

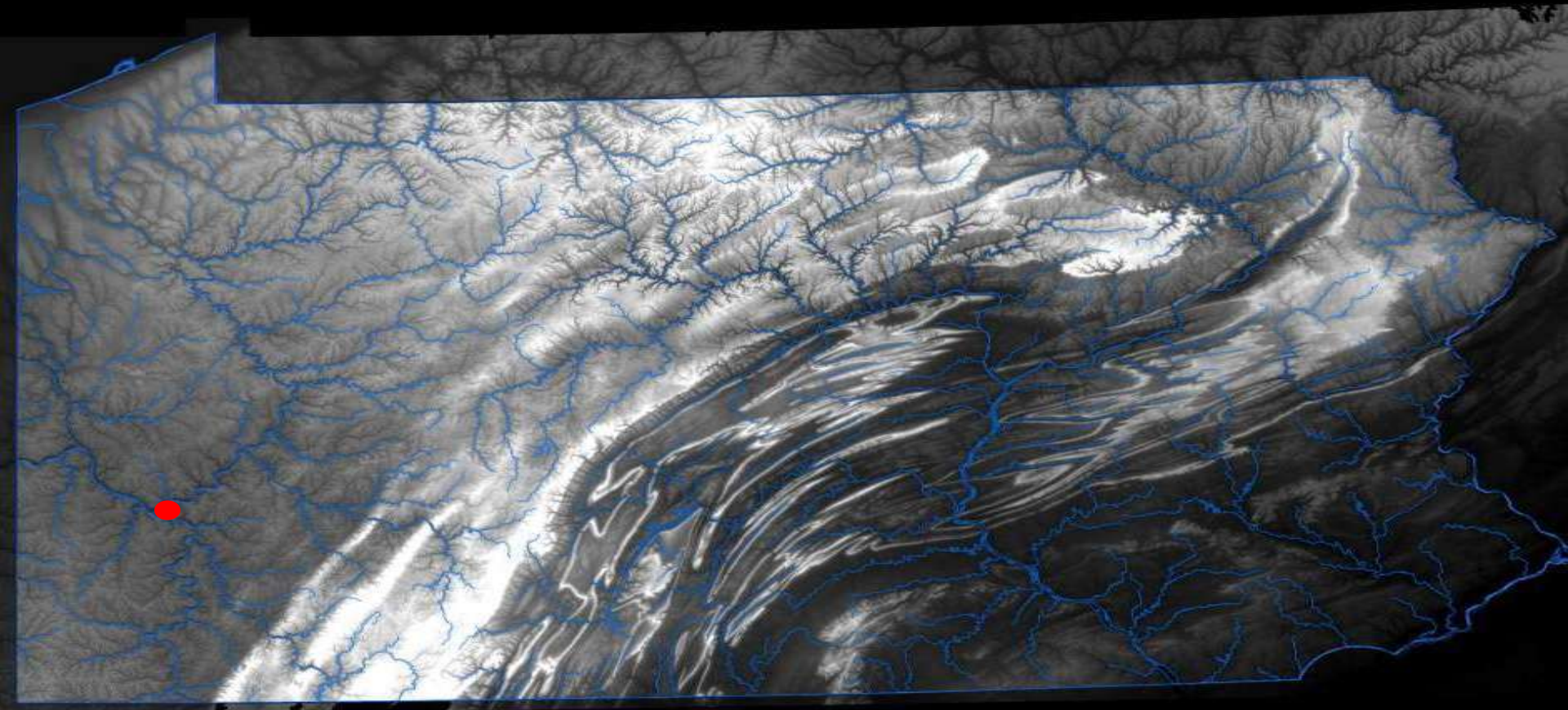


SHAPING LIVEABLE CITIES THE ART TO INTEGRATE - BLUE, GREEN AND SOCIAL

COPENHAGEN, 20.03.2015

RAMBOLL

Water is everywhere before it is somewhere ...



