

BeST

Bengaluru Science & Technology Cluster



Office of the Principal Scientific Adviser
to the Government of India

Science & Technology Cluster

सत्यमेव जयते

ಗೌರವಾನ್ವಿತ ಪ್ರಜ್ಞೆ ಮತ್ತು ಸಾಧನಗಳ ಪ್ರಯತ್ನ

ಸತ್ಯಮೇವ ಜಯತೇ



NEWSLETTER MARCH 2023

BeST's One Health Bengaluru City Consortium Launched



Stakeholders gathered from 25+ organizations for the launch of BeST Cluster's One Health Bengaluru City Consortium

The Bengaluru Science and Technology (BeST) Cluster, an initiative of the Office of the Principal Scientific Adviser to the Government of India launched the 'One Health Bengaluru City Consortium' as a significant first step towards the goal of integrating existing one health efforts, facilitating collaboration, and building a one health framework for the city of Bengaluru. Representatives from 25+ organizations consisting of researchers, academicians, technologists, industry experts, practitioners, policymakers, city planners, health authorities, not-for-profit organizations, and civic officials were gathered for the launch of the One Health Bengaluru City Consortium on 3rd March 2023, with a goal toward integrating existing one health efforts, facilitating collaboration, and building a One Health framework for the city of Bengaluru.

One Health is a multi-sectoral approach that takes into consideration human, animal, and environmental health and the interconnectivity and interdependence of these three elements. Dr. Sindura Ganapathi, Visiting Fellow, One Health Mission, Office of the Principal Scientific Adviser (OPSA) to the Government of India joined virtually to deliver the keynote address. Explaining the One Health Mission of OPSA, he pointed out the lack of existing models worked out for implementing One Health in cities and districts. He expressed that the way forward for the wastewater-based epidemiology project that impacted the rapid response of BBMP in Bengaluru, now adopted as a pilot for the One Health Bengaluru City Project by BeST Cluster, would be to go beyond COVID to other region-specific diseases, and the learnings used to develop models for other cities. He also emphasized the importance of sampling, and data usability to help the state government to better manage programs related to human health, animal health, wildlife, and forestry. He said, “For me, the success a year or two from now, from the launch of this activity is you have worked out a model where all stakeholders collaborate and develop a decent understanding of what the priorities of our policymakers should be.”

During the launch, Dr. K.V.Thrilok Chandra, IAS, Special Health Commissioner, Bruhat Bengaluru Mahanagara Palike (BBMP) addressed the gathering. He emphasized the importance of putting in place a systemic mechanism to quickly capture and respond to emerging diseases and the necessity for scientists and technology players to collaborate and collate information. BBMP has already established the ‘One Health Cell’, set aside significant seed capital in the current budget for the same, and set up a Hi-Tech Laboratory and Metropolitan Monitoring Centre to capture the major disease parameters. He said, “We don't need another World War on the health front for us to wake up again.”



Speakers at the event: From left to right, Dr. Sindura Ganapathi, Office of the Principal Scientific Adviser to the Government of India, Prof. Uma Ramakrishnan, NCBS, Dr. Shannon Olson, Echo Network, Dr. Varsha Shridhar, Molecular Solutions

Though the One Health concept has gained priority after the COVID-19 pandemic, it is not limited to only infectious diseases but is a bigger approach to include non-communicable diseases, antimicrobial resistance, environmental health, human-wildlife interfaces, livestock, and so on with the goal of building a unified healthy ecosystem. A cross-sector panel consisting of stakeholders from science, policy, urban planning, medicine, and academic engagement discussed the priorities, challenges, and future plans for the One Health approach with respect to Bengaluru city. The panel highlighted the importance of identifying shared goals, building mutual trust, data sharing among cross sectors, developing advanced alarm systems to aid

decision making, mapping different ecosystems in and around the city to understand the interconnectedness and its impact, creating awareness and building capacity on the ground right from the student level. The event also had speakers briefing existing consortium efforts on environmental surveillance, disease ecology, and stakeholder mapping with respect to One Health in Bengaluru.



