TECHNOLOGIES FOR A BETTER TOMORROW

A **CSR Bulletin** by **IIT Madras**

Dear ,

World's Most Detailed 3D Atlas of the Human Brainstem

Understanding the human brain remains one of the biggest challenges in modern medicine. The absence of detailed brain maps has limited progress in diagnosing and treating neurological disorders.

To bridge this gap, **IIT Madras' Sudha Gopalakrishnan Brain Centre (SGBC)** has developed **ANCHOR (Atlas of Neurochemical Characterization of the human brainstem with 3D Reconstruction)**, the **world's most detailed three-dimensional atlas** of the human brainstem at cellular resolution. Combining engineering, neuroscience, and advanced imaging, ANCHOR enables researchers to study the brain with unprecedented precision, from entire structures down to individual cells.

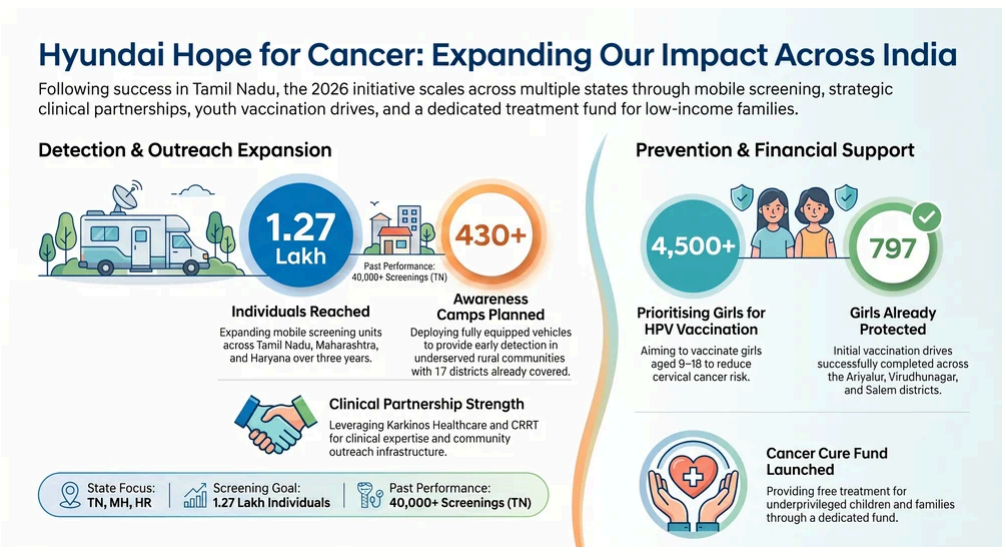
As part of SGBC's larger vision to create an open-source repository of human brain data, the initiative is expected to accelerate neuroscience research, enable better diagnostics and therapies, and strengthen India's leadership in global brain research.

Decoding the Human Brain

Making Early Cancer Detection More Accessible

Cancer continues to claim thousands of lives each year, with delayed diagnosis and limited access to screening remaining major challenges, particularly in underserved communities.

In partnership with Hyundai Motor India Foundation, IIT Madras is helping bridge these gaps through Hyundai Hope for Cancer—an integrated initiative spanning awareness, early detection, prevention, and treatment support.



The programme has already conducted over **40,000 cancer screenings across 17 districts in Tamil Nadu** and now **aims to reach 1.27 lakh people through 430+ screening and awareness camps**, while expanding **HPV vaccination and financial support** for vulnerable families.

Hope for Cancer

CSR PROJECT SHOWCASE

Turning Mobility Challenges into AI-Powered Solutions

With rising CO_2 emissions from road transport and increasing concerns around road safety, India is reimagining the future of sustainable mobility. To address this, **Bosch India Foundation and IIT Madras launched MInTathon**, a collaborative initiative fostering AI-driven solutions for inclusive urban mobility.

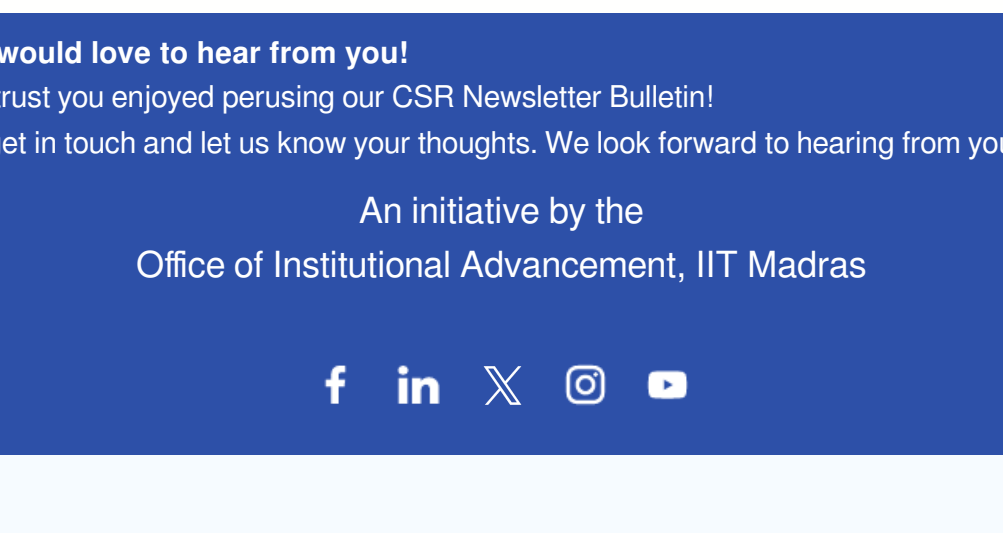
The project aims to identify innovative ideas, providing critical mentorship and technical support while facilitating government and industry partnerships for real-world pilot implementations.

The program utilized a rigorous five-stage selection funnel, starting with **270+ proposal. This pool was narrowed to 25 shortlisted teams, 11 in Jury Round 1, and 9 in Jury Round 2, resulting in 6 Selected Prototype teams**. These winning teams—**Golden Hour, Hack Elites, Alphians, Genesis, Mobility Mavericks, and Hmaps-** are now advancing through full-scale development.

By transforming concepts into deployable technologies, they are building a scalable pipeline to reduce environmental impact and enhance road safety across India.

CSR SPOTLIGHT

Waste to Livelihood



India generates 9.3 million tonnes of plastic waste and nearly 8 million tonnes of floral waste every year, with much of it ending up in landfills and water bodies. At the same time, rural communities continue to face limited access to technology-based skills and livelihood opportunities.

The **"Waste to Use"** initiative by IIT Madras tackles both challenges through a single, community-led solution. By **converting plastic bottles and floral waste into 3D printing materials**, the initiative establishes rural innovation hubs where students and youth are trained in additive manufacturing and create products for local markets.

Beyond reducing waste, the initiative aims to build a circular economy that creates skilled employment, empowers rural communities, and transforms waste into lasting economic value.

Be Part of the Solution

PARTNER SPEAK

"Our association with IIT Madras has been extremely valuable. Supporting the Research Lab on Hydrogen with Solar Integration has given us exposure to the institute's outstanding work in hydrogen, battery technologies, and sustainable materials. We look forward to strengthening this collaboration further, co-developing research that sets industry-wide standards and drives meaningful, sustainable impact."

Ms. Chetna Sharma
Vice President and Head,
Indus Towers Limited

We would love to hear from you!

We trust you enjoyed perusing our CSR Newsletter Bulletin!

Do get in touch and let us know your thoughts. We look forward to hearing from you!

An initiative by the

Office of Institutional Advancement, IIT Madras

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