

Kolloquium am 01.12.2017

Beherrschung von Unsicherheit durch Resilienz

Multidisziplinäre Perspektiven

Resilienz aus Sicht der Stadtentwicklung

Prof. Dr.-Ing. Annette Rudolph-Cleff

Entwerfen und Stadtentwicklung



Blue Dunes: The future of coastal protection 2013-14 West 8

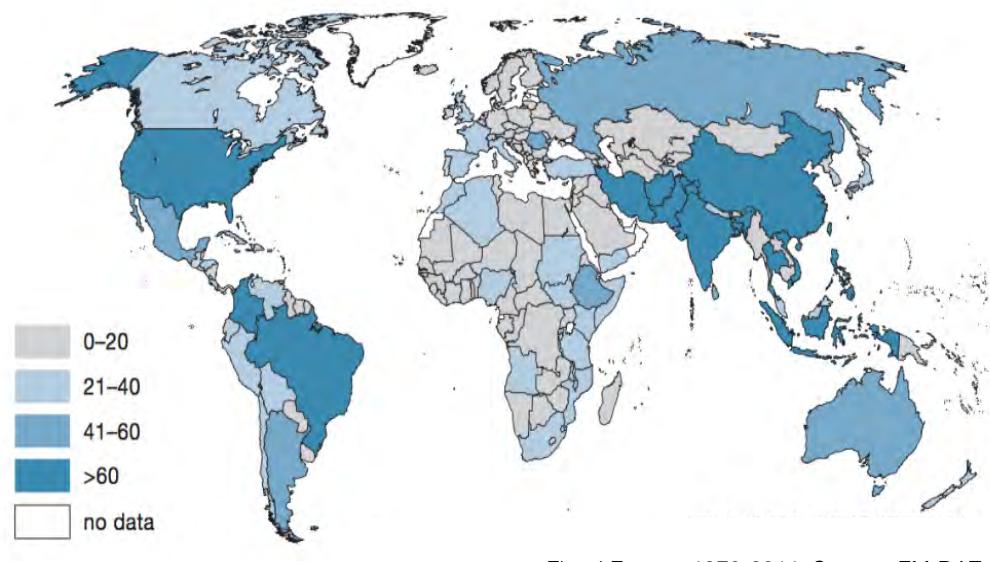
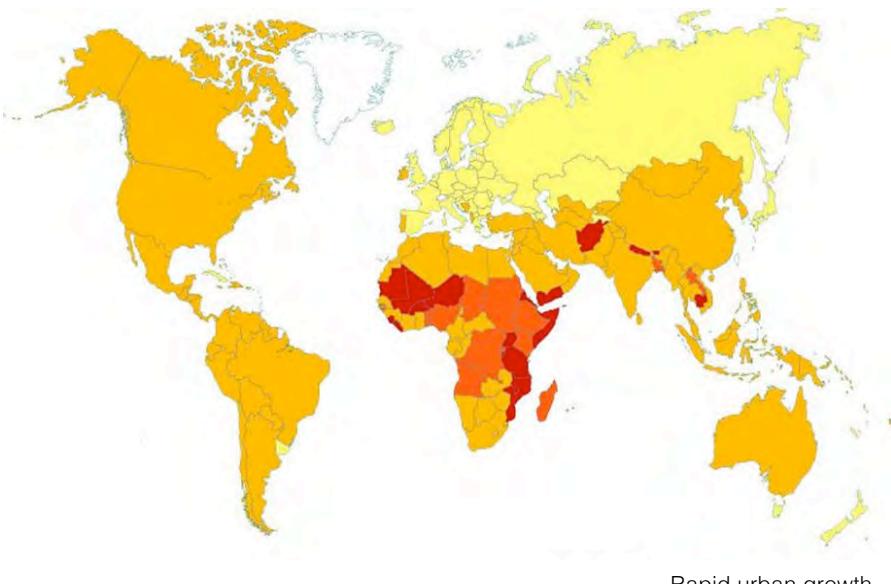


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Making cities safe and inclusive, resilient and sustainable

UN Sustainable Development Goal 11

„Resilience is the ability of a system, community or society exposed to shocks and stresses to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner.“ (UNISDR 2011)



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The question of risk and resilience



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New planning perspectives?

Addressing risk and uncertainty

A new understanding of space and time

A new focus on the urban infrastructure

A new emphasis on ecosystem services



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Design strategies and planning examples

Investments in new infrastructures and
far-sighted land management
sustainable design of landscapes
Water sensitive urban design
Low impact Development
Climate adaptive planning and building



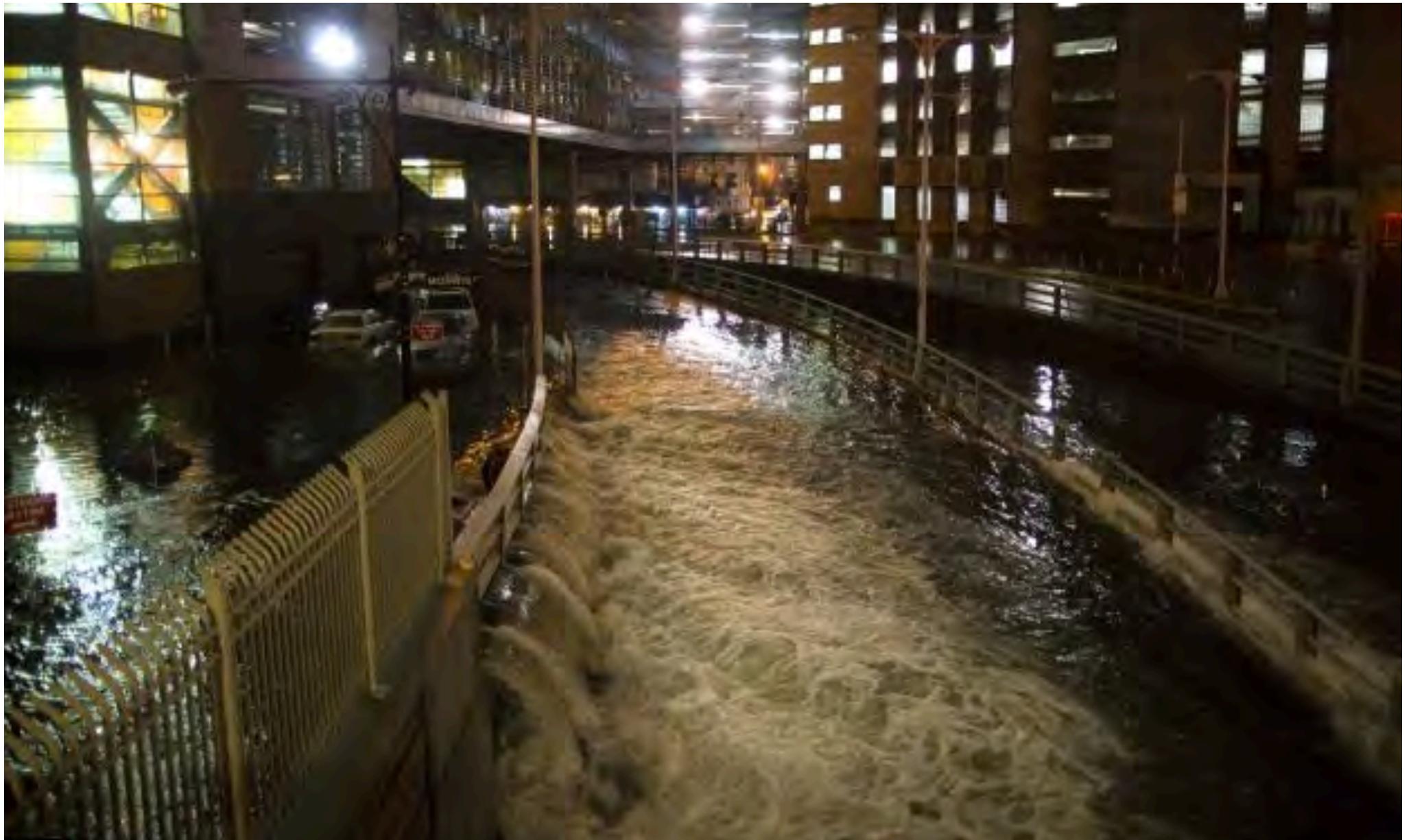
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Hurricane Sandy 2012