Cross-sector panel from left to right, Dr. Farah Ishtiaq (TIGS), Dr. Lena Robra (Swissnex), Dr. Thrilok Chandra (Special Health Commissioner BBMP), Dr. Reeta.S. Mani (NIMHANS), Mr. Vishwanath Srikantaiah (Biome Environmental Trust)

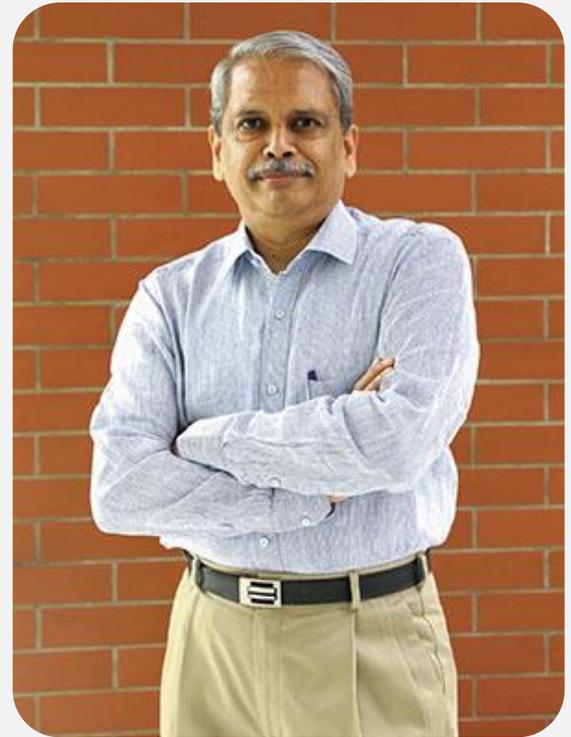
Ten years from now, the consortium envisions having an organized dashboard for data-informed policymaking, environmental surveillance made part of the public health care system, and a model framework in place for other cities to learn. “One Health Bengaluru City Consortium is being driven by disease ecology and environmental surveillance as an evidence-based approach for predicting risks to human and animal health. Cross-sector communication and cooperation between this multi-stakeholder partnership is a prerequisite in responding to emerging health crises”, said Dr. Farah Ishtiaq, Principal Scientist, at Tata Institute for Genetics and Society (TIGS). “Bengaluru is a huge urban center with interfaces between wildlife, livestock and commensals, and people. Additionally, rapid development and changing climate result in dependence of our health on ecology, the interactions between all these species, and their environment. We hope the One Health Bengaluru City can bring these ecological dynamics front and center for evidence-guided action for a healthier future.” added Prof. Uma Ramakrishnan, National Centre for Biological Sciences (NCBS). Dr. Ishtiaq and Prof. Ramakrishnan have been the key drivers of the One Health concept in Bengaluru.

GLOBAL BUSINESS LEADER SAYS...

Bengaluru has representation from the best of academia and research institutes, the best of private industry, and the best of public sector undertakings. BeST can leverage this ecosystem for taking on ambitious multi-disciplinary, multi-year programs which meet national strategic goals. This requires careful design of the program, careful selection of participants, setting achievable goals, and tracking of these goals to ensure timely progress. The programs will require guaranteed multi-year funding. I am very confident about the talent in Bengaluru and I believe that with the right planning and approach, the cluster can successfully achieve its targeted objectives.

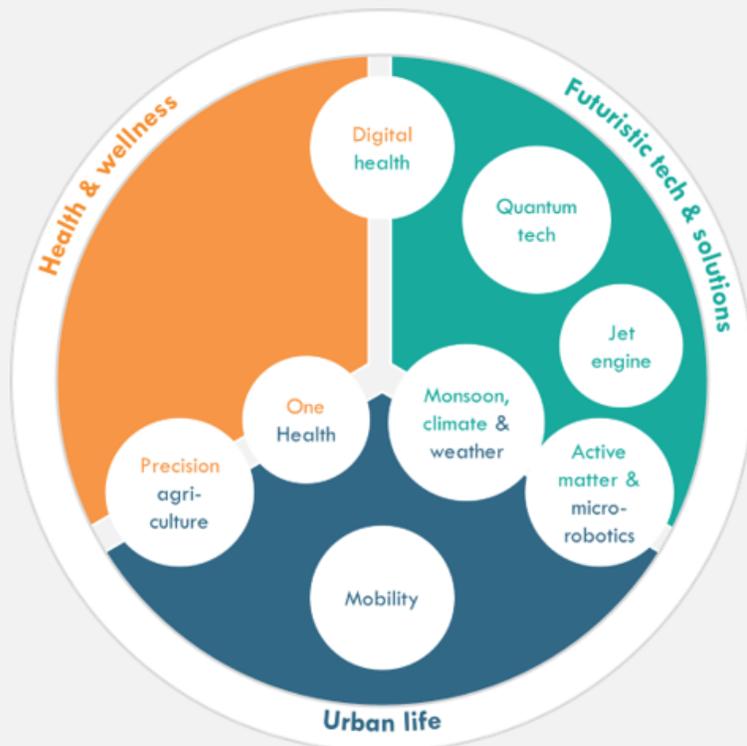


Kris Gopalakrishnan
*Chairman Axilor Ventures,
Co-founder Infosys, President ISF*



Thematic Areas of the BeST Cluster

The BeST Cluster has been creating a network of experts from a much wider variety of sectors to align S&T providers with users in the following thematic areas.