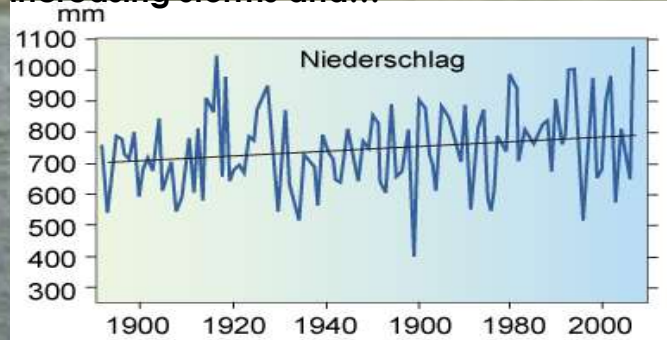
... but Water is very specific



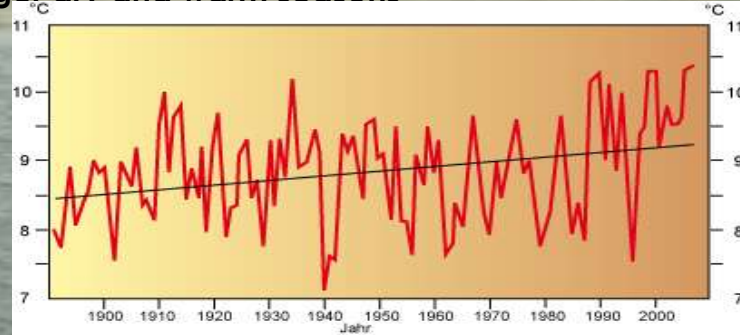
The Current Challenges

1. Climate change
2. Traditional growing cities with increasing hard covered surfaces
3. Limited capacities of drainage facilities, economic limits for upgrading

Hamburg's Statistics on Climate Change for green areas and open water
increasing storms and... longer dry and warm seasons



(http://wiki.bildungsserver.de/klimawandel/index.php/Datei:HH_prec.jpg)



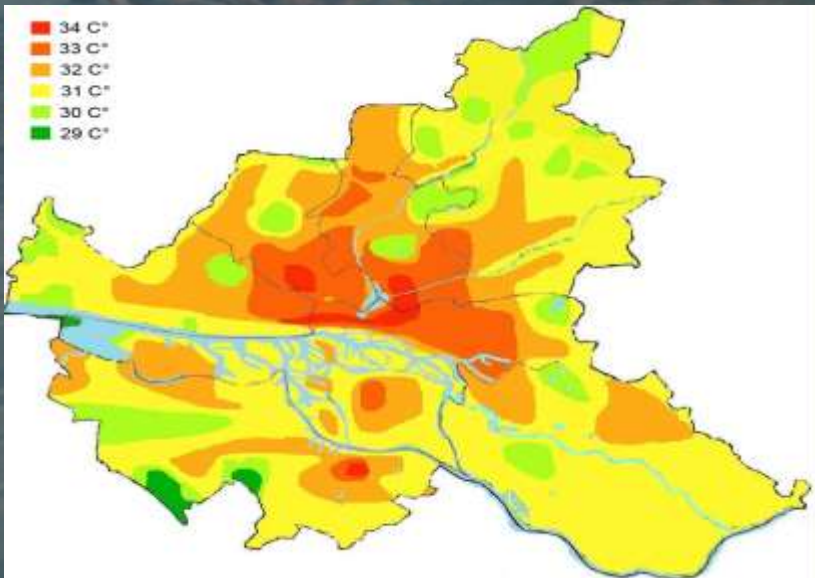
(http://wiki.bildungsserver.de/klimawandel/index.php/Datei:HH_temp1901-2007.jpg)



