

INDIA'S LEADING COMPANIES IN MANAGING WASTE



CII COMPENDIUM 2025

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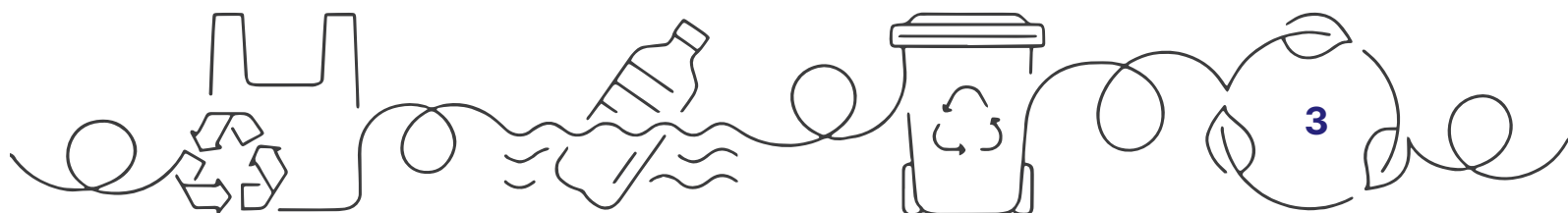
India's Leading companies in Managing Waste



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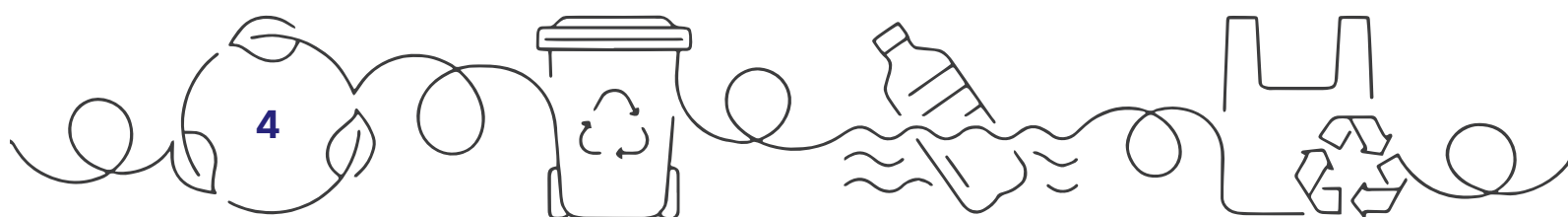
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MESSAGE



India, as one of the world's largest and fastest-growing economies, has been making remarkable strides in sustainable development, particularly in advancing the circular economy. By integrating innovative waste management practices, promoting recycling and resource efficiency, and encouraging green technologies, India is transforming the way resources are produced, consumed, and reused.

The Confederation of Indian Industry (CII), dedicated to advancing industrial sustainability, is leading a range of initiatives aimed at enhancing enterprise waste management and fostering the adoption of circular economy practices. These initiatives are grouped under a transformative initiative called the 'Waste to Worth Movement', which seeks to convert waste materials into valuable resources and promote circular economy principles across the nation.

To recognise and encourage excellence, the CII instituted the 3R Awards in 2020, celebrating best practices in 'Reduce, Reuse, and Recycle' among industries, startups, academic institutions, and other key stakeholders, and later expanded to the 4R Awards in 2024 with the inclusion of 'Repair'. The Award aims to recognise and reward stakeholders who demonstrate excellence in waste management and resource efficiency. This initiative seeks to inspire innovation and encourage widespread adoption of sustainable waste practices across sectors.

Across industries, the adoption of 4R principles (Reduce, Reuse, Recycle, and Repair) is helping minimize waste and landfill dependence while maximizing resource efficiency and circularity.

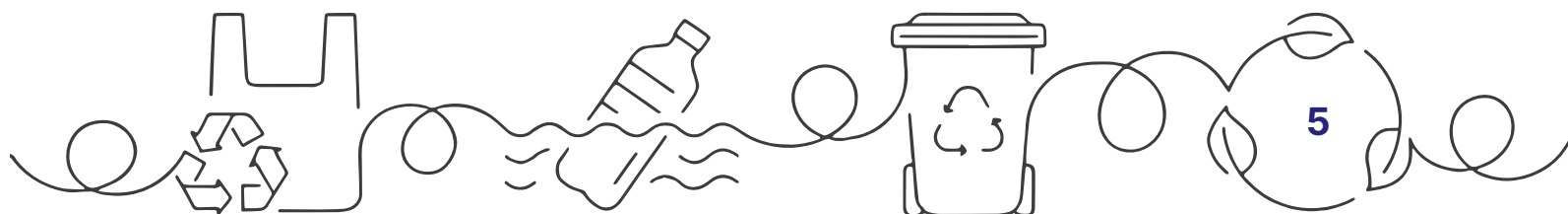
The recently launched CII Compendium of Top 25 Leading Industries along with 22 other notable success stories from startups, academia, individuals, research institutes, and laboratories, stands as a testament to India's growing leadership in this space. The compendium serves as an industry benchmark, showcasing the collective efforts of diverse stakeholders driving the nation toward a Net Zero Waste to Landfill.