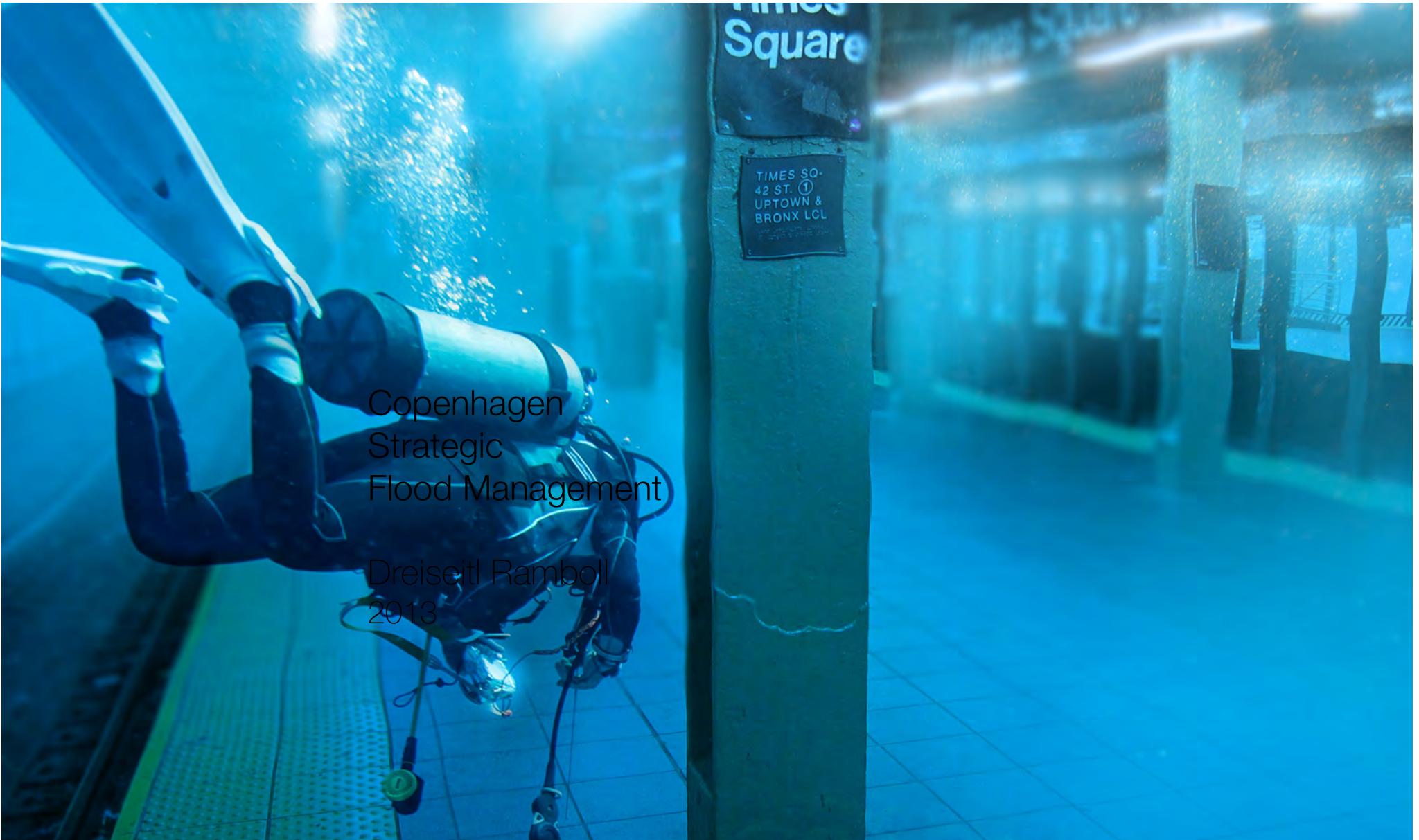
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Hurricane Sandy 2012



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Copenhagen
Strategic
Flood Management