Health and Wellness: Activities envisaged under this broad thematic area cut across academic boundaries and involve an integrated approach to prevent disease and illness, encourage healthy lifestyles in individuals and communities, and reduce the cost and impact of illnesses.

Urban Life: This area is devoted to developing theoretical and applied knowledge for urban management, liveability, and sustainability.

Futuristic Technologies: This thematic area aims to support collaborations that will pursue interdisciplinary research on futuristic areas that can drive economic growth through innovation.

The BeST Cluster was introduced to the UK Catapult team and other stakeholders in Net Zero Initiative from Bengaluru and Manchester. Dr. Neha Pankow, Head - Strategy and Business Development presented the initiatives of the BeST Cluster in Net Zero, especially in the themes Urban Mobility and Hydrogen Valley. A week-long engagement built the network of the cluster that resulted in more start-ups and academic innovators expressing interest in collaborating with the cluster for a larger impact.



UK-India Innovation for Net Zero Initiative

The BeST Cluster engaged with UK Catapult in a series of workshops on Net Zero Initiative - UK-India Innovation Twins for Net Zero, Partnership Workshop organized by Connected Places Catapult organized on 14th March 2023, Uk-India Innovation for Net Zero Initiative organized by Connected Places Catapult, Global Business Inroads and BeST Cluster in IISc on 15th March 2023, Innovating for Transport and Energy Systems: Part of the UK-India Innovation Net Zero Initiative, Energy Systems Catapult and the Indian Institute of Science – 16th and 17th March 2023, to explore the potential of a collaboration between Manchester and Bangalore, using innovation to address shared Net Zero challenges with a focus on decarbonising manufacturing, decarbonising transport and energy systems and UK-India Innovation Twinning for Net Zero.



The BeST Cluster facilitated the visit of a delegation from Manchester - Transport for Greater Manchester, Manchester Airport Group, University of Salford, Manchester University, Manchester India Partnership and Greater Manchester Combined Authority, to IISc Bangalore to explore collaboration opportunities.

Continuing engagement of BeST cluster with BCIC Karnataka



The BeST Cluster team (Mr. Ravi Tenny, Head Operations) moderated a panel discussion on 'Innovation for a resilient India', in a StartUp Award event organized by Bangalore Chamber of Industry and Commerce (BCIC) Karnataka on 18th March. The attendees included captains of the Industry, Heads of Venture Capital organisations such as TiE Bangalore and Dexter Capital Advisors and senior bureaucrats from the Govt of Karnataka. BCIC remarked about the BeST Cluster as "the catalyst for scientific innovation and industry collaboration".

ACADEMICIAN SAYS...

I feel "outcome-driven, collaborative, and cross-sectoral" would be the core strength of BeST in being impactful going forward for India and creating implementable solutions, by bringing Innovation, businesses, and stakeholders together. Urban life is an important thematic area chosen by BeST that particularly excites me.

*Prof. Ashish Verma
Professor & Convener,
Sustainable Transportation Lab
IISc Bangalore*



BeST Cluster is forming a consortium to set up a Green Hydrogen Valley in Karnataka



Karnataka is the home of renewable energy production in India and the first state in India to develop a green hydrogen policy. Based on a strong existing foundation built by local policymakers, industrialists, innovators, and researchers, the Bengaluru Science & Technology (BeST) cluster is forming a consortium of stakeholders for a hydrogen valley in Karnataka.

In line with the vision of the Government of India on becoming energy independent by 2047 and achieving Net Zero by 2070, and recently launched National Green Hydrogen Mission, DST in collaboration with Mission Innovation has announced a “Call for proposals on Hydrogen Valley Platform in India”. Over the past month, BeST cluster has been conducting several discussions and brainstorming sessions with key stakeholders in the entire value chain of hydrogen (production, storage, transportation and utilization) across Bangalore,

involving academicians, researchers, local government bodies, OEMs and EPCs, start-ups and companies, industry associations, potential off-takers, knowledge partners and international players.

What do you think is the biggest challenge to setting up a hydrogen valley?