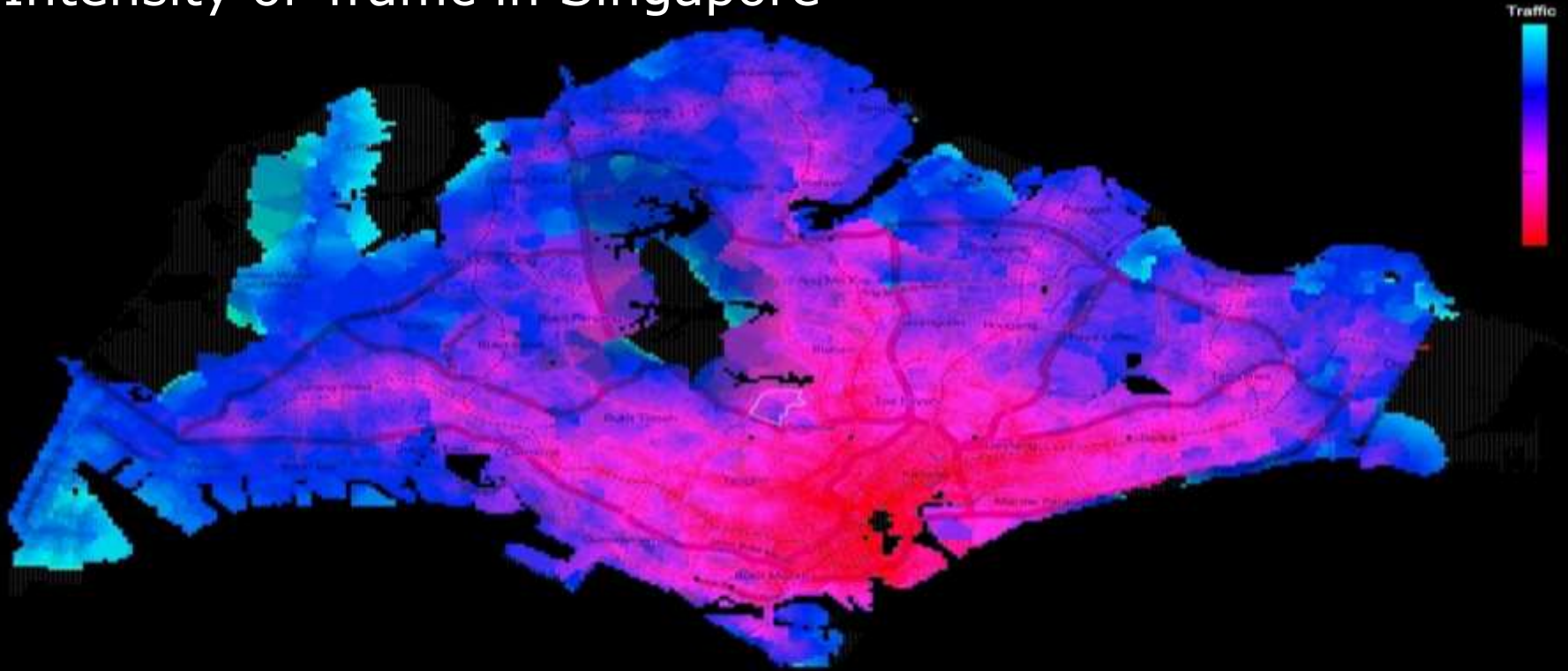
Climate change and its consequences

OVERHEATING AND DUST

The Heat Island Effect and Fine Dust stress the **Health** of citizens

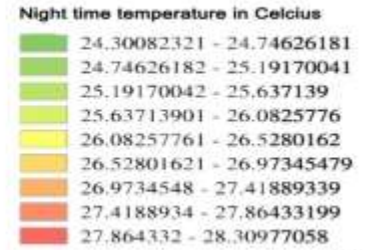
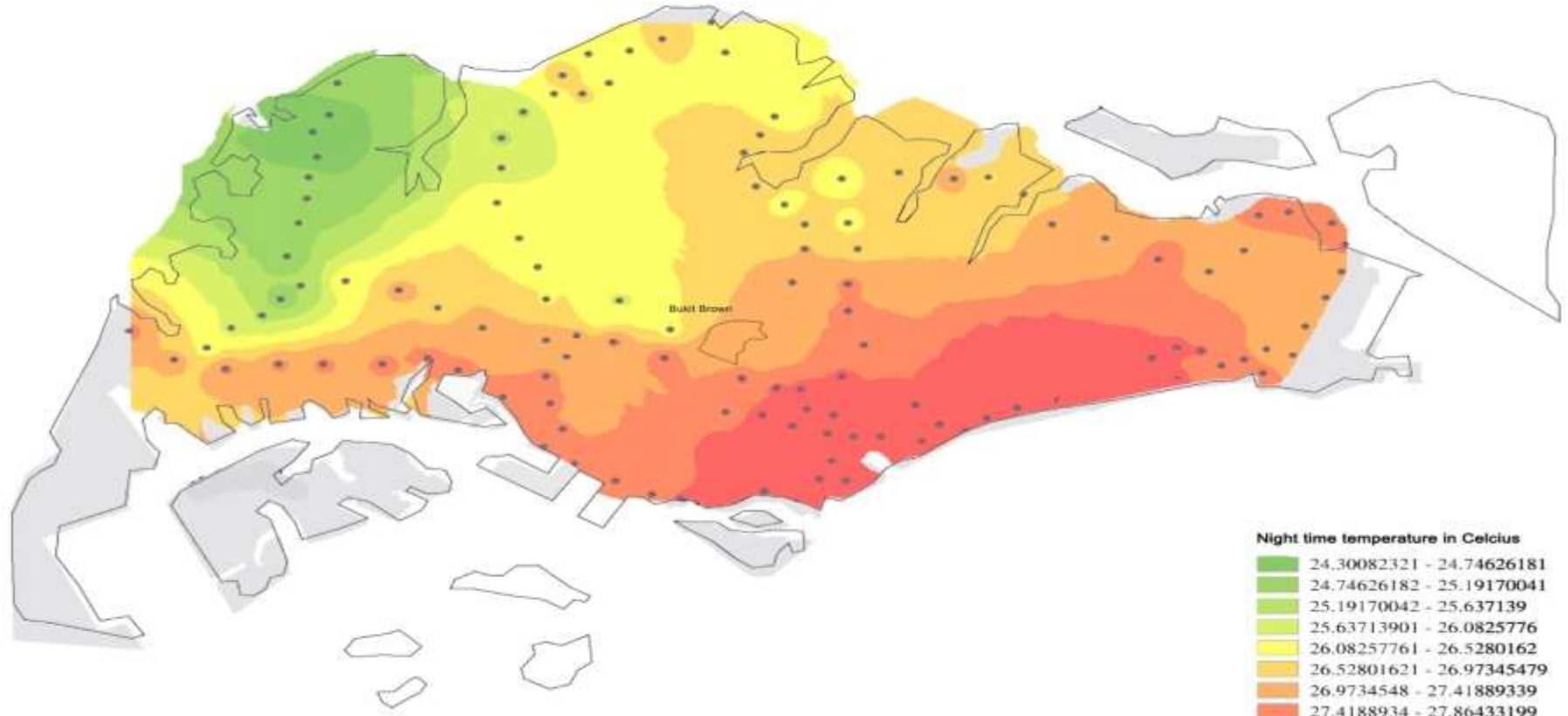


Intensity of Traffic in Singapore



4km

Night Time Temperature





The Copenhagen Example

2nd July 2011