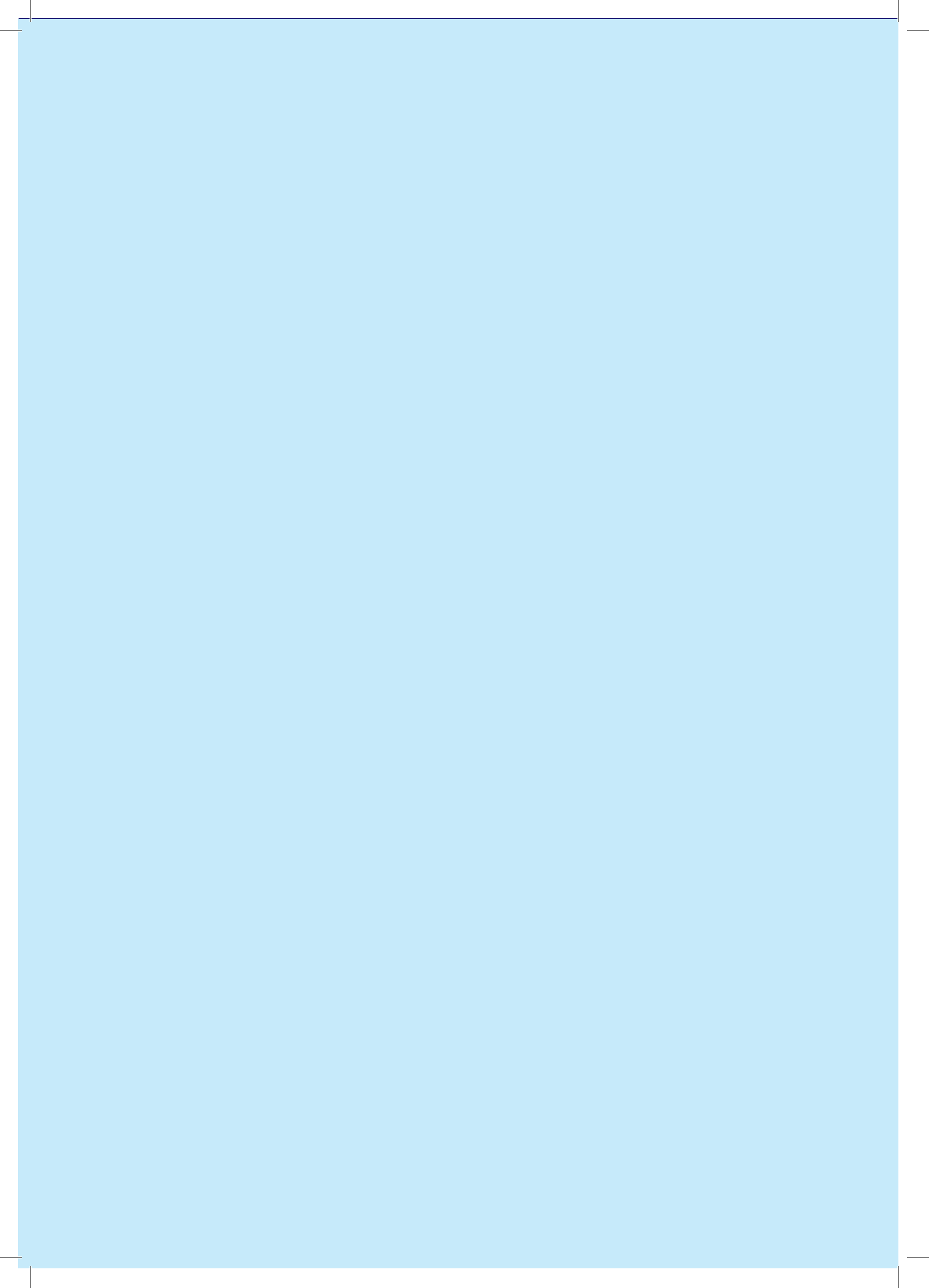
I extend my heartfelt congratulations to all contributors - academia, individuals, research institutions, startups, and Industry members for their valuable participation in this compendium. Your continued dedication to sustainable waste management is instrumental in advancing India's transition toward a circular economy, ensuring a cleaner, healthier environment for generations to come.

Chandrajit Banerjee

Director General

Confederation of Indian Industry (CII)





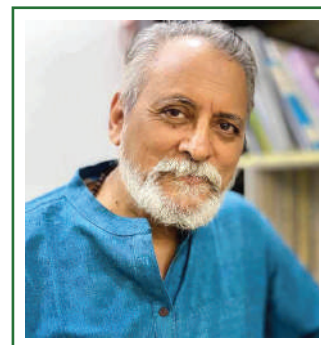


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FOREWORD



Protecting our planet is not merely a responsibility but an absolute necessity for our survival. As the world faces the escalating challenges of climate change, biodiversity loss, and pollution, it is increasingly evident that human well-being is deeply interconnected with the health of our environment. Every conscious action, be it reducing waste, conserving resources, or promoting sustainable practices—contributes meaningfully to preserving the ecosystems that sustain life. By prioritizing environmental protection today, we secure a healthier, more resilient world for generations to come.

Established in 2020, the CII 3R Awards were instituted to recognize and honor industries, startups, academic institutions, and research organizations for their exemplary contributions to waste management. These entities are redefining standards in areas such as Minimizing Waste—through innovative, low-waste product designs; Municipal Solid Waste Management—via efficient urban waste handling systems; and Plastic and E-Waste Management—through effective EPR implementation. By successfully integrating the principles of Reduce, Reuse, Recycle, and Repair (4R), they are leading the transformation towards a circular economy.

The CII 4R Awards celebrate these achievements and inspire others to adopt sustainable practices, fostering collective progress toward a greener future. Entries from diverse sectors—including industries (Large/MSME), startups, academia, and research institutions—were rigorously evaluated by expert appraisal committees and an eminent jury panel.