Dreiseitl Ramboll
2013

Hurricane Sandy 2012



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Hurricane Sandy 2012



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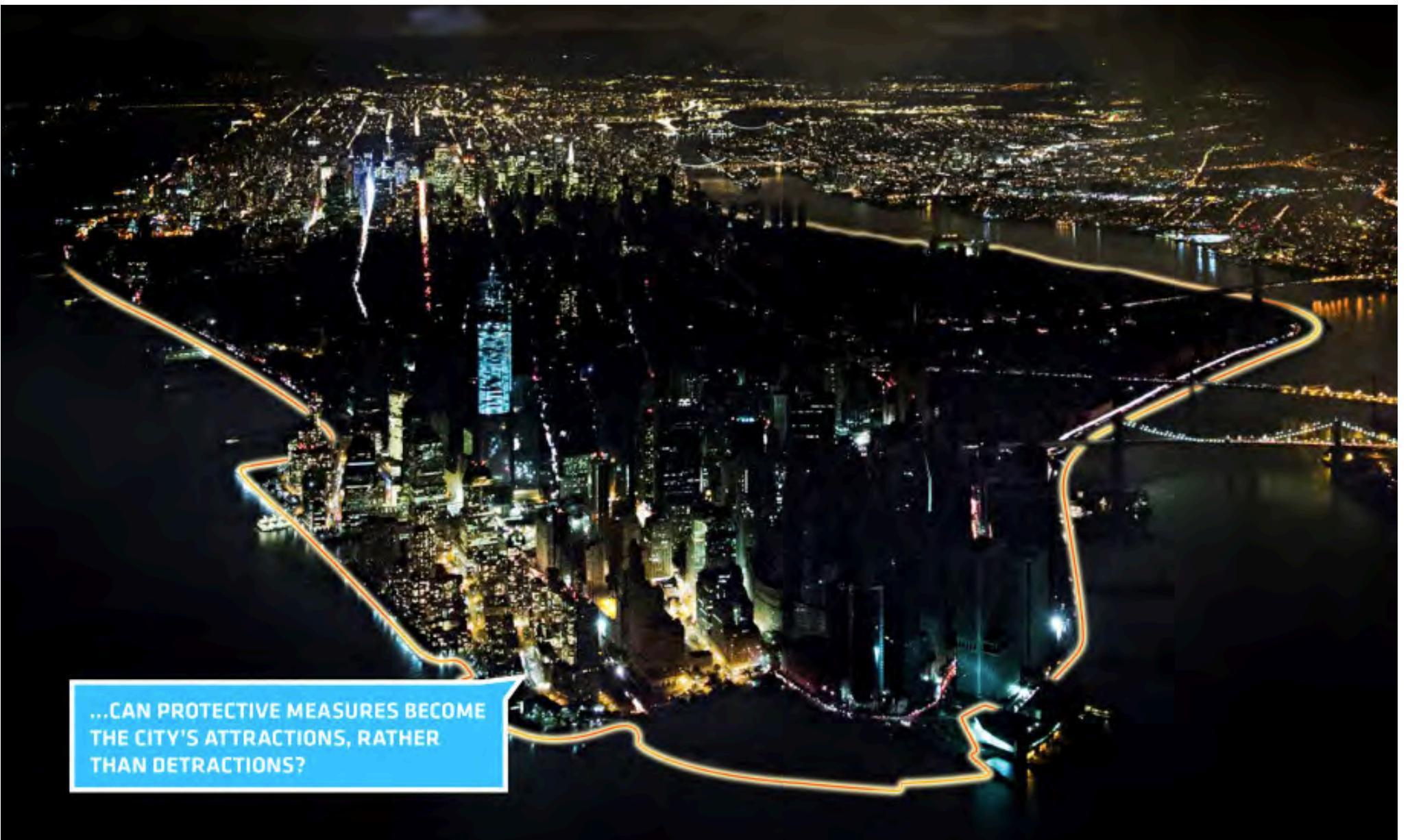


HOW CAN THE CITY PLAN FOR
IT'S RESILIENCY WHILE ALSO
PLANNING FOR IT'S FUTURE
GROWTH?

The Big U, New York, Bjarke Ingels Group



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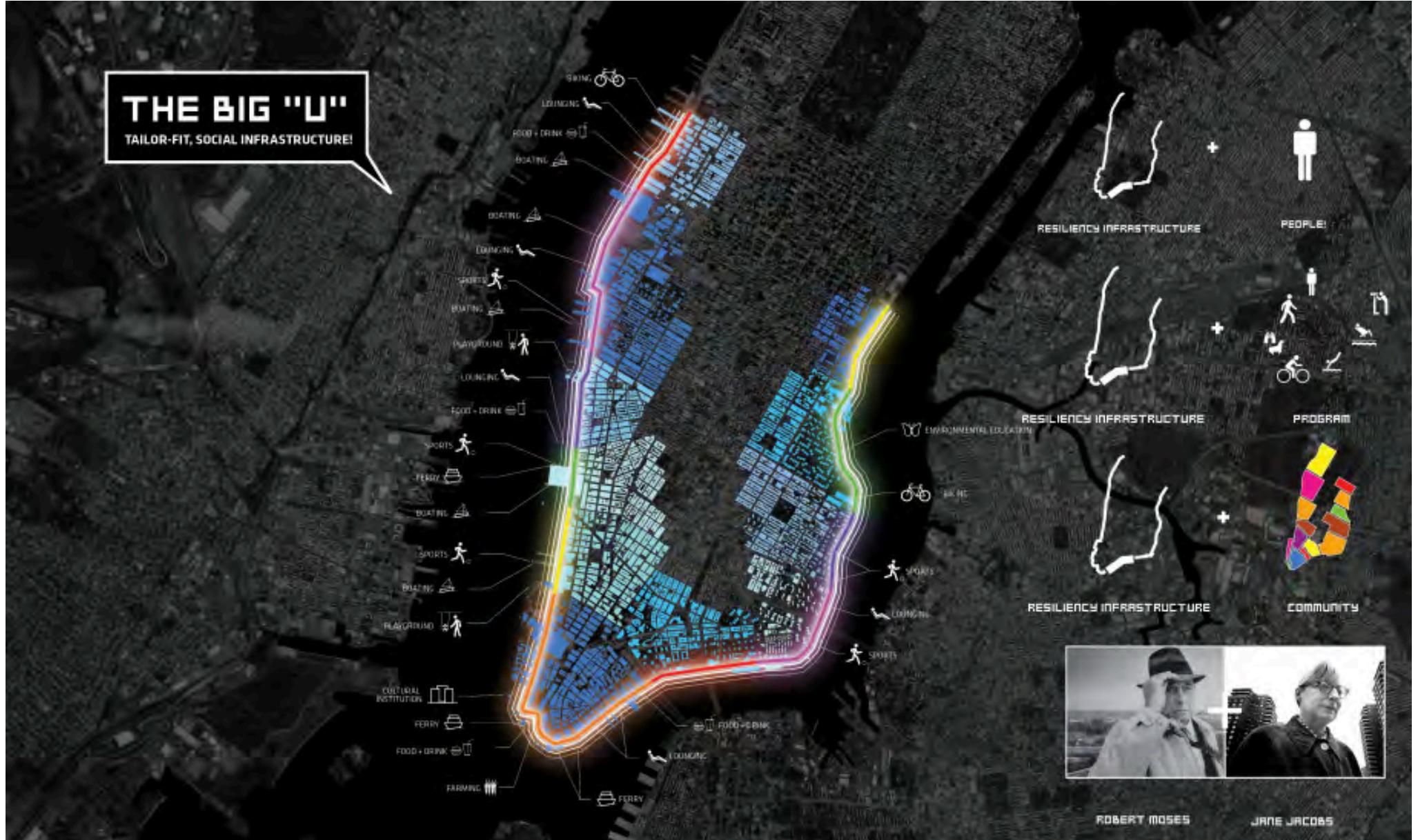
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THE BIG "U"