**BEFORE:
Extensive Flooding**

**02 July 2011: > 150mm
RAIN fell in 2 HOURS.**

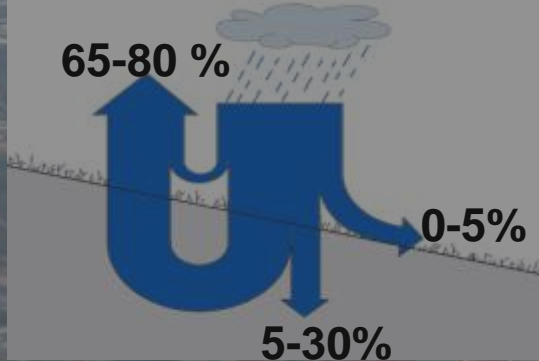
**GASVÆRKSVEJ
Copenhagen**

Water Sensitive Urban Design

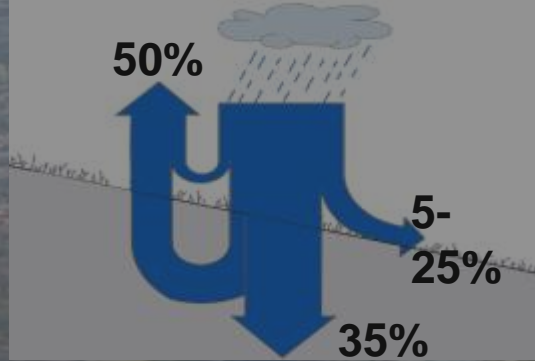
REPAIRING THE URBAN WATERBALANCE

Step 1: To approach the natural Water Balance - setup a long term goal for the Design of new and existing Development + Infrastructure