This compendium highlights 25 outstanding waste management practices and 22 success stories from across the country, offering valuable insights for organizations seeking to replicate and scale such initiatives.

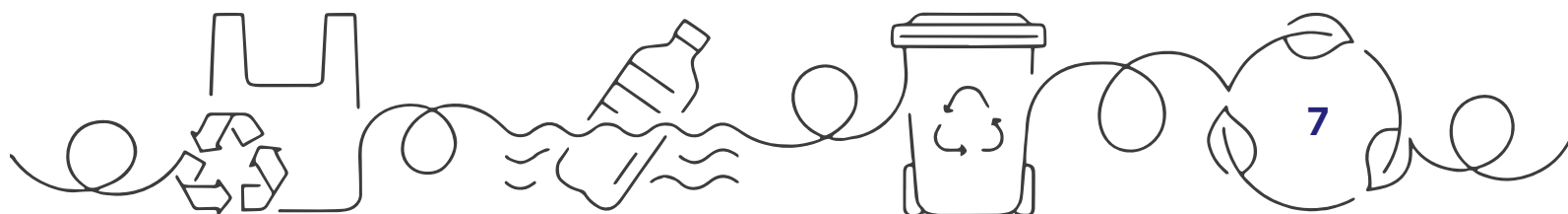
The success of these endeavors rests on strong collaboration between the public, private, and civil society sectors. Through these partnerships, we can accelerate innovation, strengthen the circular economy, and contribute significantly to India's goal of achieving net-zero emissions by 2070.

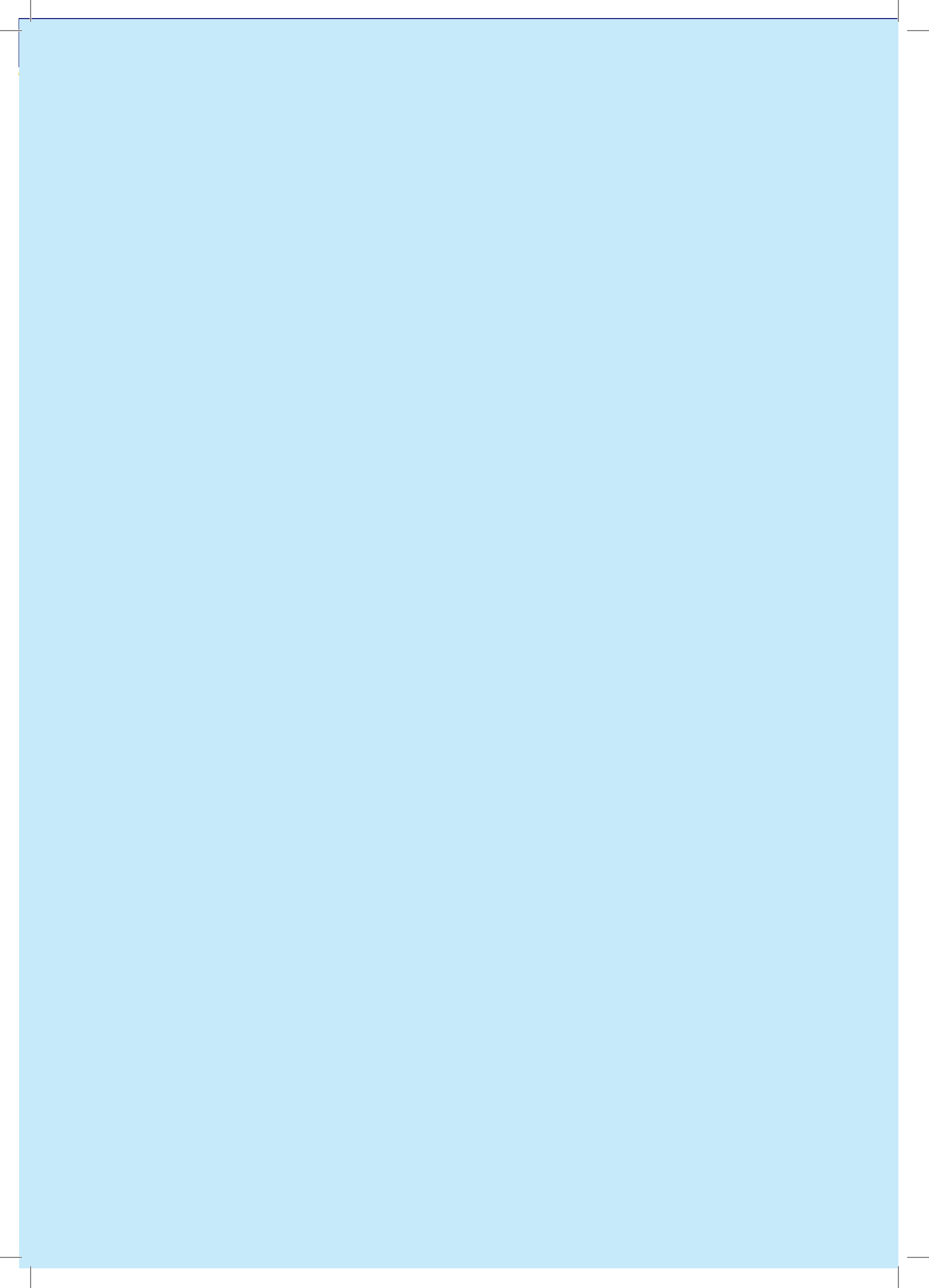
I extend my sincere gratitude to the esteemed jury members and experts for their guidance and support, and to all participating organizations for their unwavering commitment to environmental sustainability.

