

## **The Urban Sustainability Index: Assessing Urban Sustainability for Effective Change**

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This research addresses contemporary challenges such as climate change and socioeconomic inequality within the context of urban sustainability. As urban areas increasingly serve as epicentres of human habitation, there is a compelling need to explore their potential as focal points for innovation, collaboration and transformative change. In this study, we introduce the Urban Sustainability Index (USI), which incorporates eight independent parameters derived from established indicators to assess a selection of representative cities. The USI provides a robust foundation for future research, enhancement and the development of a more comprehensive, holistic and actionable approach to sustainability.

Our analysis of the findings underscores the diverse array of challenges confronting cities worldwide, with specific emphasis on issues related to emissions, air pollution, green spaces, and inequality. To effectively address these challenges, a concerted and multi-pronged effort is imperative, as underscored by the Urban Sustainability Index. This research strongly advocates for the formulation of targeted action plans, fostering collaboration between the public and private sectors, promoting active citizen participation, and empowering women.

By addressing existing deficiencies and embracing novel, effective solutions, we can pave the path towards the establishment of liveable and sustainable urban environments. This study encourages stakeholders to perceive cities as catalysts for positive change, thereby facilitating a future where urban areas assume a pivotal role in addressing global sustainability challenges. We are excited to present the Urban Sustainability Index for the first time to academics, professionals, policy makers and researchers at the upcoming AMPS conference in London.

### **Short Bio Presenting Author Ille C. Gebeshuber**

Ille C. Gebeshuber is Professor at the Institute of Applied Physics at TU Wien. She is expert in Nanotechnology, Biomimetics and Tribology. Her approach to science is wide and holistic, and inherently trans- and interdisciplinary, bridging over to biology, the arts and the social sciences. 2017 she was elected 'Austrian of the Year' in the category 'Research'. Prof. Ille is doing extensive public science outreach work and her professional activities are widely covered in the media. She wrote two public science books which became bestsellers.