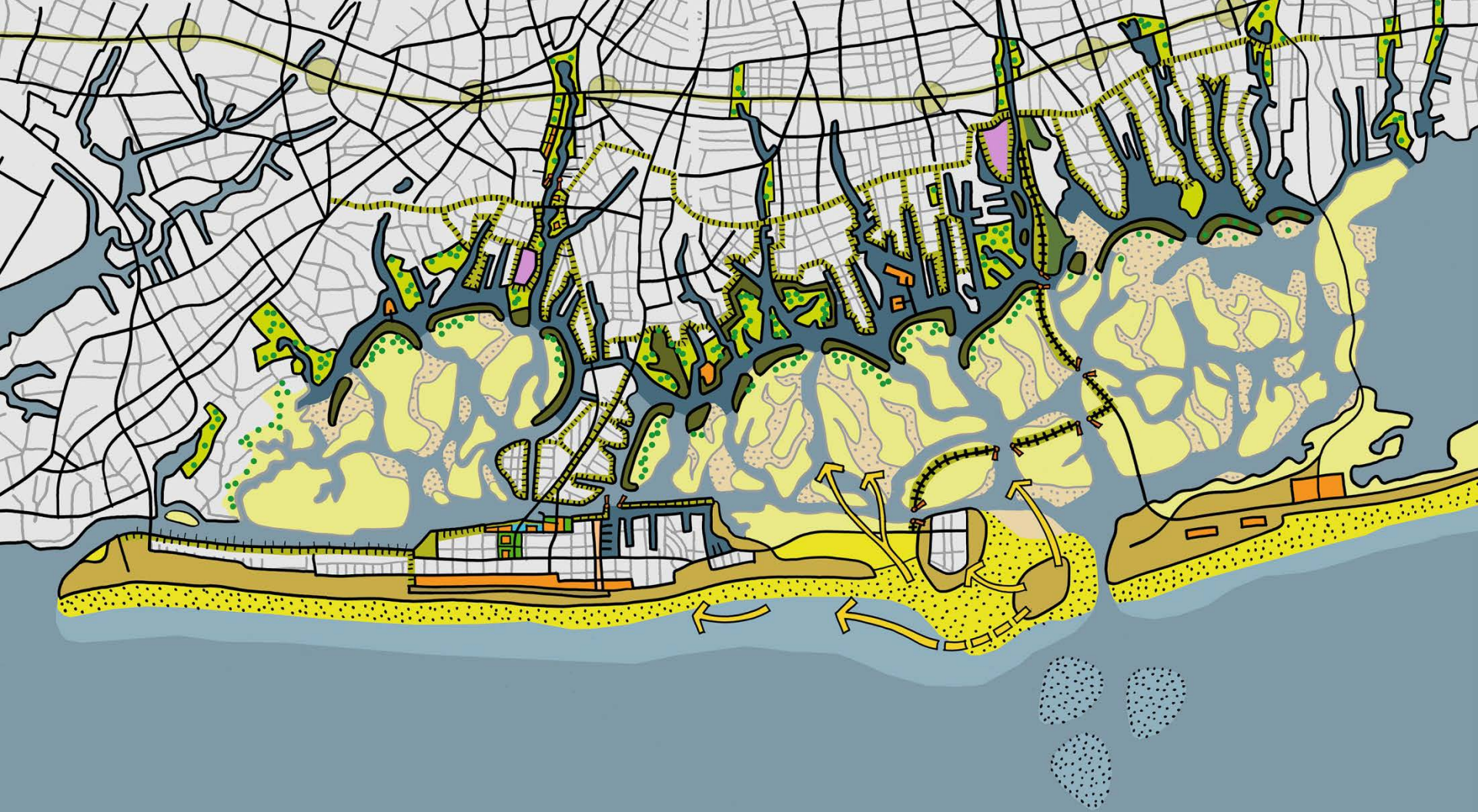
Slow streams
Dania Beach

**REBUILD
BY
DESIGN**

Living with the Bay

Interboro Team





The buffered bay in 5 elements

GREEN CORRIDOR

Green infrastructure and transit-oriented development transform the sunrise highway -LIRR corridor.

SLOW STREAMS

Urban storm water is stored and filtered along the north-south tributaries to reduce inundations and pollution.