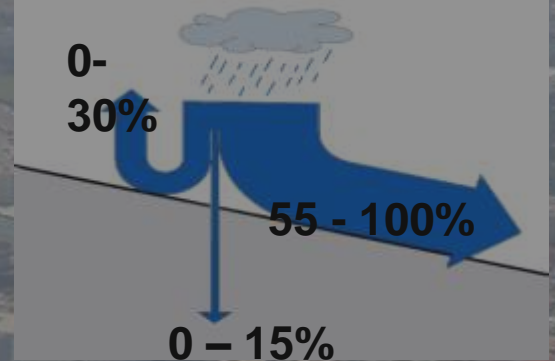
Nature



Agriculture



Urban Area



Water Sensitive Urban Design

INTEGRATION OF STORMWATER MANAGEMENT

EXAMPLE of HAMBURG, GERMANY | RISA Program

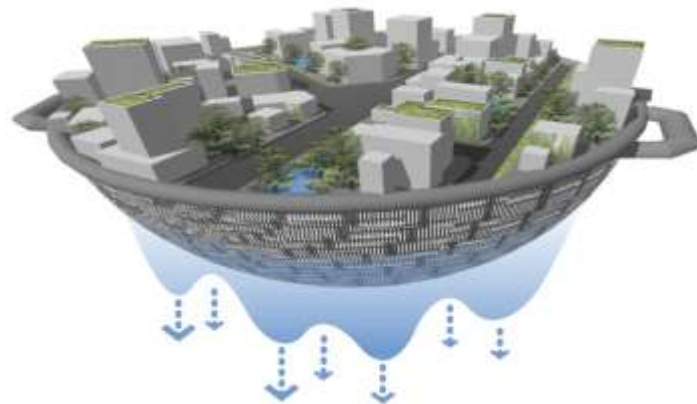
STATUS:



(Grafik: Atelier Dreiseitl)

END OF PIPE SOLUTION
ELIMINATION OF WATER

GOAL:



(Grafik: Atelier Dreiseitl)

INTEGRATIVE SOLUTION
WATER AS A TREASURE

An aerial, black and white photograph of a cityscape. In the foreground, a multi-lane highway runs horizontally across the frame. To the right, a river flows, with a large bridge crossing it. A long barge is visible on the river. The background shows a dense urban area with buildings, trees, and utility poles. The text is overlaid in white, sans-serif font.

Our Infrastructures today
form all Cityscapes,
the Waterscapes and
Landscapes.

Their Influence on Environment,
Climate, Lifequality...

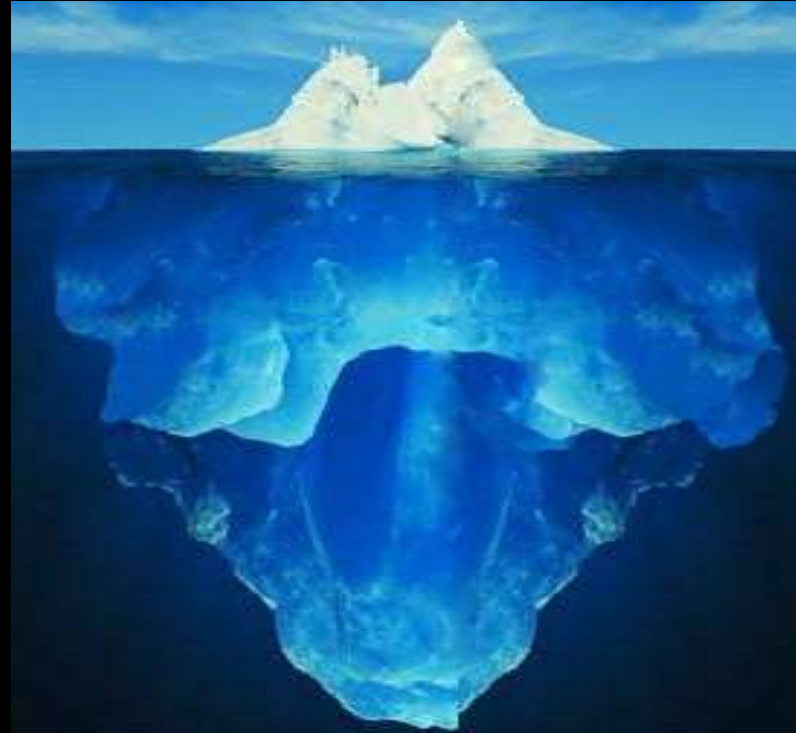
How to create consensus and site responsive? Green, Blue and Socially integrated Infrastructure?