Prof Anil K Gupta,

Chairman CII 4R awards 2025

Indian Scholar- Innovation and Padma Shri Awardee







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ABOUT CII 4R AWARDS 2025

Whole world is adopting newer, innovative, cost-effective approaches and solutions to address the growing menace of Waste. It is important for a country like India, where the population is very large and waste management practices are not yet fully adhered adopts innovative and scientific management of waste that is socially, environmentally and commercially sustainable.

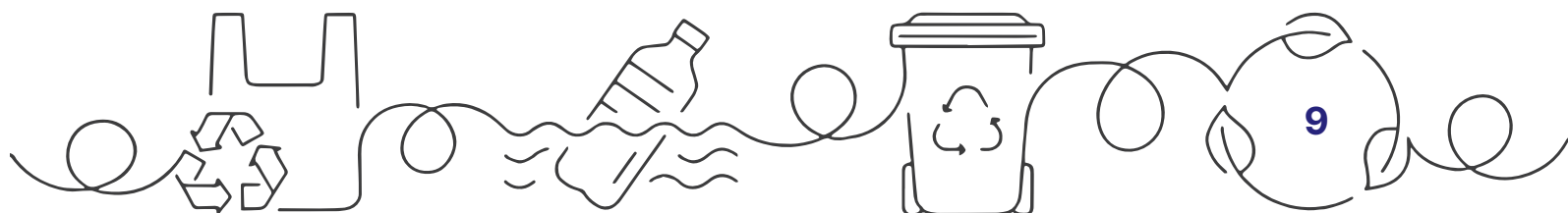
Many innovations and solutions are available and to some extent practised in many parts of the country by industries, start-ups and academia, research institute or labs to manage Municipal Solid Waste (MSW). However, large scale implementation of solutions is yet to be seen.

Similarly, Indian industry have adopted and practised processes and solutions to encourage Reducing, Reducing, Recycling and Recovering of plastic & packaging waste, e-waste and waste generated in industrial activities or waste generated from their own activities. Most of the industry follows stipulated guidelines of waste management through sanitary landfills and other processes. However, there are industry primarily MSMEs are yet to fully adapt such practices.

Industry is also conscious about the fact of waste generated by the consumers/users while consuming/using their products. Industry is in constant process of designing their products those will increasingly use non-polluting materials and will generate minimum waste at the users end. However, Industry's efforts in designing their products including its packaging are still not adequate.

It is important to capture and disseminate the best practices for others to follow and at the same time to recognize and reward the industry, start-ups, academia, research institutes or labs who have setup benchmarks in (1) Excellence in Managing MSW by private firms; (2) Excellence in Innovative Solutions by Start-ups for Sustainable Waste; (3) Excellence in Best Practices in Managing Plastics & Packaging Waste or E-Waste (under EPR); (4) Excellence in Zero / minimum Waste Generating Products; (5) Excellence in 4R by Industry (Manage Own Waste); (6) Excellence in Innovative Solutions for waste management (Academic & Research Institutes / Labs)

With this background, CII under its waste to worth initiative, this year has announced the 6th edition of 4R (Reduce-Reuse-Recycle-Recover) Awards to recognize and reward best practices of industry, start-ups academia, research institute or labs in order to set a benchmark of excellence in waste management for large number of industries to thrive to adopt these best practices.



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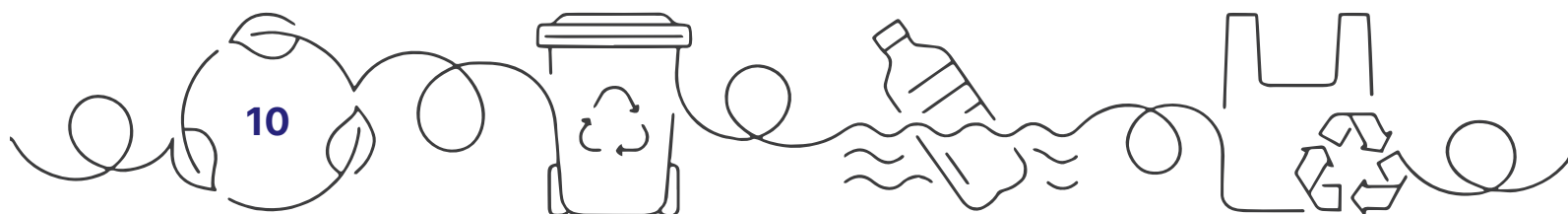


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CII 4R AWARDS 2025 CATEGORIES

All the large industries, MSMEs, start-ups, academia, research institutes or labs across the sectors can apply for categories and sub-categories below:

