



**GREEN/BLUE/LIVEABLE -
THE ART TO INTEGRATE TODAY
WHAT WE NEED TOMORROW**

PROF. HERBERT DREISEITL STAVANGER, 16.10.2015

[RANSGUL](#)



URBANIZATION IS A MEGATREND

**Green / Blue has not given priority -
It is in danger to be eliminated !**

URBANISATION AS A MEGATREND



Data Source: United Nations, esa.un.org

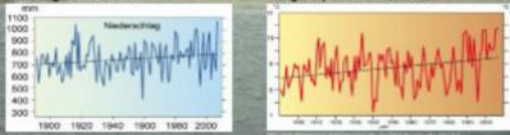


Soon 2/3 of mankind will live in Cities
This creates more and more pressure to Nature and the Environment
Green disappears and Blue is displaced in the Underground
But there are ways to integrate Green and Blue in dense Urbanisations

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
4. Decreasing open space for green areas and open water

Hamburg's Statistics on Climate Change
increasing storms and...



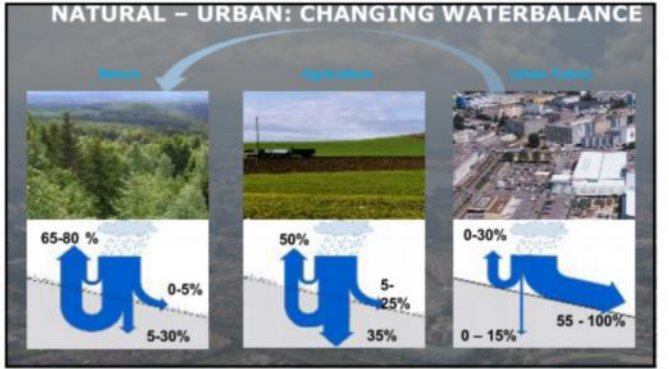
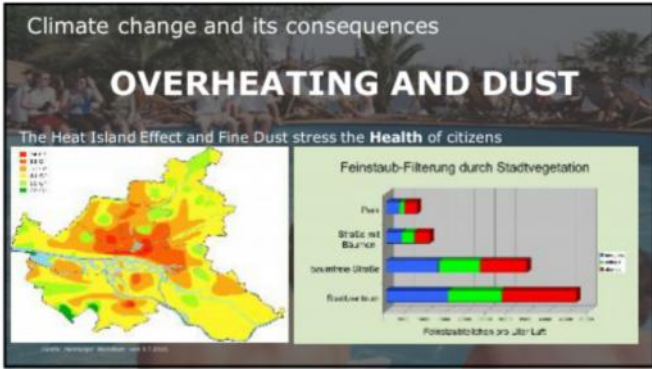
longer dry and warm seasons

Climate Change affects mostly the water regime



The heat island effect promotes heavy local downpours in cities





BLUE-GREEN INFRASTRUCTURES

BARNOULLI LIVABLE CITIES LAB



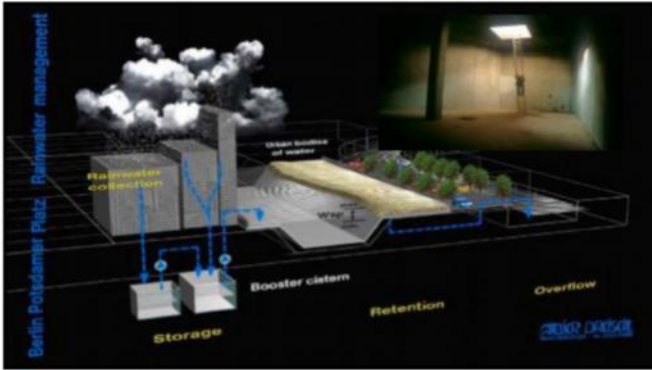
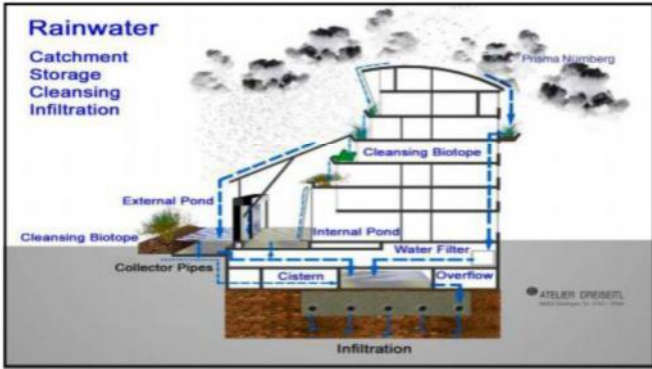




FRAMA

 Nürnberg, Germany

- 70% lower energy use compared to German standards
- 0% potable water use for irrigation
- 27.5 kWh annual heat use compared to baseline 60 kWh (per m²)
- 8000 liters of oil saved from energy saving design methods





HOW DO WE KNOW IF A CITY IS LIVEABLE?

RAHSGÖLL

REFERENCES - LIVEABILITY RANKINGS

Research by National University of Singapore and Leibnitz University Hannover on 11 relevant Ranking systems:

1. Mercer 2014
2. Monocle's most liveable cities index
3. The EIU Liveability Ranking
4. The Green City Index
5. Human Development Report 2014
6. Living Planet Report 2014
7. The Quality-of-life Index
8. Happy Planet Index
9. Gross National Happiness Index
10. Satisfaction with Life Index
11. Global Peace Index

RAHSGÖLL



HAVING A CAR USED TO BE AN ENORMOUS BOOST TO YOUNG PEOPLES' INDEPENDENCE, PRESTIGE AND FREEDOM...

...But this image is changing in the Western World.

The majority of young people cite **cost factors** as the main reason why they are driving less...

THIS IS NOT THE WHOLE STORY...

- **Status and prestige** of car ownership has been **displaced by other products** and lifestyles.
- **Public transport** are getting faster and more reliable.
- **Parking** in urban areas is limited.
- **Car-sharing and car-pooling** is getting trendy and reliable.
- Young people **move around more** and settle down later.

CARS DON'T LEAD TO HIGHER STATUS IN THE EYES OF YOUNG PEOPLE



- All over the developed world, **young people are getting their licences later** than they used to.
- Young people are unlikely to see the car as the automatic default choice.

HOW GOING GREEN BECAME A STATUS SYMBOL

Studies reflect, that

- Older people might pay more for a hybrid car as it **boosts their self esteem and image.**
- Prestige, price and quality are major influences on older people's decisions to buy 'pro-environment' vehicles.
- Less visible 'green' products are not as desirable as they cannot be shown off as easily.

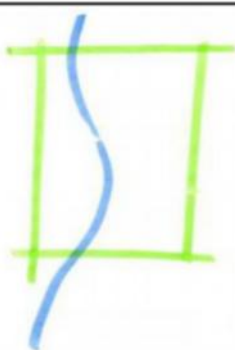
This represents a real behavioural shift.

RAMBOLL

SINGAPORE BISHAN-ANG MO KIO PARK



RAMBOLL



*„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“.*







PUBLIC INVOLVEMENT

Involve those in a decision-making process **who are affected** by a decision.
Allowing people to **influence** the outcome of **plans and processes** makes good sense for a better performance.