Visual
Architectural

Environmentally Intelligent
Infrastructures

Energy and Resource
Management / Protection

Cultural Sensitive Diversity
and a deep rooted Genius Loci





How to bring Blue-Green + Social Infrastructure
into the Urban Fabric ?

Small Scale – Big Impact
Multi-functional Layers





Water management at Kronsberg - Estate in Hannover, World EXPO 2000







MULTIFUNCTIONAL USE OF OPEN SPACES

MOST DEFINITIONS ALIGN LIVEABILITY WITH **LOCAL
COMMUNITY WELLBEING.**



Image: StadtrandNachrichten 2012

Lowe, M., Whitzman, C., Badland, H., Davern, M., Hes, D., Aye, L., Butterworth, I., Giles-Corti, B. 2013



STRONG SOCIAL NETWORKS REGARDLESS OF CITIZENS BEING RICH OR POOR AND THE GUARANTEE TO BE **SUPPORTED BY THE NEIGHBOURS** ARE REGARDED AS ONE OF THE **MOST IMPORTANT ASPECTS OF LIVEABILITY.**

LIVEABILITY ALSO APPEARS TO BE PRIMARILY CONCERNED WITH THE **PHYSICAL ATTRIBUTES** OF A PARTICULAR LOCATION.



THERE IS A **CULTURAL DIMENSION** TO LIVEABILITY, CONCERNING HOW PEOPLE ARE **EDUCATED AND ROOTED IN THEIR TRADITION.**





THE SUBJECTIVE AND RELATIVE NATURE OF THE TERM VARY BETWEEN GROUPS AND INDIVIDUALS ACCORDING TO DIFFERENT AND SHIFTING PERCEPTIONS, VALUES AND DESIRES.

A Liveable City is a target that all cities wish to reach. There is basically **no final goal**, as it continuously develops over time.