ECO-EDGE

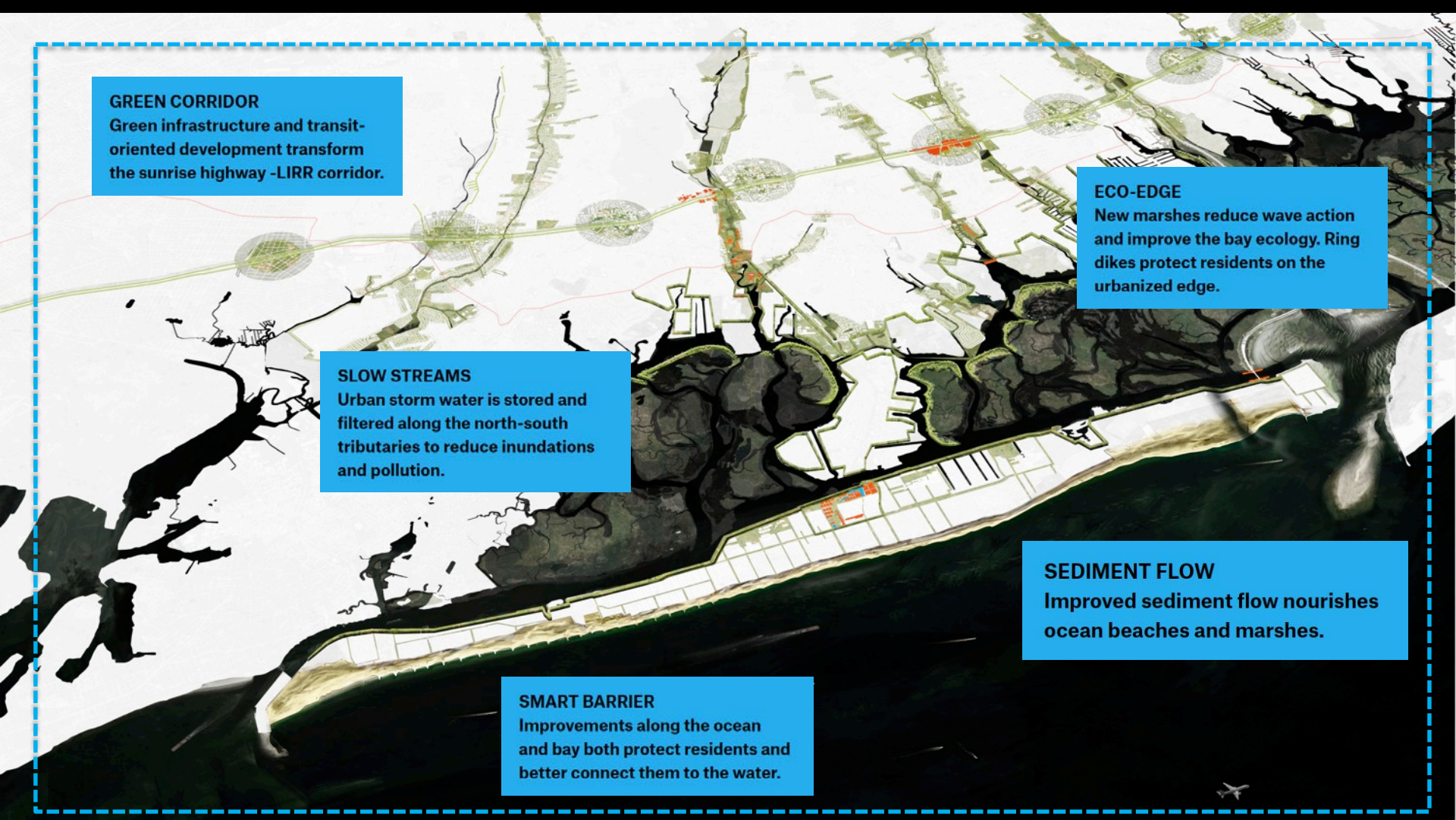
New marshes reduce wave action and improve the bay ecology. Ring dikes protect residents on the urbanized edge.