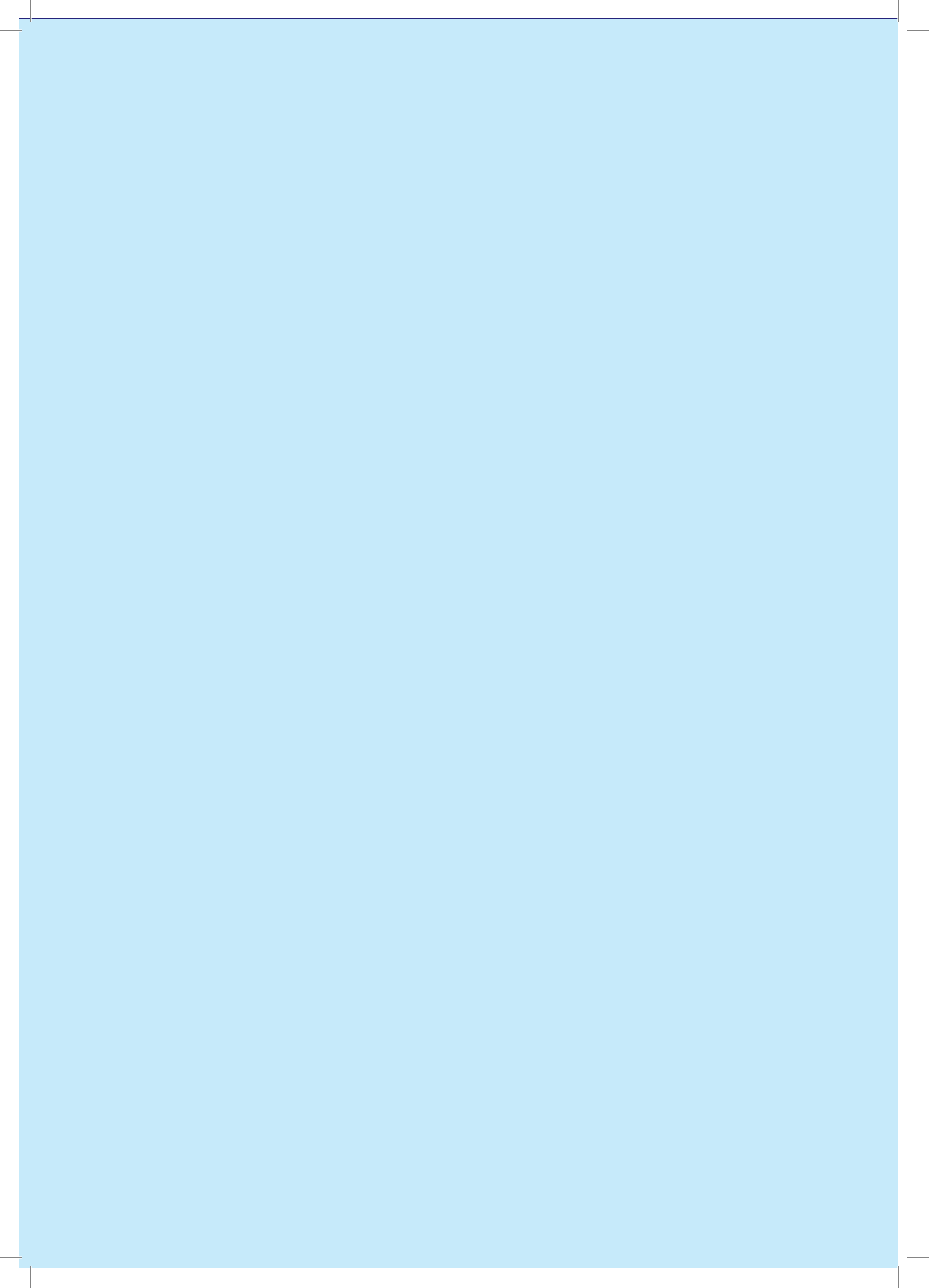
1. Excellence in Managing MSW by private firms
2. Excellence in Innovative Solutions by Start-ups for Sustainable Waste
3. Excellence in Best Practices in Managing Plastics & Packaging Waste or E-Waste (under EPR)
4. Excellence in Zero / minimum Waste Generating Products
5. Excellence in 4R by Industry (Manage Own Waste)
6. Excellence in Innovative Solutions for waste management (Academic & Research Institutes / Labs)





Top 25

Leading Industries
Minimizing and
Managing Waste across
the country



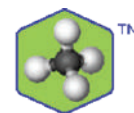


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India's Leading companies in Managing Waste



1. 2 Degrees Clicon Pvt Ltd



2 Degrees
Clicon Pvt. Ltd.

About Company

2 Degrees Clicon Pvt Ltd (2DC) is a circular energy company transforming end-of-life plastics into sustainable industrial fuels. Founded with the mission to keep global warming below 2°C, 2DC pioneers alternate diesel fuels (ADF & PPF) that replace fossil fuels in industries, driving scalable climate impact.

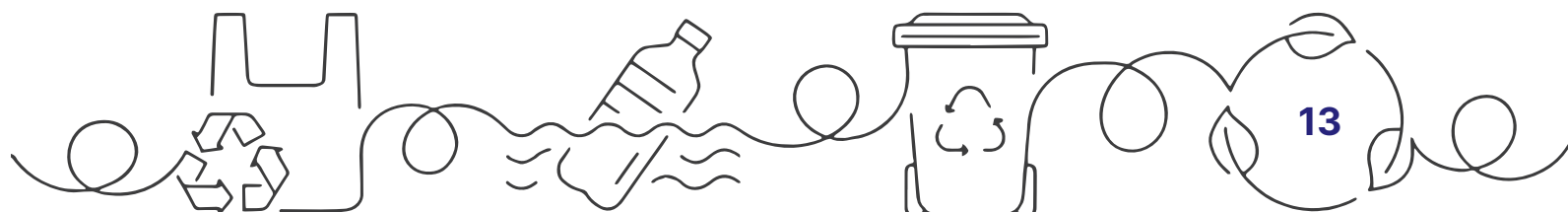


About the Products

ADF (Alternate Diesel Fuel) and PPF (Petro Polymer Fuel) are high-energy, drop-in replacements for conventional diesel, produced from non-recyclable plastic and polymer waste. These fuels reduce fossil fuel dependency, industrial emissions, and landfill load – while being fully compatible with existing furnaces and boilers.