PORTLAND/OREGON TANNER SPRINGS PARK





Pearl District in Portland

PUBLIC INVOLVEMENT



Tanner's Springs Park

Portland, Oregon





< North Park Square



Portland, Oregon, USA The new Pearl District 2004

ART AS INSPIRATION







Activity in the Park

SINGAPORE BISHAN-ANG MO KIO PARK



FACT SHEET

Design: 2008-2010

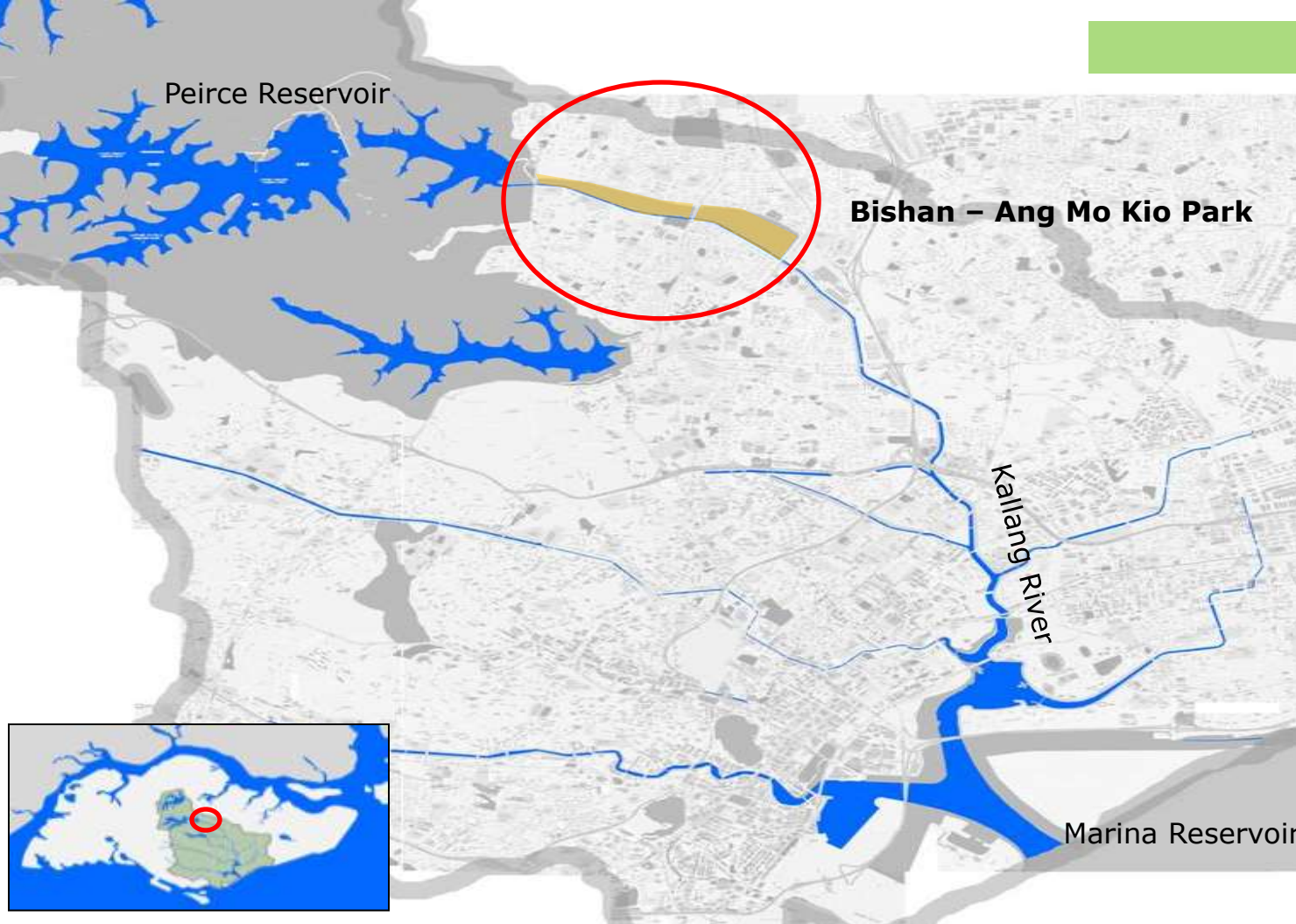
Construction: 2009-2012

Area: 63ha / 155 acres

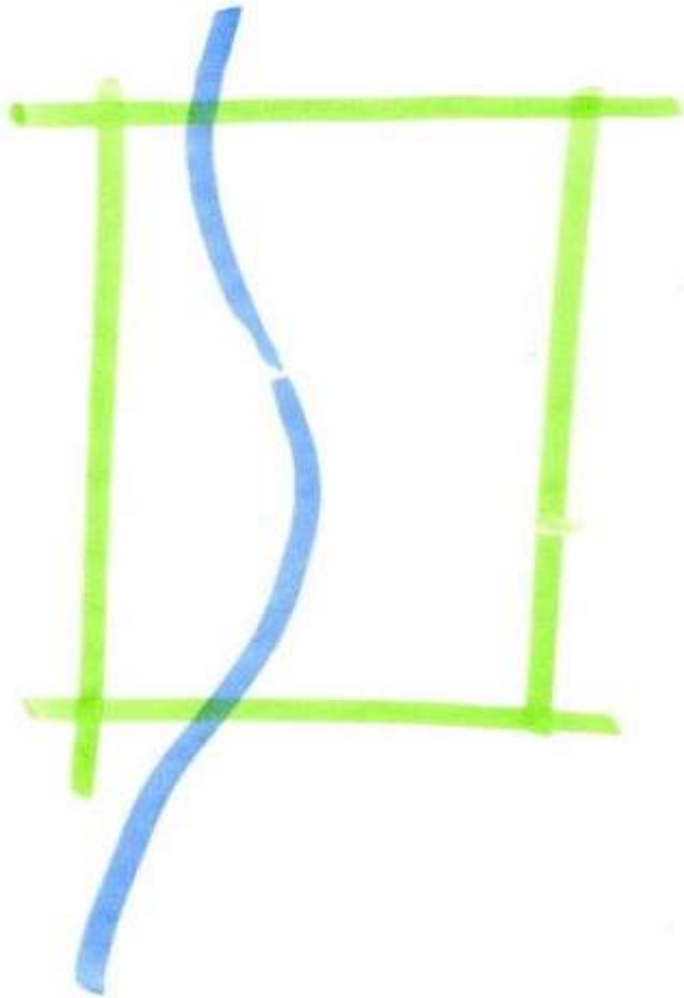
concrete drain channel:
2.7km

Natural river: 3.0km

Clients: Public Utilities
Board (PUB)
National Parks Board
(NParks)







