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

• Paper / Proposal Title:
The Citizen Centered Journey towards Sustainable Smart Cities in the Norwegian Context

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• Abstract (300 words):

Background and Aim: This paper aims to look at how sustainable citizen centered urban development projects in the Norwegian municipalities of Oslo and Lier are being conducted, the challenges and opportunities that taking a sustainable approach has presented, along with how this is reflective of the uniqueness of the Norwegian approach as whole.

Methods/ Methodology: Using a combination of data from both municipalities as well as supporting literature to illustrate not just the key features of this approach from a perspective of sustainable thinking at its core, but also how is the reflective of the Norwegian project approach.

Results/ Outcomes: This paper demonstrates that by using a participatory citizen focused approach to urban development projects, the cases not only have a more pragmatic outlook towards successful implementation, but better reflect the needs of the citizens. This citizen centered approach had added value in the form of contributing to the sustainable credibility of the projects. However, challenges are presented in terms of the scope of citizen participation mechanisms along with a post study evaluation on how useful these mechanisms proved to be, and how it was eventually implemented. This
paper also illustrates the degree to which this approach is not necessarily unique simply to these projects, but also to a more holistic approach of citizen centered feedback more generally.

**Practical Implementation:** This offers insights to the fields of Urban Facilities Management, Urban Planning, Sustainable Development and Project Management. More specifically, this offers external validity to those wanting to center the development of their projects more on the citizen focused experience, as well as the opportunities and challenges that come with trying to implement this feedback.

**Keywords:** Smart Cities, Urban Development, Urban Facilities Management, Project Management, Citizen Participation

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

**Dr. Dave Collins**

Originally from Wales in the United Kingdom, Dave is has a PhD in Sustainable Facilities Management (2019) from the Centre for Real Estate and Facilities Management in the Department of Architecture and Planning. In 2019 Dave was awarded the European Facilities Management Network (EuroFM) ‘European Researcher of the Year’ for his contributions to the advancement of «knowledge in FM and promote its effective application in practice and education». Dave also has a Bachelor in Politics and Modern History from Cardiff University completed in 2007, as well as a Master in Globalisation, Global Politics and Culture from NTNU completed in 2014. He also worked for SINTEF Technology and Society during the last year of his Masters Degree.

Prior to his move to Norway, Dave worked for nearly 5 years for a British Member of Parliament.

He is researching how users and communities can better engage themselves in Smart Cities projects as more formal intermediaries and is currently a Postdoctoral Fellow on the Nordforsk project ‘Citizens as the Pilots of Smart Cities’ (CaPs).

Dave also has 12 peer reviewed papers in conferences and journals in the fields of real estate, facilities management and project management.

**Professor Alenka Temeljotov-Salaj**

Alenka is a Professor in Sustainable Refurbishment and Facility Management at NTNU IBM, with a PhD in Psychology and MSc in Construction Engineering, Renewable energy. Her knowledge and skills from both psychology and construction fields enriched her research
experiences to establish very strong international collaboration with cities and industry. She has worked closely with municipalities, end users and the construction sector. In addition, she has interacted with researchers from different disciplines with the focus on buildings and settlements through value orientation, co-creation solutions and Urban Facility Management, emphasizing sustainable solutions, health and well-being. She participates and has participated in several research projects, both nationally and internationally, organized Summer Schools and annual International Conferences, and developed a series of workshops with students, researchers and companies.

As a member of the NTNU IBM Research, Development, Innovation Committee, she works to foster stronger innovation collaboration among stakeholder groups. She is a member of CEN commission for a new Sustainable Refurbishment standard and is an active member of EuroFM. She has published more than 180 papers in international conferences and journals, two books and 10 book chapters. She has supervised PhD students, post-doctoral students, and acted as an opponent for national and international defenses.

**Coline Senior**

Coline Senior is a Ph.D. candidate and has a master’s degree in architecture from Ecole Nationale Supérieure d’Architecture de Paris la Villette and is currently doing her PhD at the Norwegian University of Science and Technology. Her research focuses on public participation in smart and sustainable urban development projects and more specifically on how to evaluate the processes that can effectively result in citizens being empowered.

**Dr. Mina Jowkar**

Mina is a Researcher at the Department of Civil and Environmental Engineering, NTNU. Mina is currently involved in a Nordforsk project ‘Citizens as the Pilots of Smart Cities’ (CaPs).

She has a multidisciplinary background including a PhD in Built Environment and Thermal Comfort from Coventry University, United Kingdom, MSc in Architectural Engineering (with distinction) at Heriot-Watt University, United Kingdom, and a BSc in Architecture focused on design, from Razi University, Iran.

Mina has worked on several international research and industrial projects including ‘Moisture control in Scottish residential buildings’, ‘Thermal comfort in higher learning environment in the UK and Norway’, ‘Building services and HVAC operation’ and ‘Human characteristics and wellbeing in buildings’. She also has 14 publications in international
journals and conferences in fields of built environment, thermal comfort, sustainable building renovation and urban development.

**Professor Agnar Johansen**

Agnar Johansen has MSc in Production systems, from Narvik University college (1995) and Dr.philos focusing on Uncertainty management from Norwegian University of Science and Technology (2015). Currently he works as professor in project management at NTNU Faculty of Engineering, Department of Civil and Environmental Engineering.

He has led several large industrial development projects focusing on productivity and process development in the building industry (SpeedUp). Practical Uncertainty Management in a project owner perspective (The PUS project) and sustainable development of green buildings and neighborhoods (The CaPs project and the Rezbuild project). He has authored/co-authored 5 textbooks in project management, and more than 100 papers for international journals and conferences on project evolution, cost estimation, project start-up, uncertainty analyses, uncertainty management, stakeholder analyses, time management and learning in organizations. He has more than 25 years of experience as a consultant, researcher and lecturer in the field of project management.