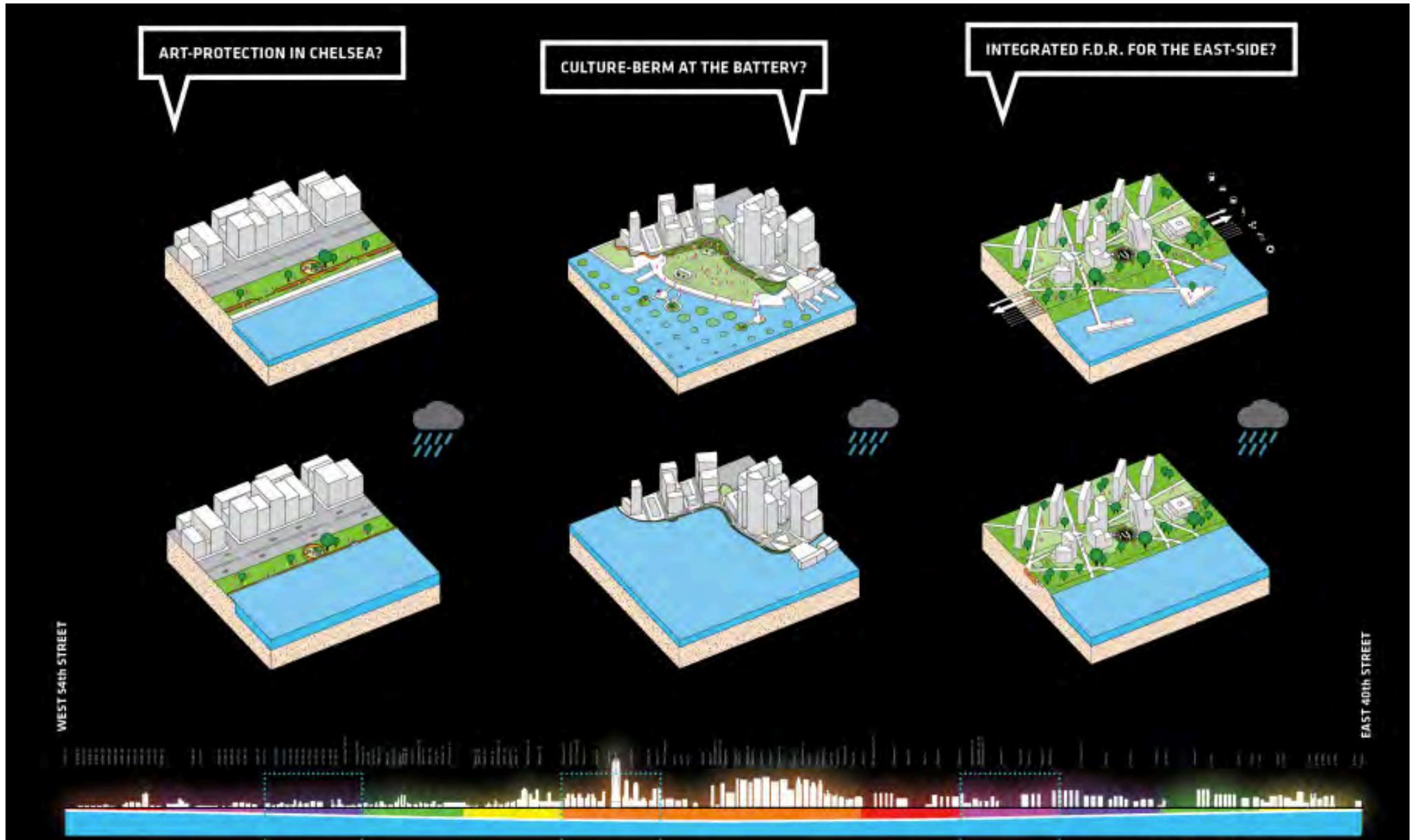
TAILOR-FIT, SOCIAL INFRASTRUCTURE!