*„To integrate the **river** with the **park** via a holistic sustainable approach that will engage the public and engender a sense of ownership and appreciation for our water resources“.*





BRINGING NATURE TO DOWNTOWN SINGAPORE



Image: Dreiseitl

KALLANG RIVER





2008

Before



2013

After (View from bridge 5)





Observation Pods / Canopy Walk

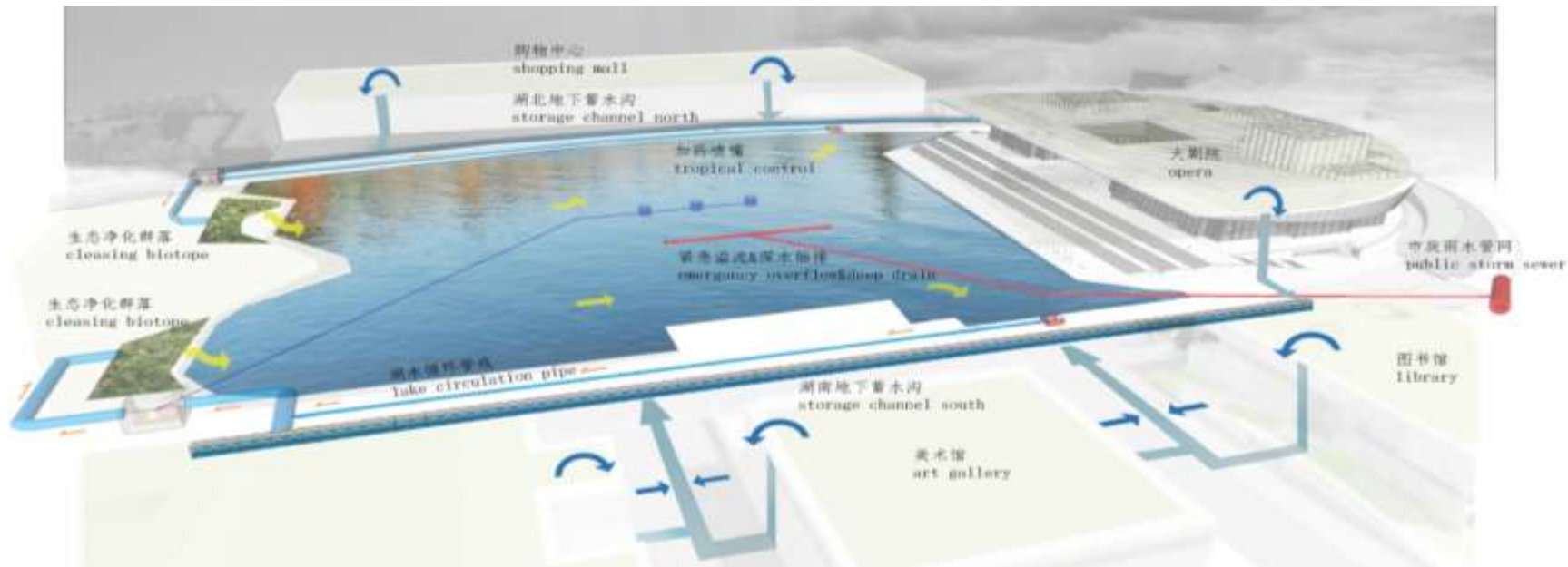
TIANJIN CULTURAL PARK

Tianjin, China



LITANG CULTURAL PARK

Tianjin, China



RAMBOLL

ATELIER DREISEITL

LITANG CULTURAL PARK

Tianjin, China





Bringing people closer to the water

ATELIER DREISEITL



Thank You