

Varanasi Announces Winners of the Sustainable Cities Challenge to Scale Crowd Management and Sustainable Mobility Solutions in its historical core – Kashi

VARANASI, INDIA, 19 July: Varanasi is set to scale a portfolio of innovative mobility and crowd-management solutions designed to improve pedestrian movement, accessibility, and resident/ visitor experience across its historic core, Kashi, following the announcement of winners of the Sustainable Cities Challenge (SCC) Varanasi – an initiative led by Varanasi Nagar Nigam in collaboration with the Toyota Mobility Foundation (TMF), Challenge Works, and WRI India.

CityFlow by CITYDATA.AI and Nippon Koei and Janjatra by The Urbanizer were selected as winners and will receive financial and advisory support to scale their solutions across the old city. Behtarway by VOGIC AI and Nayichaal by Prameya Consulting were recognized as “Honorable Mentions” for their contributions towards more inclusive and efficient mobility in Varanasi.

The event was graced by **Shri Arvind Kumar Sharma, Honourable Minister, Ministry of Urban Development, Government of Uttar Pradesh**. He was hopeful and enthusiastic to scale the innovative solutions from the Challenge, and looked forward to their impact in Varanasi.

Designed to address the complex movement of millions of pilgrims, tourists, and residents through Varanasi's dense heritage precincts, the selected solutions combine advanced technology and people-centered designs to enhance navigation, improve safety, and support proactive crowd management.

CityFlow, developed by CITYDATA.AI in partnership with Nippon Koei, uses big data, computer vision, and generative AI to analyze and manage crowd movement in real time, helping authorities identify and respond to congestion hotspots. Janjatra, developed by The Urbanizer, combines color-coded wayfinding, dynamic digital signage, and tactical urban interventions to improve navigation and ease pressure on heavily used pedestrian routes. The “Honorable Mentions” complement these efforts through targeted mobility interventions. Behtarway, developed by VOGIC AI, is an AI-powered hyperlocal pedestrian navigation platform, while Nayichaal, developed by Prameya Consulting, focuses on improving accessibility and navigability for vulnerable populations in the old city of Kashi.

The selected teams emerged from a two-year challenge process that brought together innovators, city authorities, mobility experts, and local stakeholders to develop practical and scalable approaches to crowd and pedestrian management. As implementation moves forward, the winning and honorable mention solutions are expected to support a

safer, more accessible, and more seamless experience for residents and visitors navigating Varanasi's historic urban core.

Himanshu Nagpal, IAS, Municipal Commissioner, Varanasi Nagar Nigam and CEO, Varanasi Smart City Limited, said, "Managing the movement of millions of pilgrims, tourists, and residents through a dense and historic urban fabric requires new approaches that balance heritage preservation with modern city management. The solutions emerging from the Toyota Mobility Foundation's Sustainable Cities Challenge demonstrate how data-driven technologies, wayfinding innovations, and human-centered design can help cities anticipate and respond to crowding challenges more effectively. As Varanasi continues to evolve as a global cultural and spiritual destination, these interventions will support safer, more efficient, and more accessible movement across the city's historic core."

Prasanna Ganesh, Executive Program Director, Toyota Mobility Foundation, said, "The innovators recognized today have successfully transformed the challenges of a historic city into opportunities for innovation. Their solutions have progressed beyond pilot concepts and now help city authorities manage overcrowding, while providing residents and visitors with a smoother, safer, and more convenient mobility experience in Varanasi. At Toyota Mobility Foundation, we focus on practical and scalable innovations that combine technology, sustainability, and collaboration. Our goal is to help create mobility ecosystems that improve quality of life and ensure Mobility for All."

Kathy Nothstine, Director of Cities and Societies at Challenge Works, said, "By implementing cutting-edge innovations in an immensely historic and spiritual setting, Varanasi is demonstrating its leadership in pairing future-facing technology with human-centered urban design to the world. We look forward to seeing how Varanasi's winners will continue to implement solutions that will help people move around the city safely and enjoyably."

Avinash Dubedi, Head, Sustainable Cities and Transport, WRII, said, "Varanasi is showing how historic cities can use innovation to address today's mobility challenges. The selected solutions combine real-time data, digital technologies, urban design, behavioral insights, and accessibility-focused planning to manage pedestrian movement more effectively. Beyond easing crowd congestion, they offer a framework for creating people-centric public spaces that improve safety, accessibility, and visitor experience while preserving the city's unique character. As these solutions scale, Varanasi can become a model for heritage/pilgrimage cities worldwide seeking to integrate mobility management with inclusive urban design."

Supporting the challenge through on-ground engagement and amplification efforts of its various initiatives in India, **Toyota Kirloskar Motor** has worked alongside the Toyota Mobility Foundation to advance implementation in India.

Vikram Gulati, Country Head and Executive Vice President – Corporate Affairs, Toyota Kirloskar Motor, said, "We are truly inspired by the commitment, creativity and ingenuity

demonstrated by the selected teams in developing innovative solutions that contribute to the sustainable management of India's historic marvels. Their ideas present exciting opportunities to enhance crowd management in Varanasi while setting new benchmarks in urban mobility and public safety. We commend their efforts in harnessing innovation to address real-world challenges and create a meaningful impact on society."

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Notes to Editors

All winning teams and honourable mentions are available for interviews. To schedule an interview, please contact the media representatives listed below.

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About Toyota Mobility Foundation

Toyota Mobility Foundation (Chair Akio Toyoda) was established in August 2014 by Toyota Motor Corporation (Toyota) to support the development of a more mobile society in which everyone can move freely. The Foundation underscores Toyota's ongoing commitment to continuous improvement and respect for people. It utilizes Toyota's expertise and technologies to support strong mobility systems while eliminating disparities in mobility. TMF works in partnership with universities, governments, non-profits, research institutions and other organizations, creating programs that are aligned with the UN Sustainable Development Goals (SDGs) to address mobility issues around the world. "TMF aims to create a truly mobile society that will help people live better lives no matter where they are," said Chair Akio Toyoda.

About World Resources Institute

World Resources Institute (WRI) works to improve people's lives, protect and restore nature and stabilize the climate. As an independent research organization, we leverage our data, expertise and global reach to influence policy and catalyze change across systems like food, land and water; energy; and cities. Our 2,000+ staff work on the ground in more than a dozen focus countries and with partners in over 50 nations. Learn more: WRI.org and on Twitter @WorldResources.

About Challenge Works

Challenge Works is a global leader in the design and delivery of challenge prizes to spark innovation in science, technology and society. It is part of Nesta, the research and innovation foundation. Challenge Works has run over 100 challenge prizes, awarding over £370m on behalf of public, private and philanthropic funders around the world. Find out more at <https://challengeworks.org/>