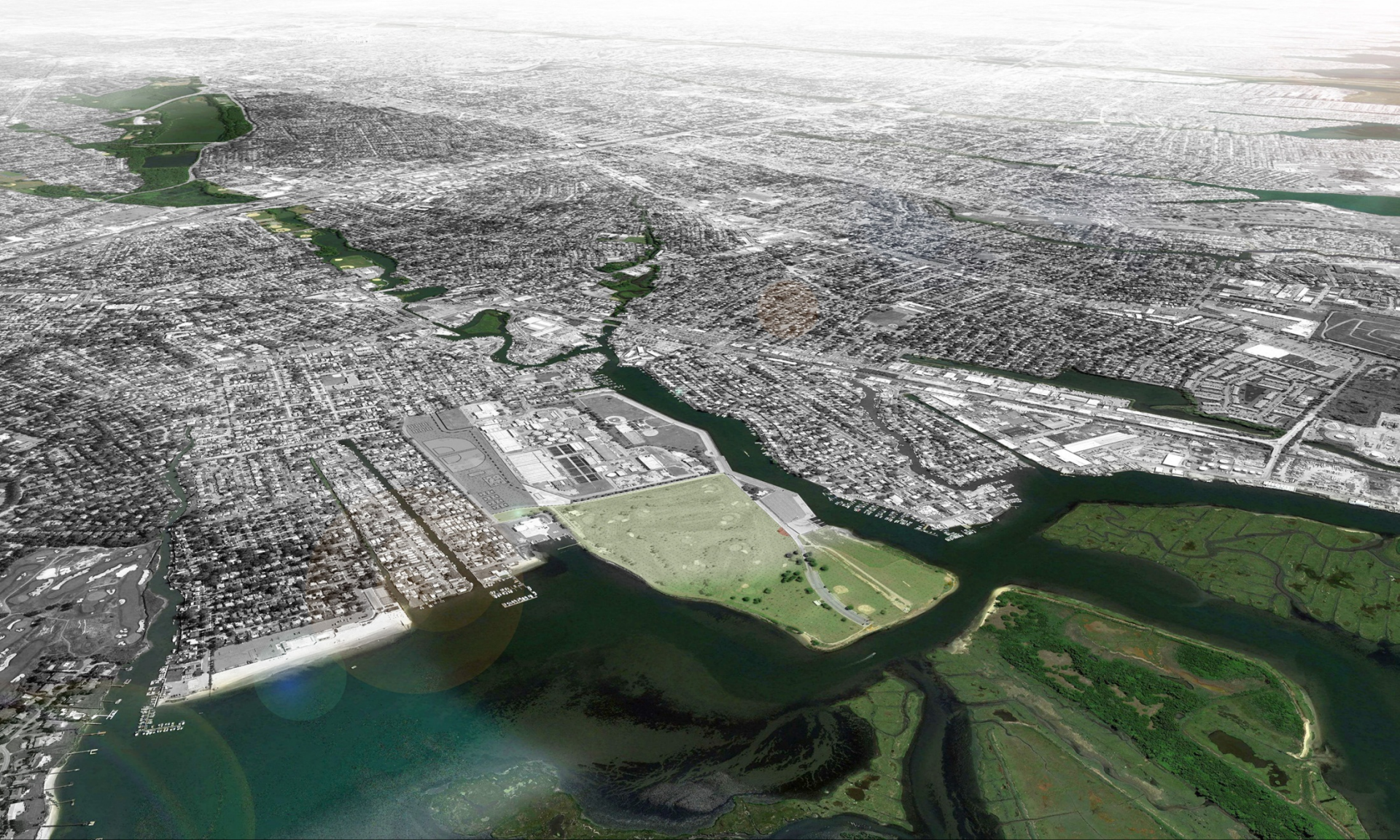
SEDIMENT FLOW

Improved sediment flow nourishes ocean beaches and marshes.

