Rotterdam and the RDM Campus: Opportunities for Building Climate Resilient Communities through Redevelopment

USACE Coastal Resilience Conference 23 May 2014 New Orleans

Piet Dircke - Global Director Water Management ARCADIS
Similarities between New Orleans - Rotterdam

- Geographic: vulnerable: delta, large river, partly below sea level
- Storm surge barriers, levees & flood walls for flood protection
- Large port cities with regional & national economic importance
- Climate adaptation/mitigation: oil- and gas industry & transport
- Same size: approx. 600,000 inhabitants
- Both hit by a major disaster => need for rebuilding
- Both multicultural, large low income communities, music (jazz!)
Dutch Delta Plan II:

• Adapting to climate change
• Sea level rise
• Future challenges
• National systems approach
• Living with water
• Long term 2100 - 2200
ROTTERDAM REGION

THE NETHERLANDS

ROTTERDAM, DELTA CITY

MAESLANTKERING: STORM SURGE BARRIER
ROTTERDAM 2014

- LARGEST PORT OF EUROPE
- 40 KM HARBOUR
- 2800 KM SEWER SYSTEM

ROTTERDAM 1652

- THREE WATERBOARDS
- 612,000 INHABITANTS
- 400 KM CANALS + 1000 PUMPING STATIONS
Climate change and water challenges

Threats coming from 4 directions

River discharges

precipitation

Groundwater

Sea level rise
Rotterdam Multipurpose “Steps” Dike Concept
UNDERGROUND WATER STORAGE
Water Plaza
Water Plaza
MORE SPACE FOR WATER
1600 hectares
Creating on the edge

RDM Campus
RDM Campus Location

Submarine shed
Dock Harbor
Innovation dock
Oostendorp
Heilinkat garden village
Vaalhaven short sea terminal
RDM Campus
RDM Campus Rotterdam: Research, Design & Manufacturing
A rich history

Rotterdamsche Droogdok Maatschappij 1902-1983
(Rotterdam Dry Dock Company)
Garden village Heijplaat
Redevelopment of the RDM area

The cooperation between the partners in RDM Campus has been laid down in a cooperation agreement letter for 10 years. This is to be considered a letter of intent.
Vision

"RDM Campus is a breeding place for the Dutch creative & technical industry voor sustainable innovations with a focus to Building, Moving & Powering."

RDM Campus is a place where students and companies collaborate in an open environment and focus on new economic activity and sustainable and innovative solutions in the markets Building, Moving & Powering.
Educational concept: Innovation teams

Businesses & students
Bay 2 in Innovation Dock offers room for meetings and business events
RDM Campus has an extensive network in the fields of building, moving and powering, design and architecture. Regular meetings offer lectures by professors, as well as networking opportunities.
Floating Pavilion artist impression
Floating Pavillion construction at RDM Campus
Rotterdam Waterfront and floating pavilion
RDM Aqua Dock
Concept House Village/ Living lab: Development, testing, implementing

- Technical innovations
- LivingLab: automation (domotica)
- Research: sustainable behavior
- Demonstration Sustainable Houses
- Street of the Future (Straat van de Toekomst)
Brooklyn – Rotterdam Waterfront Exchange:

“Community Resilience”

BRWX - Community Resiliency
• Climate Adaptation
• Knowledge networks & centres

Connecting Delta Cities

Connecting Delta Cities unites those Delta Cities who strive to make their cities climate proof. They join forces in their quest for innovative adaptation strategies, sharing knowledge and best practices.

Connecting Delta Cities virtually combines the knowledge, experience and connections of Rotterdam, Tokyo, Jakarta, Hong Kong, Shanghai, New York, London and others.

www.deltacities.com
More information

Check out www.rdmcampus.nl

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Thank you!!

Rotterdam images courtesy of City of Rotterdam & Urbanisten