



## Sustainable Chemistry Changemakers: Paving the Way Toward a More Sustainable Future

### REVY Environmental Solutions: From ISC3 Start-up of the Month to Pioneer in Resource Recovery from Waste

For its innovative contribution to sustainable chemistry, the Indian start-up REVY Environmental Solutions was recognized as the Start-up of the Month by the [International Sustainable Chemistry Collaborative Centre \(ISC3\)](#) in October 2020. REVY develops designer biocultures – combinations of bacteria and microorganisms in the form of anaerobic granular sludge and formulations to enhance biomass growth (BGEF) – to improve the recovery of valuable materials from organic waste and wastewater, while reducing environmental pollution. Founded by Dr. Vanita Prasad, the company supports biogas and wastewater treatment businesses in significantly reducing operating costs and treatment times – while also lowering emissions and recovering valuable energy. REVY has since grown into a technology-driven company with national and global recognition.

#### Driving Forces Behind REVY's Innovation

Vanita Prasad firmly believes that environmental protection and economic viability must go hand in hand for a successful transition to sustainable chemistry. REVY's microbial and bacterial cultures for the treatment and enhancement of biomass from biogenic waste and wastewater are a successful example of this – being equally valuable from both an economic and ecological perspective. These formulations shorten treatment times, reduce energy consumption, and lower operating costs. These innovations have opened the doors to today's customers and partners. More than five years after being named ISC3 Start-up of the Month, we spoke with REVY's founder about progress, milestones, and the impact of ISC3's Start-up Service.

#### What does Sustainable Chemistry mean to you?

To us, Sustainable Chemistry means using science to develop processes and products that reduce environmental damage, conserve resources, and create value from waste. The ISC3 Key Characteristics of Sustainable Chemistry were instrumental in bringing our ideas to life—not only by broadening our perspective. They helped us assess our work beyond the technological level, encouraging us to consider aspects such as social impact, inclusivity, and long-term resilience. We actively applied these principles to optimize our processes—whether in product design, customer engagement, or partnerships.

#### Where are you now compared to when you were chosen as Start-up of the Month?

Back in 2020, we were a young company with a small team and a promising idea still in the testing phase.

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Our focus at the time was mainly on proving that our microbial solutions could indeed transform waste into value. We were just beginning our journey in the biogas and wastewater treatment sector. Today, our team includes eight employees who contribute their expertise from various fields to the development of our products and the company. The value of REVY has more than tripled, considering our expanded product portfolio, the number of internationally filed and granted patents, and our revenue growth. Our income now comes from a balanced mix of product sales and services – from supplying our products to commissioning and maintaining plants, as well as conducting studies, all monitored via our REVY app R-EMAPP. The app-based digital platform continuously monitors the key operational and microbial health parameters of Biogas/CBG plants, STPs, and ETPs, enabling early detection of process imbalances and guiding timely corrective actions for stable and efficient performance.

#### **How has ISC3's support benefited REVY?**

Support from the ISC3 Global Start-up Service played a crucial role in our growth. Being selected as Start-up of the Month, along with the associated publicity, gave us international visibility and credibility. Equally valuable was the access to networks, mentors, and experts who helped us refine our business model and align our solutions with global sustainability principles. Participating in events like the Investor Forum provided opportunities to present our innovations on global platforms and connect with potential investors and partners. Engaging with ISC3's core principles also helped us sharpen our strategic focus and goals.

#### **What have been the highlights of the projects?**

We have developed our innovation up to TRL7 on the Technology Readiness Level index – meaning we have successfully deployed prototypes at both pilot and commercial scales. What began as a lab experiment is now established in real-world practice.

Furthermore, REVY has been recognized by the World Biogas Association as the best biogas support and operations company and has been accepted into prestigious platforms such as the Green Tech Accelerator and the India-Australia Accelerator. Recently, we were awarded second place at the L&T Future Tech Aqua Hackathon 2025. All these recognitions have opened doors to new collaborations with major companies such as Thermax, Reliance Bioenergy, and HPCL, as well as government and international networks.

#### **What does this mean for REVY's future?**

We have grown from a small, lab-focused start-up into a technology company with national and global recognition. What began as a lab experiment now has a tangible impact in the field: our products – whether anaerobic and aerobic biomass cultures, granulated biomass, or growth-promoting formulations – enable more efficient, stable, and profitable operations for plants, while saving energy. This means our products and services are market-ready – and we are very proud of that. But even though we've achieved a lot, we still see ourselves at the beginning of a much larger mission: to redefine how waste is managed and how resources are recovered – sustainably and at scale.



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#### **About ISC3**

The [International Sustainable Chemistry Collaborative Centre](https://www.isc3.org) promotes Sustainable Chemistry for a sustainable world. ISC3 supports the chemical industry and chemical-related sectors in their transformation process through sustainable, innovative approaches from Sustainable Chemistry. The goal is a circular economy that integrates multiple aspects of sustainability throughout the entire product life cycle and encourages a shift in stakeholder behaviour. To advance the dialogue between different sectors and actors worldwide, including Europe and other regions as well as emerging and developing countries, ISC3 follows a multi-stakeholder approach with the networking of policymakers, public and private sectors, education, science and society. It contributes to international chemicals policy, develops professional and academic training programs, advises companies, and promotes start-ups and research. Founded in 2017 by the Federal Ministry for the Environment, Climate Protection, Nature Conservation und Nuclear Safety (BMUKN) and the Federal Environment Agency (UBA), the centre is implemented by the German Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ; English: Society for International Cooperation) and supported by the Society for Chemical Engineering and Biotechnology (DECHEMA e.V.) as ISC3 Innovation Hub. [www.isc3.org](https://www.isc3.org)