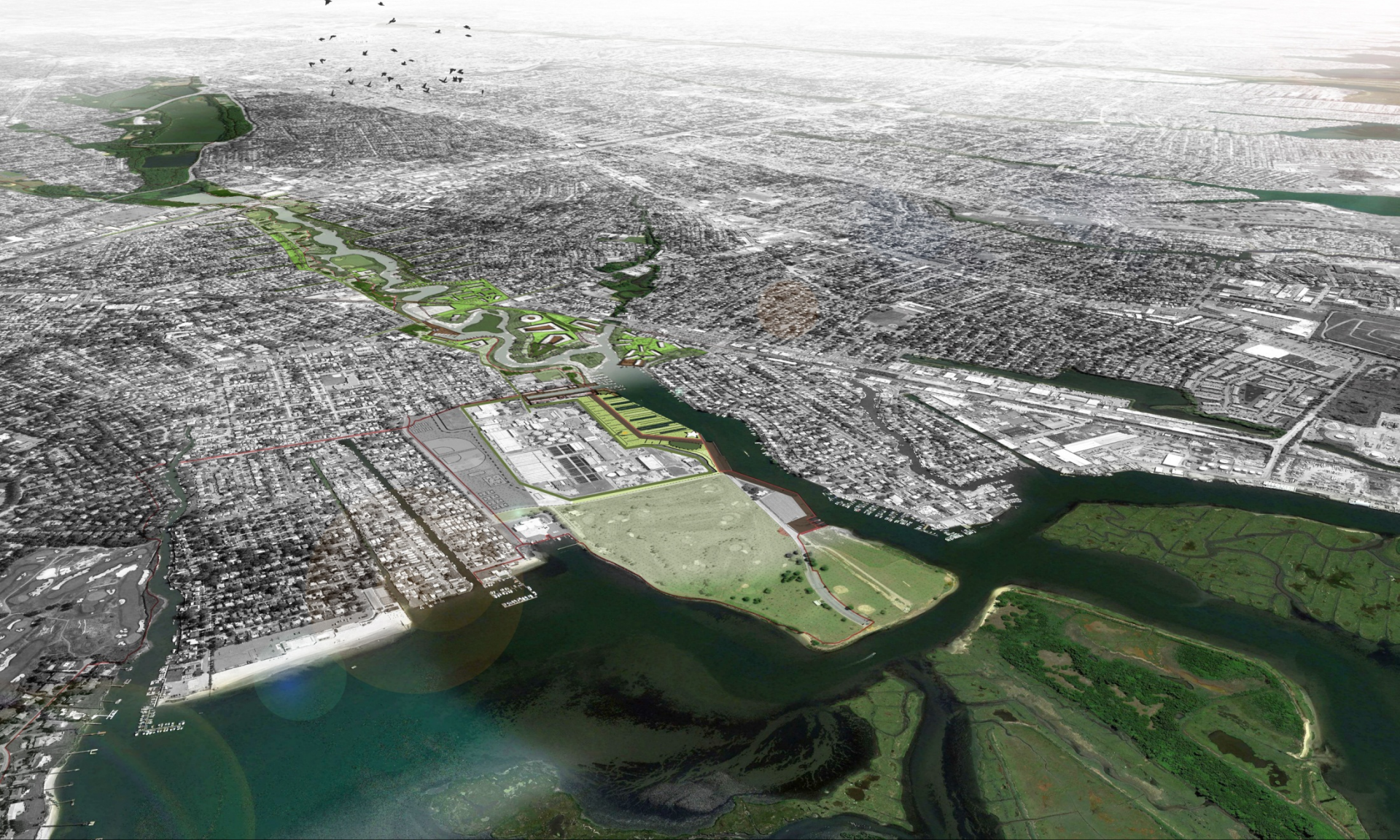
SMART BARRIER

Improvements along the ocean and bay both protect residents and better connect them to the water.