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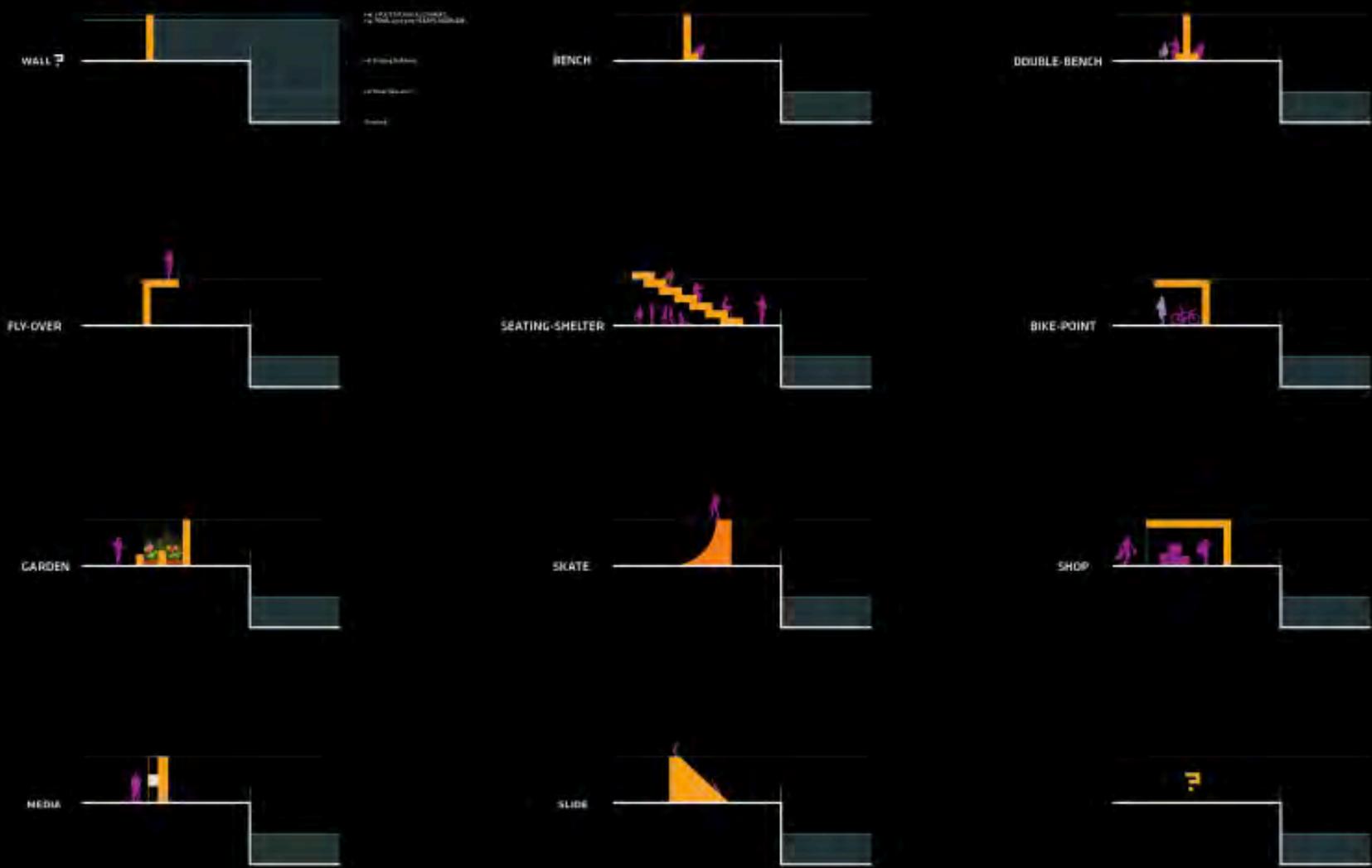


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HOW CAN A WALL BE MORE THAN A WALL?



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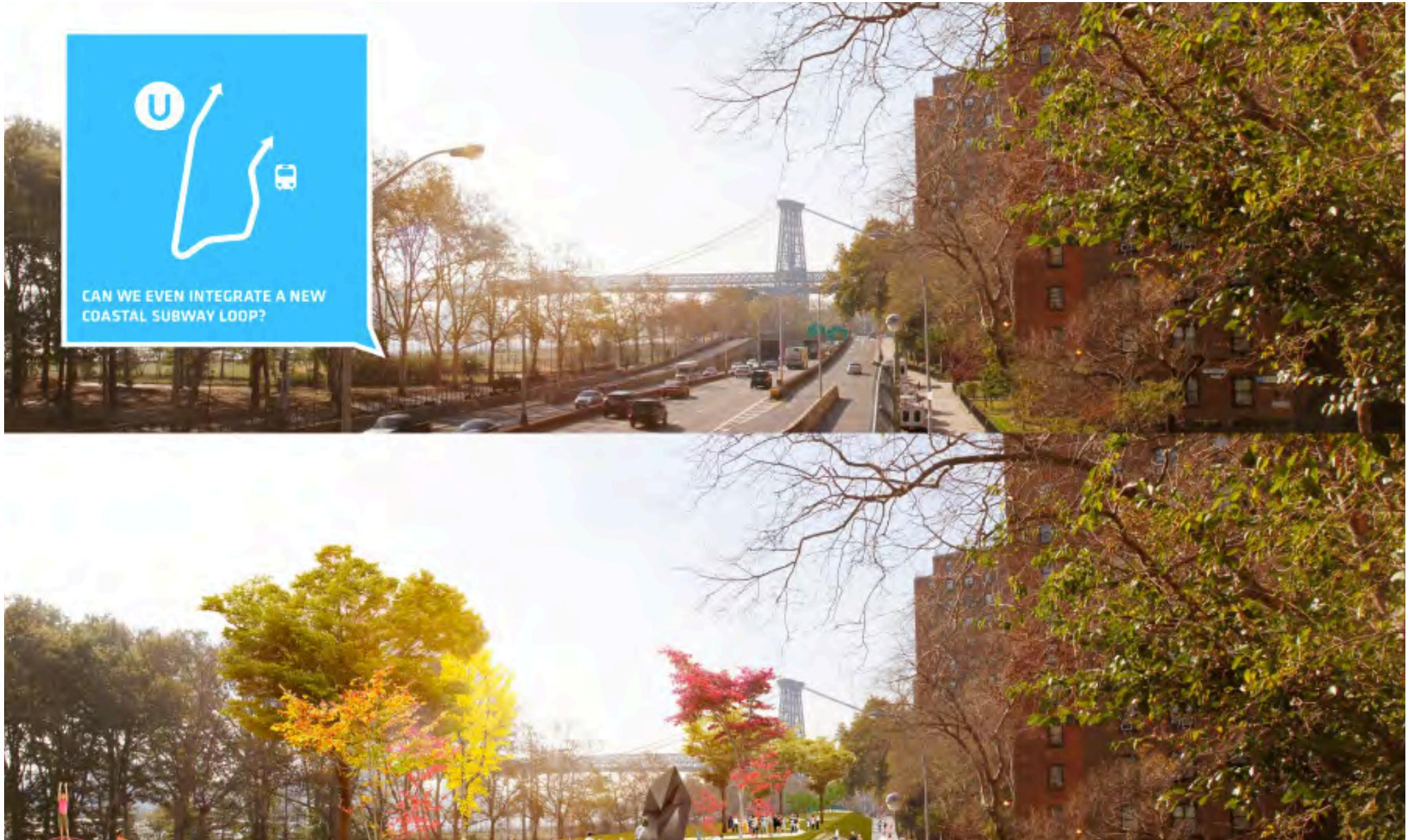
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Water Plaza Rotterdam, De Urbanisten