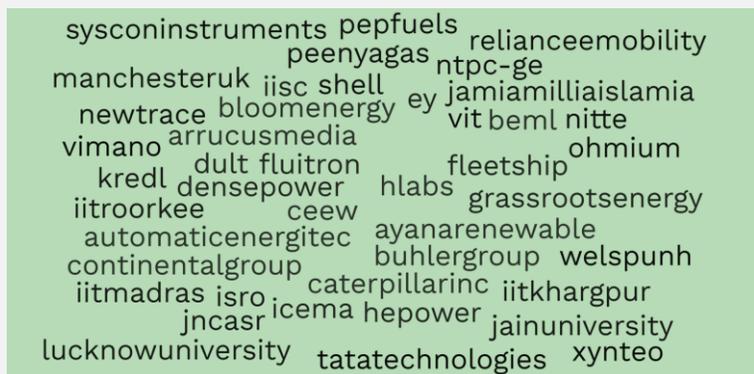


A poll response from one of the brainstorming sessions

BeST cluster is organizing a multi-stakeholder consortium meeting and workshop on April 14th 2023 in IISc Bangalore.

The efforts are aimed to:

- Bring various stakeholders of the entire hydrogen value chain together.
- Communicate the mission, schemes and policies of the Government of India and identify ways to set up a Hydrogen ecosystem.
- Connect players with complementary areas of expertise in the Hydrogen space to promote development and scaling.
- Provide a platform for the stakeholders to exchange their views on creating a Hydrogen valley.
- Identify interested stakeholders and build consensus among them to initiate the creation of a Hydrogen valley.



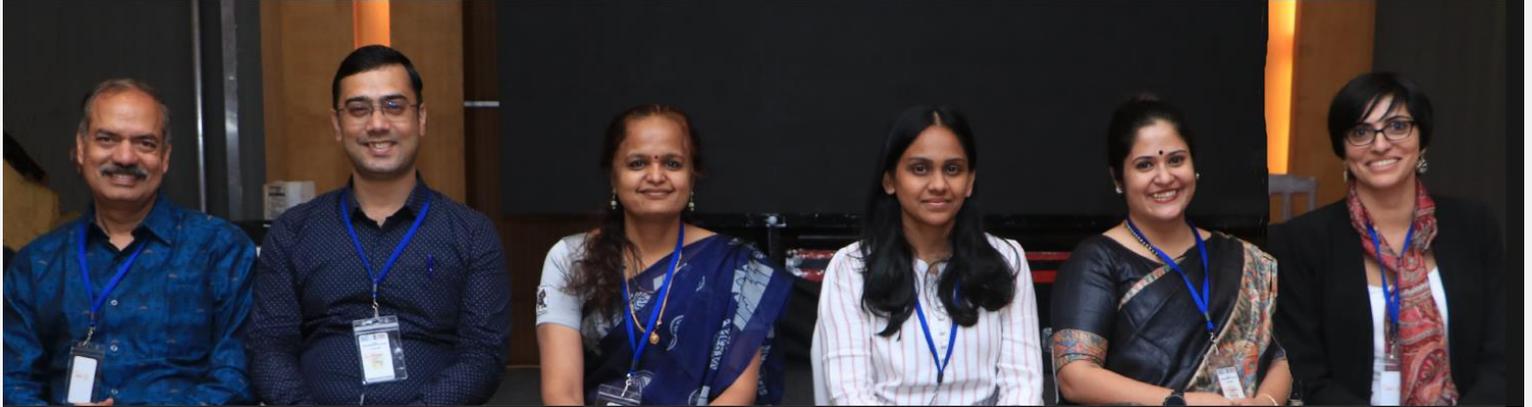
Stakeholders expressed interest so far

OUR TEAM IS GROWING

Mrs. Vani A as Project Associate: Vani is a highly skilled professional with expertise in project management; is an expert MOODLE (a learning management system) trainer and had been an IT system administrator. With a proven track record of successful project implementation, Vani has exceptional abilities in handling bureaucracy, generating reports, and managing multiple stakeholders. Vani's additional skills include hands-on experience in various technical tools such as Drupal, JOOMLA, Photoshop, and PHP. She holds an MBA degree in Operations Research Management, PG Diploma in Education Technology and a Bachelor of Engineering degree in Textile Technology, demonstrating her diverse educational background and strong analytical skills. Vani's ability to manage projects from start to finish, coupled with her effective communication skills, and server and website management makes her a valuable asset to any team. Her expertise in MOODLE training has helped numerous organizations develop and implement effective learning management systems.



The BeST Cluster's Functional Team



From left to right, Mr. Ravi Tennety, Head Operations, Dr. Mrinal Sarma, Project Manager, Mrs. Vani A, Project Associate, Dr. Nidhya N Joghee, Project Manager, Dr. Sreeparna Samanta, Project Manager, Dr. Neha Pankow, Head Strategy and Business Development

Bengaluru Science and Technology (BeST) Cluster

Indian Institute of Science Campus

Bengaluru, India – 560 012

Email: office@bestkc.in

www.bestkc.in