R & D Structure and Collaborations and Partnerships

2DC's R&D structure is built around three verticals – Feedstock Optimization, Fuel Quality Enhancement, and Circular Process Innovation. Collaborating with CSIR-IIP and IICT, our team focuses on catalyst design, emission control, and fuel efficiency. Through a strategic partnership with Reliance Industries, we're converting ADF back into plastics, completing the circular loop. Continuous trials with industrial clients drive on-ground validation, scalability, and global-standard performance.



Best Practices

Collection & Segregation: 2DC partners with waste agencies, recyclers, and PROs to source end-of-life plastics efficiently.

Chemical Recycling: Advanced conversion of non-recyclable plastics into high-quality fuels ensures zero residue and clean combustion.

Traceability & Monitoring: Aligned with ISCC PLUS, ISO, and PCB standards, the company maintains robust monitoring, documentation and reporting systems.

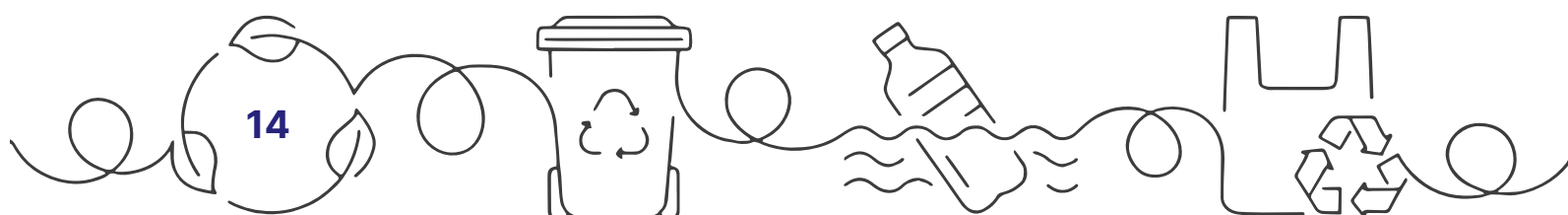
Stakeholder Engagement: 2DC conducts sustainability and safety training for staff, vendors, and waste workers, strengthening circular value chains.

Circular Economy Initiatives: The ADF-to-plastic collaboration with Reliance Industries sets a benchmark for closed-loop material reuse.

Efficiency & Compliance: Energy-efficient operations, emission controls, and continuous monitoring ensure consistent adherence to global environmental standards.

Future Plans

By 2030, 2DC aims to expand production capacity (processing 50,000 MT of plastic waste annually), enhance R&D for higher fuel yield and lower emissions, and implement third-party carbon verification. The company plans to scale collaborations with industries and municipalities, maximizing plastic diversion and building integrated Circular Fuel Hubs across India.





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2. Attero Recycling Pvt Ltd



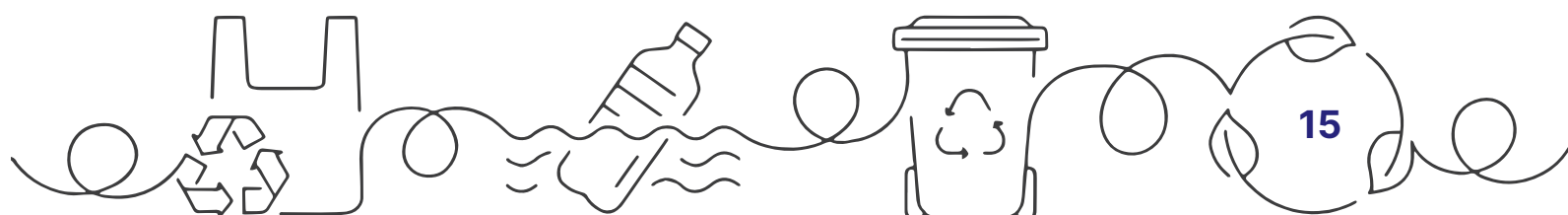
About Company

Attero Recycling is India's first and the largest DeepTech mixed-metal refining and recycling company, established in 2008 and inaugurated by President A.P.J. Abdul Kalam. With 45+ global patents Attero extracts 22+ high-purity critical, precious and rare-earth metals from e-waste and spent Li-ion batteries, advancing India's circular economy ambitions, while promoting the AtmaNirbhar-Bharat vision



About the Products

Attero produces 22+ Green Metals such as Lithium, Cobalt, Nickel, Copper, Gold, Neodymium and Praesodymium –extracted by recycling-ewaste and spent LiB waste through proprietary zero-emission, zero-water-discharge processes with >98% recovery efficiency and up-to 99.98% purity. SelSmart-Attero's D2C digital take-back platform, enables consumers to responsibly dispose their e-waste for instant rewards, while Metal Mandi, its AI-enabled B2B marketplace, digitizes scrap sourcing and trading—strengthening India's circular economy by increasing velocity, traceability, and quality of waste sourced.