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photo Ossip van Duivenbode

Water Plaza Rotterdam, De Urbanisten



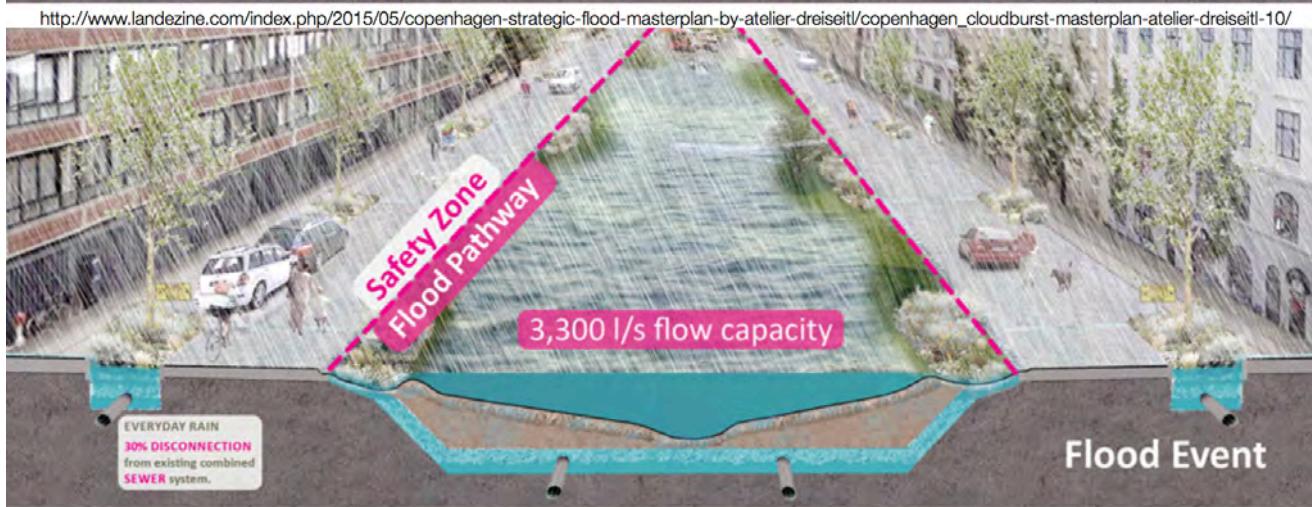
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Bishan Ang Mo Kio Park, Singapore Dreiseitl 2006



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Copenhagen Strategic Flood Management

Dreiseitl Ramboll
2013



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http://www.landezine.com/index.php/2015/05/copenhagen-strategic-flood-masterplan-by-atelier-dreiseitl/copenhagen_cloudburst-masterplan-atelier-dreiseitl-09/

Copenhagen Strategic Flood Management

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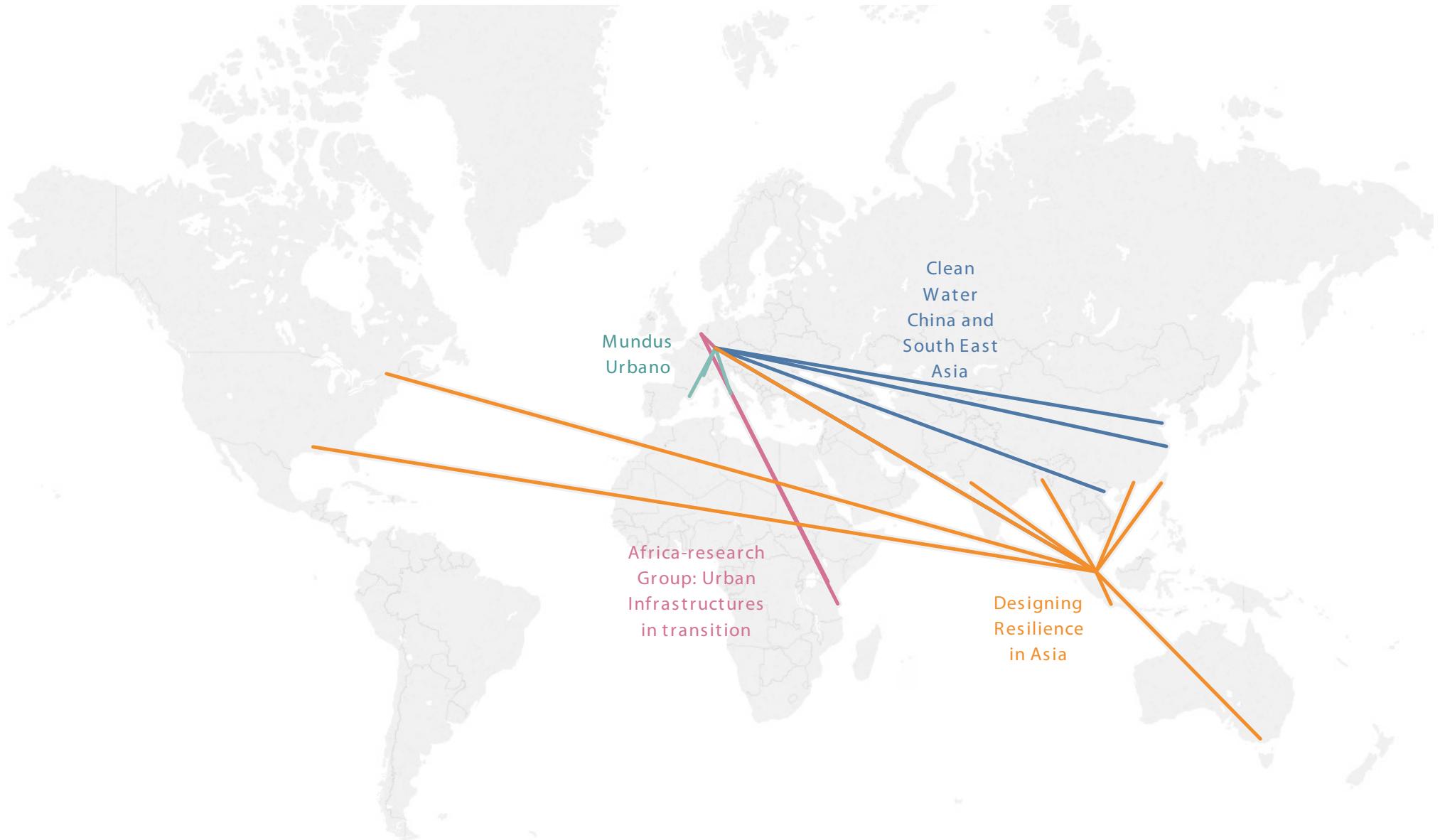
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Copenhagen Strategic Flood Management

Dreiseitl Ramboll
2013



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DESIGNING RESILIENCE IN ASIA

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium



**DESIGNING
RESILIENCE
IN ASIA**

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium

International design competition and symposium

National University of Singapore
Cept University, Gujarat India
Bangladesh University of Engineering
and Technology, Bangladesh
Institut Teknologi Badung, Indonesia
Technische Universität Darmstadt
RMIT University, Australia
National Cheng Kung University,
Taiwan
South China University of Technology,
Guangzhou, China
Université de Montréal, Canada
Louisiana State University, USA



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und stadtentwicklung



DESIGNING RESILIENCE IN ASIA

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium

Focus

The main focus of the competition is the **utilization of urban and architectural design, as well as, building technologies** to endow, support, amplify, and maintain a **community's resiliency** in light of natural disaster event, namely, a **typhoon and its associated effects**, i.e. high winds, storm surge, flooding, and excessive precipitation.



