

# Partner Search Form

## Sustainable and Liveable Cities and Urban Areas organized by JPI Urban Europe and the National Natural Science Foundation of China (NSFC)

Applicants looking for project partners can generate a "Partner Search Form" describing the profile of the organization they want to collaborate with.

The completed partner search form can be sent to the Call Secretariat who will publish it on the JPI Urban Europe website and on the LinkedIn Group as well. **Send the filled in form to: [magnus.brink@iqs.se](mailto:magnus.brink@iqs.se)**

**Date:** 23 March 2018

### Section 1 – I am looking for:

- A partner for my project
- A project to join

### Section 2 - Call Information: which topic(s) do you address?

- Topic 1: Climate change and new urban economies
- Topic 2: Transformation of energy systems and strengthen urban circular economies
- Topic 3: Urban public administration and services innovation
- Topic 4: Urban data management

### Section 3 - Your Organisation

Organisation name and location: School of Architecture, University of Sheffield, UK

Contact person: Dr Chengzhi Peng

E-mail: [c.peng@sheffield.ac.uk](mailto:c.peng@sheffield.ac.uk)

Website: <http://bdf.group.shef.ac.uk/>

Description of the organisation (max. 100 words):

We are a group of researchers working on predictive modelling of urban micro-environments for optimising sustainable bioclimatic design decision making with climate projections. Our aim is to research new capabilities of assessing existing or proposed urban micro-environments (buildings and spaces between buildings) to achieve sustainable liveability now and future. We focus on better understanding to predict the correlation of morphological features (parametric and non-parametric) of urban micro-environments and urban microclimate (e.g., thermal, wind and air quality). We are particularly interested in collaborating with partners to work on innovative and purposeful building stock management as a new circular urban economy.

### Section 4 - Free Keywords:

Urban microclimate, climate change projections, urban neighbourhood, sustainable liveability, building stock modelling and management

### Section 5 - Project Description

A majority of existing urban buildings and neighbourhoods around the world were designed and built without being able to face the challenges that climate change poses, nor are they able to meet the broader well-being demands of a population that has satisfied their more basic economic needs. This joint Europe-China BuildToLast project will investigate how the value of a city's building stocks can be reassessed to enable innovative management towards sustainable liveability now and future. Long-term broader value modelling will include demographic shifts, social-ecological well-being, likelihood of extreme weather events, uncertainties in land and property markets, and climate change projections.

We are currently working on a number of projects that investigate: (a) links between urban morphology and microclimate, (b) potential heat stress risk of a city's housing stock, and (c) change in liveability of a city's housing environment in future climate. We aim to bring about new insights to the challenges of sustainable bioclimatic design by developing transparent and updatable models using large datasets and methods such as machine learning, agent based simulation, statistical analysis, environmental and social sensing.

### Section 6 - Partner Profile Sought

Type of organisation:

Required Skills and Expertise (if applicable):