# BEGIN

# Blue Green Infrastructure through social innovation

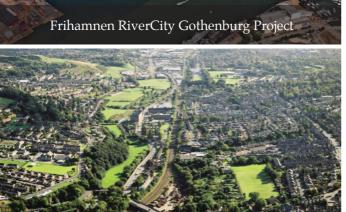Frihamnen RiverCity Gothenburg Project


MØLLENDAL Redevelopment area, Bergen, NO


Citizen engagement


Antwerp Park Spoor Nord


Shipley & Canal Road Corridor Regeneration


Blue green public space in Wielwijk Dordrecht NL


New governance and collaborative models

**Interreg North Sea Region** — European Union European Regional Development Fund

Partner:

DORDRECHT · Hamburg · ENFIELD Council · STAD GENT · Göteborgs Stad · BERGEN KOMMUNE · A · ABERDEEN CITY COUNCIL · CIRIA · Kent County Council · The University Of Sheffield · Erasmus Universiteit Rotterdam · City of BRADFORD Metropolitan District Council · Royal College of Art · TUHH Technische Universität Hamburg-Harburg · UNESCO-IHE Institute for Water Education · Bax & Willems Consulting Venturing

## Background

Cities can't cope with more frequent and intense rainfall due to climate change. In addition to conventional grey infrastructure, we need blue-green infrastructure (BGI), eg: green corridors, permeable paving, bio-swales, rainwater harvesting. BGI can better deal with extreme weather events and foster other ecosystem services and the livability of our NSR cities. Research (TEEB,2015) shows that BGI benefits outweigh costs: x2-x10. Most cities have BGI ambitions and approaches have been developed (NSR MARE, SKINT, SAWA), but multiple barriers persist and implementation is hampered: who benefits, pays, and maintains solutions?

## Aim

The overall objective of the project Blue Green Infrastructure through Social Innovation project (BEGIN) is to demonstrate improved climate change adaptation solutions through blue-green infrastructure (BGI) in urban areas, to capture and sustain BGI's multiple benefits by using social innovation, and to mainstream BGI into urban planning and operation by developing financially feasible business cases and overcoming governance barriers.

## Approach

1. Demonstrate: include BGI measures in urban redevelopment and subsequent service delivery arrangements.

2. Customise, apply and validate social innovation methods from other domains such as 'nudging', co-creation, public service design, and self organisation for effective climate adaptation,

3. Transition partner cities' planning and operation, and accelerate wider uptake through the city-to-city learning method, using existing all-encompassing local government networks.

BEGIN has world-class research partners that for the first time combine BGI (UIHE, CIRIA, UoS) and social innovation (EUR, RCA). They build upon state of the art approaches (EU FP7, Interreg4) to demonstrate BGI solutions and business cases.

## Results

The main outputs of BEGIN are:

1. Demonstration of BGI in 10 leading NSR cities (NL, B, D, S, N, Eng, Sco) with proven business cases that will guide capital investment of >€1Bn.

2. Collated toolbox that guides BGI implementation and helps involve citizens and business as investors.

3. Validation of a unique transnational city-2-city learning approach (from NSR CAMINO). It will be up-scaled via UN and Mayors Adapt city networks (>1600).

## Impact

BEGIN will create a replicable approach for implementing blue-green infrastructure and maintaining eco-system services in cities.

BGI will be established as the dominant strategy for urban climate adaptation, based on validated business models with active citizens' contributions.

Hence, the gridlock in climate adaptation due to current economic circumstances can be overcome.

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