R & D Structure and Collaborations and Partnerships

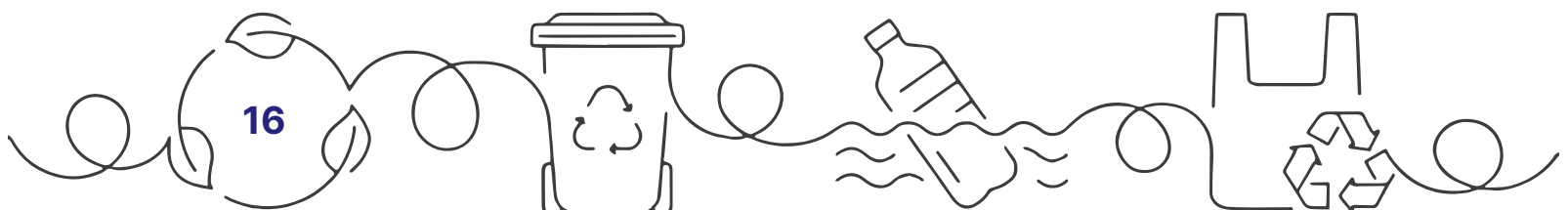
Attero's in-house R&D division—comprising chemists, metallurgists, and process engineers from premier institutions—works closely with IIT Chennai, Mumbai, Delhi, Roorkee and global universities like Cambridge and Manchester. A structured innovation funnel drives patentable technology from lab-scale to commercial-scale deployment. The company holds 45+ globally granted and has filed 200+ patents. Its chemistry-, size-, and shape-agnostic LiB recycling and zero-water-discharge refining are global firsts.

Best Practices

Attero is India's only fully integrated, technology-driven e-waste recycler enabling a true circular economy across diverse e-waste streams—including PCBs, LiB, catalytic converters, solar panels, and rare-earth magnets. Its operations span the entire value chain, from traceable collections to advanced, globally benchmarked metal recovery through 46+ patented recycling and refining technologies. Attero's proprietary clean-tech processes deliver over 98% material recovery with up to 99.98% purity for 22+ critical, precious, and rare-earth metals - highest globally. The recovered green metals are channelled back into their highest-value applications, ensuring maximum resource efficiency and reduced dependency on virgin mining. Going beyond compliance, Attero holds multiple third-party certifications (ISO, R2, GRS, LCA, GHG, etc.) and is uniquely approved by the UNFCCC to generate carbon credits per tonne of e-waste recycled. This globally validated, scalable model advances India's AtmaNirbhar and net-zero goals while setting new global standards in sustainable metal recovery.

Future Plans

Attero plans to expand its e-waste recycling capacity from 170,000 to 300,000 MTPA and LiB recycling from 7,500 to 20,000 MTPA by 2026. It aims to scale its digital circularity platforms, deepen rare-earth recovery and also invest further downstream to further improve its rare earth magnet and pCAM production capability while establishing new recycling plants pan-India—helping make India truly Atmanirbhar.





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3. Bisleri International Pvt Ltd

Bisleri

About Company

With a legacy of over 50 years, Bisleri International Pvt. Ltd has grown to become one of the largest premium beverage businesses in India. Being the makers of the country's largest-selling packaged drinking water, Bisleri follows a stringent process of 90 quality tests and a 10-stage purification. It remains true to its core value of providing consumers with pure, safe and healthy water. Bisleri International has a strong presence with 128 operational plants and a robust distribution network of over 6,000 Distributors and 7,500 Distribution. The core values of Bisleri International lie in yielding growth and embedding sustainability by being responsible in all aspects of the business.

About the Products

Bisleri's diverse portfolio champions hydration and refreshment with iconic products like Bisleri packaged drinking water, known for its purity and trust. Vedica, a premium Himalayan Spring water, offers water with naturally enriched minerals. Bisleri's carbonated soft drink range includes Pop, a classic, orange-flavored fizzy drink; Limonata, a refreshing lemon and mint-flavored drink; Rev, a black cola beverage, and Spicy Jeera, crafted to suit India's love for jeera. Each product reflects Bisleri's commitment to quality, taste, and innovation for every preference.

R & D Structure and Collaborations and Partnerships

Stakeholder engagement is central to Bisleri's strategy, recognizing that waste management requires collective action. The company collaborates extensively with communities, NGOs, government bodies, academic institutions, corporates, national parks and residential welfare societies.

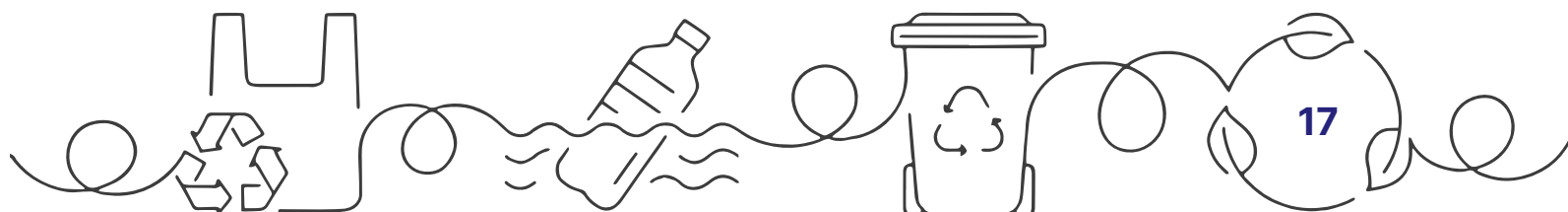
- 1. Community Engagement:** The Bottles for Change program has touched 6.2 million of lives, instilling sustainable habits at the household level.



