CITIES IN A CHANGING WORLD:
QUESTIONS OF CULTURE, CLIMATE AND DESIGN

• Paper / Proposal Title:
Citizen City Maker: A human-centered approach to interactive planning

• Author(s) Name:
Prof. Raoul Bunschoten
Meram-Irina Pienaru

• University or Company Affiliation:

• Abstract (300 words):
Rapid urban growth is a key driver that forces changes in the housing industry. When it comes to housing production, there is an urgent need for fast solutions but with a citizen centered approach. New laws requiring citizen engagement in all projects create conflict between supply and demand, as well as between governance and industry. Furthermore, the family structure, how the population is now grouping itself into households, and their lifestyle has changed which should be reflected in innovative architectural typologies and materials that can support a more sustainable future. Design proposals usually respond to competition briefs that but do not address citizen demands directly.

This research deals with tools for supporting faster and more socially and economically sustainable housing development required by EU policies. It does so by looking at private and state-owned developers and the planning processes they need to undertake by using a human centered data-driven approach to housing production. Concretely, the work has been divided in three main areas of action: 1. Collect and classify citizens needs and opinions 2. Visualize data for a non-specialist audience through...
collection and assessment of data 3. Develop and test urban design scenarios using points 1. and 2.

This paper will describe how digital tools such as machine learning (semantic and sentiment analysis), data analytics and gamification methods were deployed in order to understand and act in the context of the city of Berlin.

In today’s context of housing shortage the results of our project show that digitized citizen engagement and engaging negotiation between city stakeholders (that represent supply and demand) leads the way to faster execution times and money-saving. The digitalization of social interactions enables faster negotiation. Public opinion must be considered starting with the first phase of the project so that it feeds directly into the solution and thus minimizing conflicts.

• Author(s) Biography (200 words each):

Raoul Bunschoten is Professor of Sustainable Urban Planning and Urban Design at the TU Berlin. He is a specialist in Climate Crisis Impact planning and Urban Intelligence planning. He has worked on a range of Smart City and Environmental Planning project. The Chair is currently working on several research and implementation projects, involving Circular Economy, Intelligent Prefabrication in urban production and Machine Learning and Artificial Intelligence in industrial City Making processes as well as urban and regional planning projects. These projects are both funded by the EU as well as the German research money. Raoul Bunschoten has initiated the Conscious City and has founded the Conscious City Lab in the TU Berlin. He is founder and director of CHORA, an architectural design and urban planning group, including CHORA Berlin and the UK based CHORA research.

Meram-Irina Pienaru has graduated as an urban designer from a dual degree program that is organised by TU Berlin and Tongji University Shanghai. She holds the following degrees: M.Sc Urban Design, M.Arch Architecture, and Diploma in Architecture from UAUIM Bucharest. Her thesis focused on the spatial implications of the use of Internet and mobile technology, with an application in Shanghai. Throughout her work and studies, Irina has deepened her knowledge on Smart Cities and innovative solutions for participatory urban development and urban curation. Currently, she is managing a research and innovation project about digital citizen engagement in housing production, supported by the European Institute of Innovation and Technology.