

Godrej Construction partners with IIT-M based start-up Tvasta to pioneer indigenous 3D Construction Printing in India

~ Godrej Construction & Tvasta have partnered to offer a pioneering, indigenous 3D Construction Printing Technology Platform supporting the Construction & Real Estate Sector.

~ Through this partnership, the companies have jointly developed, for the first time, a very sustainable concrete mix comprising of approximately 30% of Recycled Concrete Aggregates.

Mumbai, 17th June 2022: Godrej & Boyce, the flagship company of the Godrej Group, announced that its business, Godrej Construction has partnered with Tvasta Manufacturing Solutions, an indigenous start-up founded by IIT-Madras alumni, to introduce and commercially deploy an innovative **3D Construction Printing (3DCP) Technology** in India. Inspired by the nation's call for an 'Atmanirbhar Bharat', Godrej Construction and Tvasta aim to pioneer this technology for the development of various sustainable infrastructure projects, housing solutions, disaster relief structures, national defence related applications and various other public amenities in India, and globally.

Tvasta, a deep-technology start-up, based out of Chennai and Bengaluru, has developed this indigenous 3DCP technology platform, which leverages automation and robotics for a faster, and more sustainable construction process, compared to conventional methods of construction. The new platform also offers the option of adopting modular off-site construction techniques. These factors can help reduce the overall carbon footprint for construction projects, and even improve safety by reducing the possibility of injuries to onsite workmen.



Proof Of Concept using 3DCP technology to create a sustainable and inclusive bus shelter

Addressing the growing needs of the Real Estate and Infrastructure sectors of India, Godrej Construction and Tvasta have collaborated to develop a Proof-of-Concept (*image above*). The Bus Shelter was 3D Printed within a span of 32 hrs and assembled on site within 8 hrs. To promote adoption of Circular Economy principles in the Construction industry, Godrej Construction, along with Tvasta have developed for the first time a very sustainable concrete mix design comprising of approximately 30% of Recycled Concrete Aggregates (RCA), sourced from concrete waste debris, recycled at the Godrej Recycled Concrete Plant, at Vikhroli, Mumbai. The unique structure has a distinct physical design – a curvilinear geometry to showcase the aesthetic versatility, structural advantages and excellent potential that this technology has to offer to the Construction Industry. It is designed to be completely energy efficient with independent solar panels for

lighting the bus shelter and its commercial signages at night. The idea germinated during Godrej & Boyce's 'Sprint' Initiative, an organisation wide intrapreneurial innovation program.

Commenting on the introduction of 3D Construction Printing Technology Platform in India, **Anup Mathew, Sr. Vice President and Business Head, Godrej Construction** said, *"We are glad to collaborate with Tvasta, an indigenously developed 3D Construction Printing technology start-up in India. Godrej Construction is committed towards providing innovative and sustainably designed customer centric solutions for the built environment. Having jointly developed this pilot project, we believe that there is a great opportunity for us to leverage and scale-up the use of this new technology for the benefit of our stakeholders.*

To promote a Circular Economy, we have also jointly developed an innovative concrete mix-design that uses a significant proportion of Recycled Concrete Aggregates (RCA) as a part of the raw material used in the 3DCP Technology. This newly developed 3DCP concrete mix offers great promise for developing and using construction materials with a lower embodied carbon, which can help us design and develop innovative solutions for a more sustainable built environment.

Our endeavor will now be to jointly engage with key industry stakeholders for exploring appropriate opportunities for the deployment of this 3DCP Technology, which even globally is still in a relatively nascent and evolving stage of development." Currently, Godrej Construction is an INR 1000cr business of Godrej & Boyce, is looking to scale up its offerings in the construction sector.

Vidyashankar C, Co-Founder and COO, Tvasta added, *"We're happy to partner with a pioneer and thought leader in the building materials sector such as Godrej Construction. We are optimistic that this synergy will aid in the rapid scale-up of our technology platform. In turn, this will undoubtedly, extend the range of construction solutions that Tvasta offers for the many distinct use-cases in the country."*

About Godrej & Boyce Mfg. Co. Ltd.

Godrej & Boyce ('G&B'), a Godrej Group company, was founded in 1897, and has contributed to India's journey of self-reliance through manufacturing. G&B patented the world's first springless lock and since then, has diversified into 14 businesses across various sectors from Security, Furniture, Aerospace to Infrastructure and Defence. Godrej is one of India's most trusted brands serving over 1.1bn customers worldwide daily. For more information, visit www.godrej.com.