

HYDERABAD CITY KNOWLEDGE AND INNOVATION CLUSTER PROPOSAL

Urban Liveability Upgradation:

The Ministry of Housing and Urban Poverty Alleviation, Government of India, announced an Ease of Living Index ranking for Indian cities in 2018 (Press Information Bureau, Govt. of India, 2018) in collaboration with IPSOS Research Pvt Ltd, Athena Infonomics, and the Economist Intelligence Unit (EIU; the research and analysis wing of The Economist Group of publications) (Express News Service, 2018). The underlying study looked at over 110 Indian cities and ranked them across 4 major verticals – Physical/ Infrastructure, Institutional/ Governance, Social, and Economic (in decreasing order of weightage) – and 15 sub-categories therein.

Hyderabad was ranked 27th overall (Express Web Desk, 2018), ranking among the top ten in the Institutional vertical, reflective of the good governance in the state, but falling short on other developmental metrics (Press Information Bureau, Govt. of India, 2018).

The Economist Intelligence Unit (EIU) also publishes the results of an annual global survey – the Global Liveability Index – ranking a wide range of cities globally on five broad parameters – stability, healthcare, culture and environment, education and infrastructure (The Economist Intelligence Unit, 2018). Mercer too publishes a similar ranking across ten categories which together cover all the above parameters (Mercer, 2019).

In both rankings, the best Indian cities are ranked in the 100-200 range, losing points on the Infrastructure parameters related to climate change mitigation as well as the provision of basic human necessities such as availability of potable water, solid waste management, etc. (Mercer, 2019).

The availability of global and local rankings as well as the underlying data matrices provide one the unique opportunity to take an outcomes/ metrics-driven approach to solving a multi-modal problem by allowing one to prioritise between different sub-groups of problems based on criticality, while also being able to track the efficacy of interventions through external audited surveys.

Looking at only the developmental aspects of the Liveability Indices, and specifically the underlying Infrastructure and Utilities related topics – which are also under the purview of the Research and Innovation Circle of Hyderabad (RICH) under its original mandate as well as the mandate of the City Cluster Project spearheaded by the Office of the Principal Scientific Adviser, Government of India – the main themes considered in order of criticality to survival are listed below.

Specifically, the following areas will be looked at :

1. Effective segregation of wet and dry waste
2. Solid waste management systems
3. Wet waste management systems
4. Faecal sludge treatment
5. eWaste processing

Based on the listing of the focus areas in order of criticality, and taking into account the resources and capabilities on hand as well as the Government of India's priority areas, viz. Swachh Bharat Mission (Department of Drinking Water and Sanitation, 2019) and Jal Shakti Abhiyan (Department of Drinking Water and Sanitation, 2019), we propose to look at the following areas on priority – waste and water management, as these lend themselves well to decentralized solutions producing large and measurable localized as well as dispersed impact. In a second phase, the issue of air pollution and urban mobility will be taken up, specifically related to setting up of charging station networks in the city to add impetus to the electrification of vehicles on the road, and setting up of smart traffic signals which use real time data over a network of traffic intersections and appropriate analytics to dynamically control signal timings to bring down traffic queue lengths and average waiting times at signals.

- **Key activities and stakeholders:**

- i. Waste segregation – Trashcon
- ii. Dry waste management - Waste Ventures India/ Bintix
- iii. Wet waste + faecal sludge management - Madon Applied Sciences
- iv. Advisory inputs - Administrative Staff College of India

- **Budget:** INR 6 crores

- **Duration:** 36 months

- **SDGs relevant to the project:**

- SDG 3: Good Health and Well-Being
- SDG 6: Clean Water and Sanitation
- SDG 7: Affordable and Clean Energy
- SDG 11: Sustainable Cities and Communities
- SDG 13: Climate Action
- SDG 14: Life Below Water
- SDG 15: Life on Land

- **National missions relevant to the project:**

Jal Jeevan Mission

Swachh Bharat Mission

Waste to Wealth

- **Metrics to measure project outcomes:**

Population covered

Operational metrics (kilograms of waste processed)

Economic metrics (project-level and streamwise)