

Innovative measuring of air pollution and microscale modelling of urban heat – the iSCAPE project

Resilient Cities 2019

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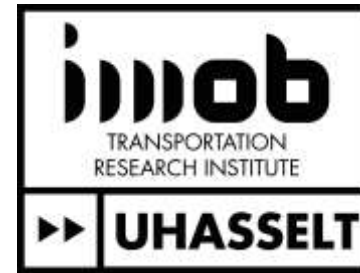
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EUROPEAN COMMISSION
DIRECTORATE-GENERAL
Joint Research Centre



FINNISH METEOROLOGICAL INSTITUTE



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council



Overall Goal

Develop an integrated strategy for the control of air pollution in European cities grounded on evidence-based analysis

Objective

Reduce urban air pollution and the negative impacts of climate change using sustainable passive control systems, behavioural change initiatives and the living lab approach



Smart Citizen platform (sensor kits)



Sensing checklist for participants



iSCAPE Citizen Science Workshop, Bottrop



Living Lab station

Two approaches of sensing technologies:

- Citizen Science (sensor kits)
- Living Lab stations

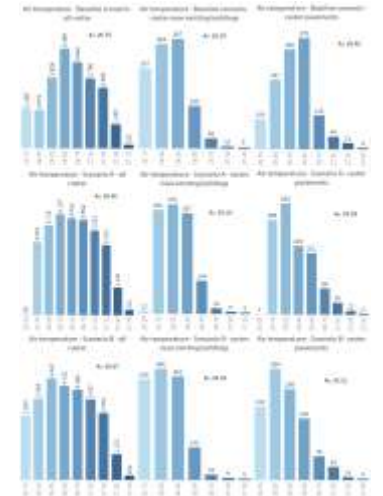
<https://docs.iscape.smartcitizen.me/>



Construction of scenario models



Simulation of the thermal situation (PET) of the scenarios



Statistical analysis of the scenarios

- Baseline Scenario and up to three different scenario models for different measures
- Basis for further analyses: spatial intersection with socio-demographic data, simulating possible future developments in the context of climate change and/or demographic change

Bridging science, policy and planning – iSCAPE City Bottrop

bottrop.

bottrop.



Modellstadt Bottrop



ACTIVATION OF CITIZENS
theme evening, workshops



3000 ENERGY CONSULTATIONS
in total c. 30 % of all property owners



56 % SUCCESS RATE
of energy consultations



291 MIO. € DIRECT INVESTMENT
with reference to InnovationCity

1200 GAINFULLY EMPLOYED PERSON YEARS
secured by 2015

- Fundamental Interests
 - Expanding our network
 - Getting a more extended perspective on new scientific approaches in the field of environmental planning
 - Constant improvement of our working methods and outcomes
- Additional Value
 - Having an excellent access to all chairs at the School of Spatial Planning in Dortmund



iSCAPE

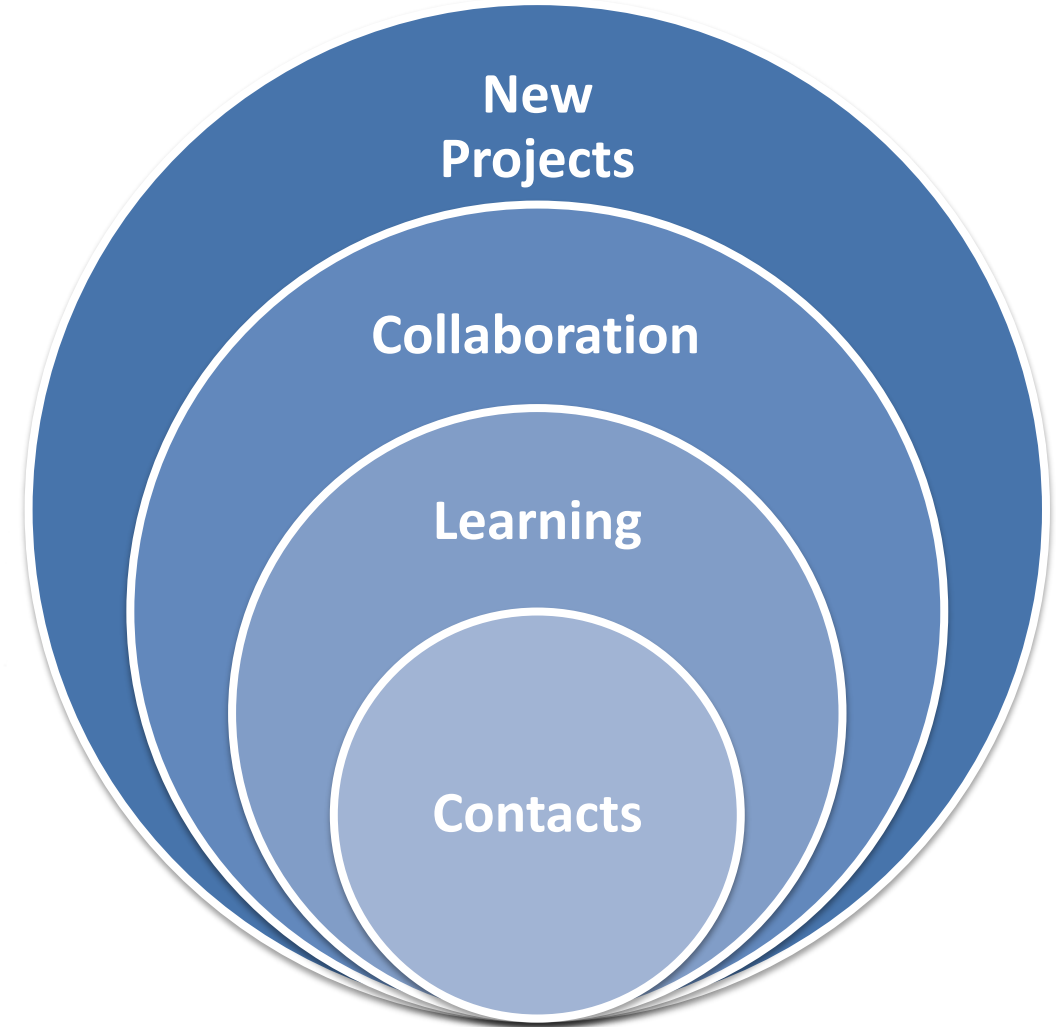
Simulations

Citizen Science

Wandering
Trees

Empowerment & potential support of
Environmental Impact Assessment





Environmental Justice

Vulnerability

ZUKUR



Zukunft
Stadt-Region-Ruhr



Klima Wa Ge

klimawandelangepasste
Gewerbe- und Industriegebiete

In order to deal with current and upcoming risks and the impassibility of climate change, the key to sustainable environmental planning is to work hand in hand with science and to look beyond one's own nose and beyond the particular boundary.



THANK YOU
for your attention