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**DESIGNING
RESILIENCE
IN ASIA**

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium

Panel of judges

Marie Aquilino, ESA Paris
Esther Charlesworth, RMIT
Rohit Jigyasu, ICOMOS
Reena Tiwari, Curtin University

Honorable Mention

Project Technature- TU Darmstadt
Alexander Habermehl | Alexandru Oprea | Charlotte Schauer
Daniel Mario Appari | Dominika Ewa Czajkowska | Robert Maximilian Sand | Sandra Leipe | Sandra Michel | Shirin Safaei | Sonja Müller



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DESIGNING RESILIENCE IN ASIA

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium



Technature_objects

protecting the coastline
securing income sources
establishing risk management
leveraging on-site elements
upgrading infrastructure

Sections

current situation
phase 1_initiation
phase 2_stabilisation
phase 3_consolidation



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DRIA 2015 Overall Design Excellence Award

START SMALL GROW STRONG

By PROTECTION CONSTRUCTION AND CONNECTION

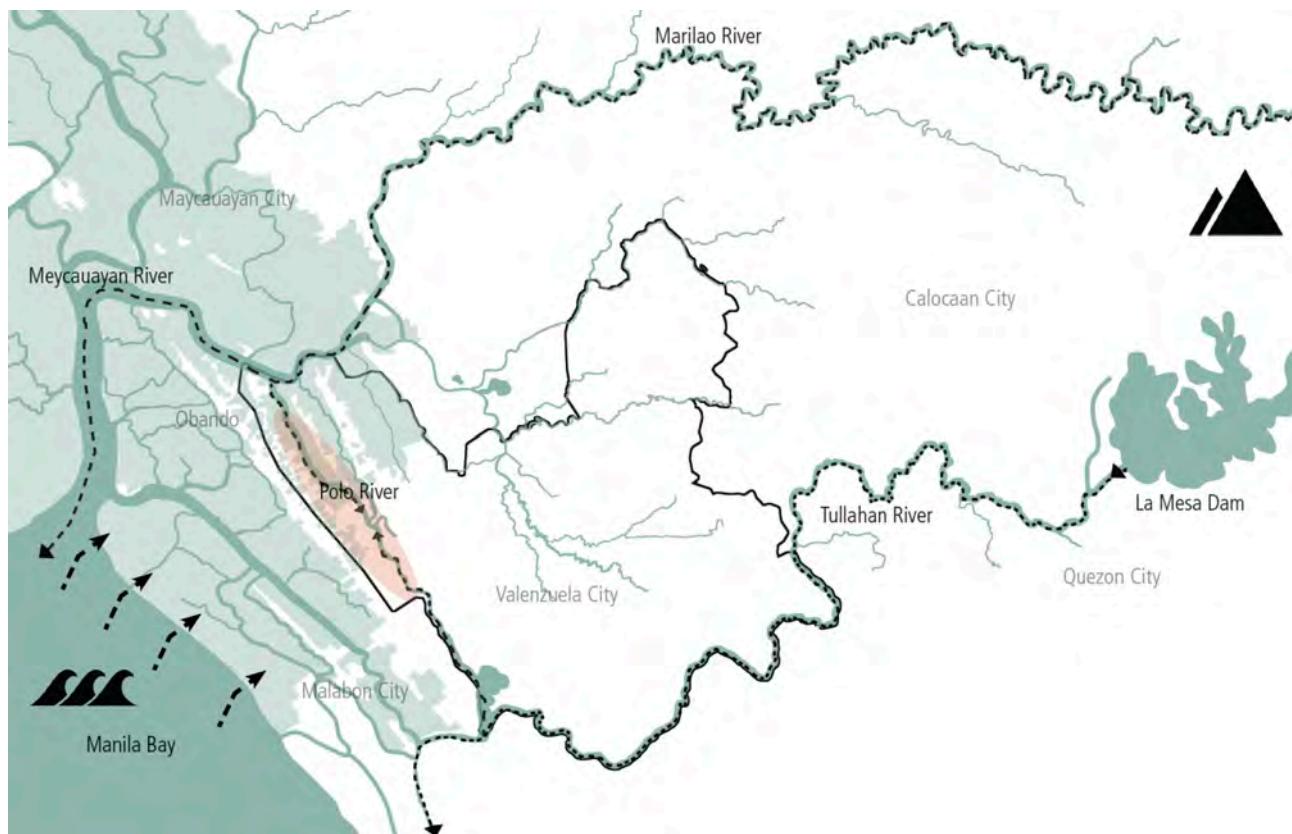


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Project SAFE Waterscapes
DRIA 2016 Urban Design Excellence Award



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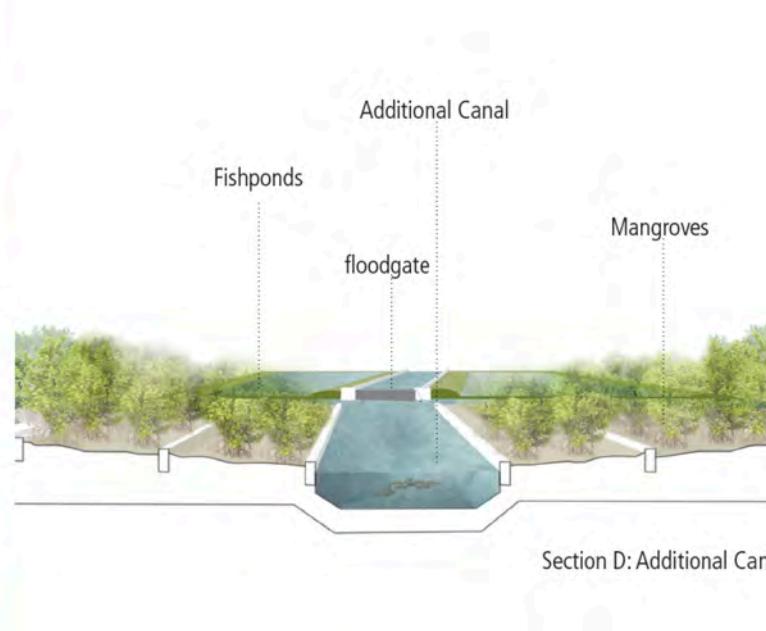
Project SAFE Waterscapes

