Global Forum Session on 18th October 2022
Smart vs. Nature Based Solutions

This parallel panel presentation featured on Day 2 of the Global Forum. The session was observed by an international audience of environmental and urban planning specialists whose experience ranges a diverse balance of government, civil society, and private sector expertise. Marc Watum, CEO of Vertex Ecosystem and founder of Africa's Vision 2030 Fund opened the session and moderated conversations surrounding the interlinkages between smart, technology-enabled climate conservation innovations, and nature based solutions.

To kick off the discussion, Marc sought out to distinguish between smart and nature based solutions, alluding that smart innovations tend to be introduced or trialled in urban areas or strategic clusters where key players or affected parties collaborate. They harmonise science and technology, and when successful usually result in the obsoletion or replacement of certain inputs, processes, ways of doing, and their associated outputs. The objectives usually resolve around optimisation; efficiency, cost saving, and when a sustainable end is pursued, improvements to the ecological burden are an objective.

On the other hand, he shared that nature based solutions seek to harmonise existing ecological systems with available innovations, usually localised according to the environment's landscape through endeavours that can be described as entrepreneurial, research intensive, conservational, adaptive, or preventative. Finally, he remarked that modern solutions will need to harmonise these phenomena. This idea set the scene for the following presentations.

Throughout the panels presentations and discussion, speakers demonstrated the various developments innovations, and the associated challenges that are being experienced in their respective jurisdictions. Of the European, Middle-Eastern, and Africa-focused initiatives, the use of natural landscapes and 4th generation technology played a critical role in resolving predominantly urban living difficulties. Pollution, clean water systems, the depletion of biodiversity, and social organisation were the main themes being confronted by the panellists and their organisations.

Highlights of the various contributions:

→ Andile Khoza, Founder of South African water infrastructure repair services company Metsi, shared an emotive presentation on South Africa's dire water insecurity. Sharing astonishing statistics surrounding the rate of water loss, as well as the lack of employment opportunities for qualified water engineers and maintenance workers, he highlighted the social case for communities who are today using smart applications such as Metsi to create a new narrative. Through his app, users can upload photographs of faulty water infrastructure, have it assessed in real time, and have the nearest qualified repair worker dispatched to the site.

→ Etienne Monbaron of the Geneve State Water Protection Agency delivered an inspirational project management case as he showcased his agency's river restoration interventions. Using the success of his PAV River Project, he showed how a true river can be restored in a way that mitigates flood & runoff risks, thrives even under the

most immense pressures from population density, and delivers a clean, safe water resource for its surrounding community.

→ The role of neighbourhoods in nature-based solutions by Rowa Elzain, Co-founder and Managing Coordinator at MCT Space Lab, gave a thought-provoking analysis of the public-civil-private society nexus in Muscat's local context. Her positioning of citizen power as the antithesis to exclusionary environmental action challenged the audience and her peers to adopt participatory processes that can accelerate the achievement of SDG 11: Sustainable Cities and Communities.

→ Hassan Al Raisi, Urban Planner at the Oman Ministry of Housing, gave a refreshing introduction to a new and inclusive policy agenda being introduced in Oman – The National Spatial Strategy. During this presentation, Hassan detailed the ministry's intentions to achieve the country's Vision 2040 objectives by delivering on strategic infrastructure that bolsters the country's relationship with the environment, her transportation, and use of natural resources. The keys to this strategy were awareness; both at the global (public-civil-private) and local levels, the introduction of planning standards, and the use of data to inform and manage them forward.

→ Urban architect and design professor José Miguel Lameiras from the University of Porto led the audience through a visual demonstration of the applicability of smart mapping technologies in the erection of parks, forestry, and green public spaces in his city. Through this presentation he drew on acquired experiential knowledge to teach observers the value of letting nature lead. José's examples included the use of sophisticated mapping technology to assist in non-invasive, structurally and environmentally convenient landscaping that produced incredible reafforestation while saving and absorbing as much as 2500 cubic meters of water, 35 kg of carbon, and stabilising average temperatures in the city every year.

→ Bart Wubben, an urban architect with vast experience in both the Netherlands and Oman through the success of his company, Muscat Landscaping, presented the importance of using informed processes to introduce state of the art technology in local spaces. He started by highlighting the ways in which natural landscapes and society can and must integrate, before sharing case studies that communicate the merits of holistic approaches to environmental action and construction. A key take away from this was the importance of inclusion, education, and local buy-in from the first explorations of any environmental action through to its operation and lifetime.