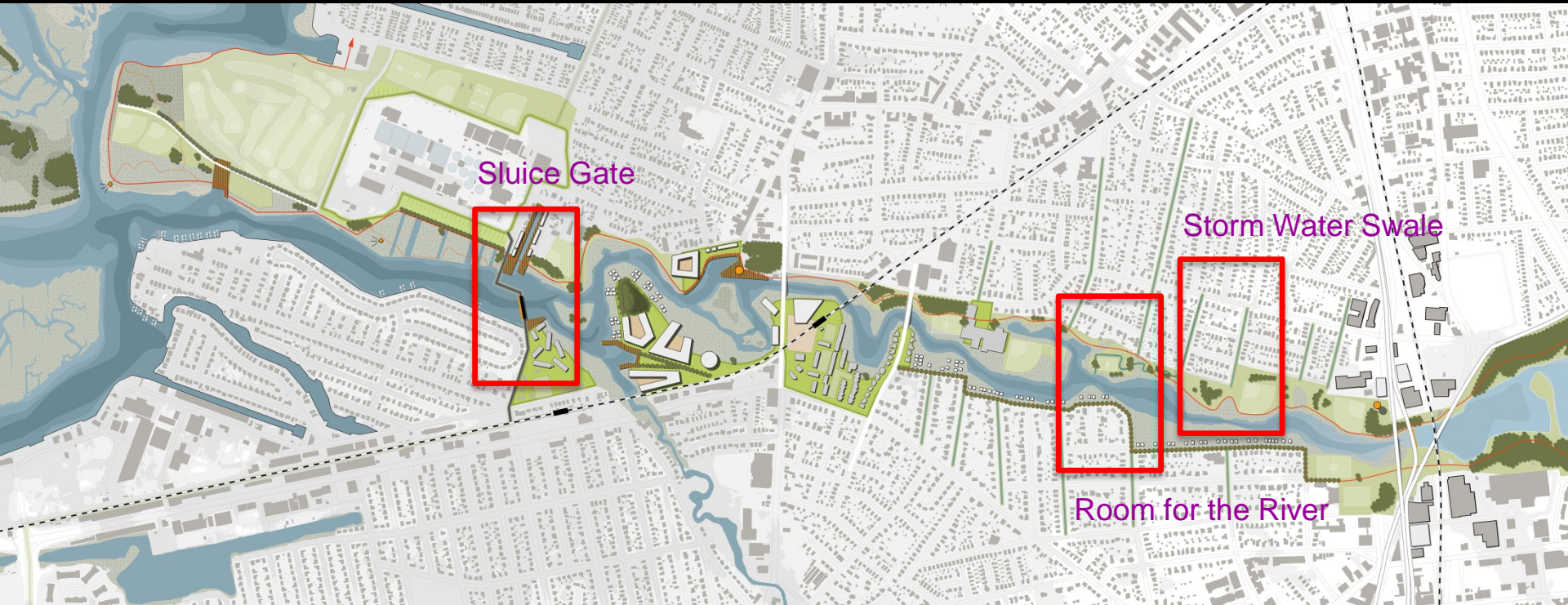




Transforming Mill River...



Into a slow stream



PROJECT
approved by client

Stormwater System for the Mill River Watershed; Phase



PROJECT
approved by client

Everyday conditions - sluice is open



PROJECT
approved by client

Maximizing the riverbed

bosch stabbers

Not only designs that work but that also add quality



Dutch Dialogues

Drawing as Esperanto

Speeding up the process & connecting parties



KEY OBJECTIVES / PROBLEMS:

- **NEW APPROACH TO DISTRICT**
 - **IMPROVE** THE **SHAPE AND AVENUE**
- **CREATE FLEXIBLE AND INTEGRAL**
 - **VEHICULAR SYSTEM** TO **IMPROVE** **WALKING** AND **BICYCLING** **CONDITIONS**
- **ENHANCE THE DISTRICTS**
 - **CHARACTERISTICS** TO **IMPROVE** **LANDUSE** AND **PLANNING** **CONTRIBUTION**
- **BUILD UPON THE DISTRICTS**
 - **IDENTITY & CHARACTER** BY **IMPROVING** **INFRASTRUCTURE** TO **IMPROVE** **FORM**
- **EMPHASIS STRATEGIC IMPROVEMENT**
 - **TO** **IMPROVE** **QUALITY** **OF** **LIFE** **AND** **ENVIRONMENT** **AND** **IMPROVE** **COMMUNITY** **BY** **IMPROVING** **FORM**

DISTRICT





Delhi 2050



Saoedi Arabië



Saoedi Arabië



Ho Chi Minh City | Vietnam



DẢNG CÔNG

Ho Chi Minh City | Vietnam

HỒ CHÍ MINH



An aerial photograph showing a coastal region. On the left, there is a large, calm body of water. To the right, a complex network of narrow, winding canals or ditches crisscrosses a marshy or wetland area. The terrain appears to be a mix of water, mud, and sparse vegetation. The overall scene suggests a coastal water management or restoration project.

Building America's Water City

Greater New Orleans
Comprehensive, Integrated &
Sustainable Water







**Resiliency takes smart,
integrated planning and
can add value**

Water safety requires more than a technical approach, above all it requires a design approach