DRIA 2016 Urban Design Excellence Award



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Project SAFE Waterscapes
DRIA 2016 Urban Design Excellence Award



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Project SAFE Waterscapes
DRIA 2016 Urban Design Excellence Award



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**DESIGNING
RESILIENCE
IN ASIA**
INTERNATIONAL SYMPOSIUM AND
DESIGN COMPETITION
15TH - 16TH
JULY 2017

THANK YOU VERY MUCH
AND SEE YOU NEXT YEAR!



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Project Retrace, Semerang, Indonesia

DRIA 2017 Urban Design Excellence Award

The Semarang Times

Informing the city of Semarang about 2030

VOL CLXII ... No. 56, 127

100% Semarang News

SEMARANG, WEDNESDAY, MAY 12, 2038

EARLY EDITION

The new German ambassador Silvia Golyman is going to visit Semarang tomorrow

RP 30,000

'100 Resilient Cities': 25 years of resilience in Semarang

by Johanna Westermann & Marco Padberg

SEMARANG - Exactly 25 years ago, the city of Semarang, Indonesia was selected to become one of the first cities in the '100 Resilient Cities' organization. Today the inhabitants of Semarang organized a festival, to celebrate the positive change that this opportunity brought them. Throughout the whole city, neighborhoods organized small street markets. Furthermore the municipality itself organized a few concerts in the old warehouse in the district of Bandarharjo.

Semarang has always been a bustling and vibrant city, rapidly developing around its historic core. Urban culture and heritage result from multiple influences, as well as from exchanges during the colonial rule. The Dutch influence is still manifest in the trading port, the canals, the buildings of relevance to ethnic heritage and the segregated infrastructure development within the urban region.

Nevertheless, the city was facing a number of challenges, including growing urban poverty, inadequate basic services, increasing crime rate, environmental degradation, land subsidence, freshwater scarcity, and disasters following tidal and flash floods.

With Semarang becoming one of the '100 Resilient Cities', the city changed. Different projects were initiated to improve the quality of life of the inhabitants of Semarang. One of them focused in particular on Bandarharjo, a district in the city center, which was especially vulnerable to hazards.

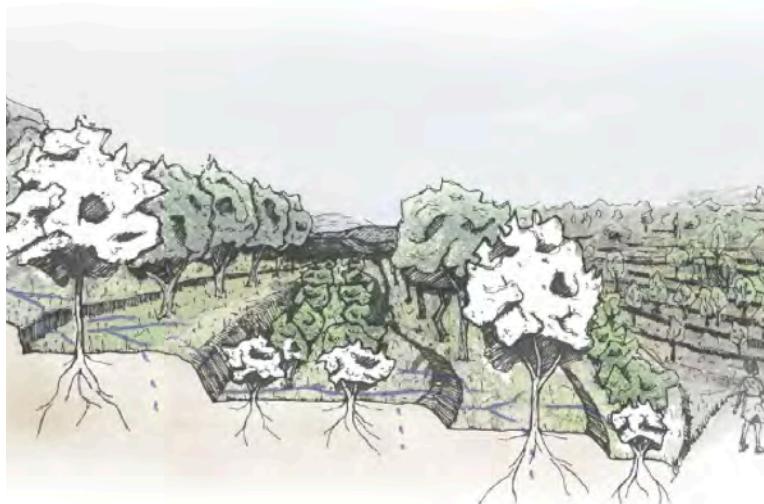
The project aimed to follow the '2030 sustainable development goals' and developed Semarang into a more 'inclusive, safe, resilient and sustainable city'. Measurements were taken, to reduce the vulnerability and exposure to environmental hazards, implementation of inclusive public spaces, to stimulate economic and social development without compromising the environment, to generate a life free from violence, and to create opportunities for equal participation and opportunities. In order to reach this aim, the project team devised a comprehensive and holistic strategy. For the reduction of the causal factors of floods, and the mitigation of their effects, an overall watershed management strategy was proposed. This management strategy considered both the local and regional scales through nature-based approaches in the short and long-term, including reforestation, soil conservation techniques, and alternative production activities.

Furthermore, the team worked with the city's cultural identity to promote social and economic development. It took advantage of the existing architectural heritage, and provided an adequate physical environment for social, economic, and recreational activities and strengthened the local economy, which ultimately facilitated crime reduction and equality promotion. The multicultural dynamic of Semarang was the foundation for community understanding and social self-regulation and organization, and ultimately the start of a social-ecological resilient city.

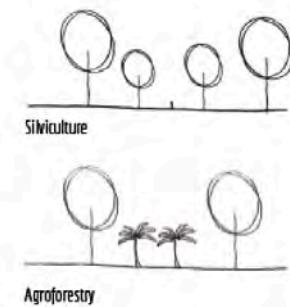
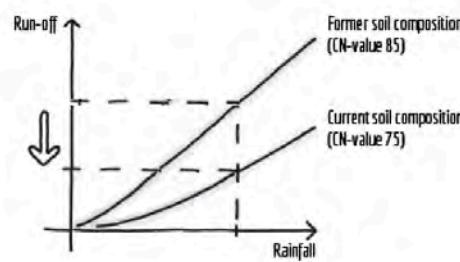
Mai Quynh Lai, Andrea Hanak, Young Eun Ha, Huyen Trang Dao, Diep Chieu Duong Ngo, Johanna Westermann, Marco Padberg, Van Ly Nghiem, Vanessa



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Reforestation



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Designing Resilience in Asia 2017, NUS Singapore



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START SMALL GROW STRONG

By PROTECTION CONSTRUCTION AND CONNECTION



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TU Darmstadt | Germany

Sandro Bellini | Hannah Freund | Nadine Jezernik | Vera Kallenbach | Neele Leson | Beata Preiger | Jennifer Weil | Ann-Cathrin Winkelmann

The city as social space

Social Resilience

The vulnerability of a Community is critically determined by its social cohesion.



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Your future waterfront
What do you see?



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