Bisleri
(Packaged Drinking Water)



Vedica
(Natural Mineral Water)



2. **Partnerships with NGOs:** Bisleri works with over 20 NGOs across country, including Parisar BHAGANI Vikas Sangh, Sampurna Earth, UBOONTU Foundation etc.,
3. **Government Bodies and Policy Forums:** Partnership with 37 Municipal Corporations, 5 National Parks as technical & knowledge partner for plastic waste management. Participating in Raisina Dialogue, CII Waste to Worth, CII Water Stewardship, Ministry of Environment Forest & Climate Change, CPCB, FSSAI Conference & policy forums etc., The company also aligns with EPR frameworks and actively engages policymakers.
4. **Academic Institutions:** Partnerships with colleges & universities such as Panjab, Chandigarh, Amity, Manipal, SRM, NIMIS, IIT's etc., embed sustainability awareness among students. Manual like "Towards Responsible Use of Plastics" have been developed in collaboration with the Centre for Environment Education to support behavioural change in younger generations.
5. **Waste Management Agencies/Plastic Waste Processors:** Partnership with Waste Management Agencies/Plastic Waste Processors for collection and recycling of used plastics to fulfil the company's Extended Producer Responsibility.

Best Practices

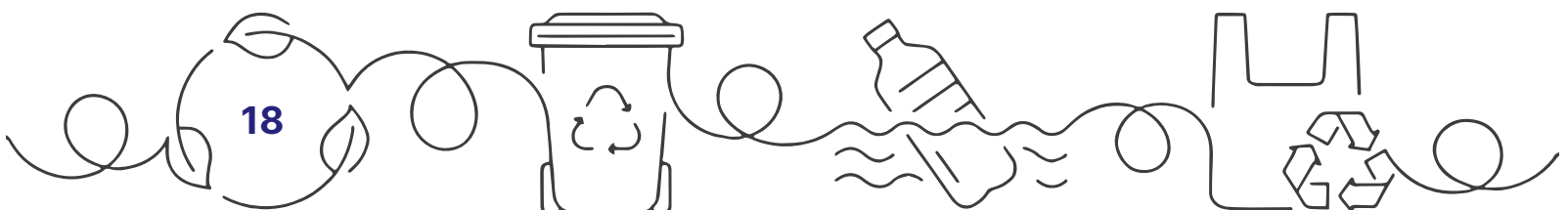
Bisleri, is a 'Water-Positive' and 'Plastic-Neutral' organization, drives sustainability through Bisleri Greener Promise, with flagship programs like Bottles for Change, educating communities on responsible plastic consumption and plastic recycling to create valuable products, and Project NAYI Umeed, which focuses on water conservation & restoration through check dams, reservoirs, lakes, rainwater harvesting, and responsible groundwater usage. Our initiatives foster impactful community and environmental engagement.

The company initiatives are aligned with the Sustainable Development Goals and achieved 9 out of 17 goals (3) Good Health & wellbeing, (6) Clean water & sanitation, (9) Industry, Innovation and Infrastructure, (11) Sustainable Cities and Communities, (12) Responsible Consumption and production, (13) Climate Action, (14) Life below water, (15) Life on Land and (17) Partnerships for the goals.

Future Plans

GREENER PROMISE - 2025 TARGET

Bisleri plans to extend the "Bottles for Change" program to cover 20 major cities and collect used plastics and recycle 12,500 MT of plastic by 2025. Under project NAYI UMEED to construct or restore 350 check dams across India and focusing on harvesting over 35 billion litres of water and irrigating over 23,000 acres of land. This will help over 65,000 members of families and provide them access to clean water for cultivations, sanitation, and hygiene. Also reducing 30% carbon footprint by using renewable energy.





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4. Blue Planet Environmental Solutions India Pvt Ltd



About Company

Blue Planet Environmental Solutions is a Singapore-headquartered waste management and circular economy company operating across Asia. It integrates cutting-edge technology, engineering expertise, and sustainability-driven innovation to provide comprehensive waste management, recycling, and resource recovery solutions that contribute to carbon neutrality and a cleaner, more sustainable planet.

About the Products

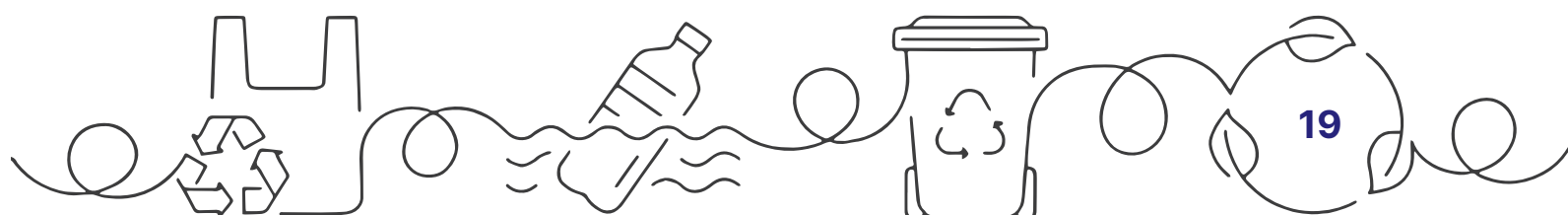
- 1. Integrated Material Recovery Facilities (MRFs):** Advanced facilities that segregate, process, and recycle multiple waste streams—organic, plastic, metal, and e-waste—using AI, robotics, and IoT systems.
- 2. Waste-to-Energy Solutions:** Proprietary bio-methanation and pyrolysis technologies that convert waste into renewable energy, reducing landfill dependency and greenhouse gas emissions.



R & D Structure and Collaborations and Partnerships

Blue Planet operates a decentralized R&D ecosystem connecting its technology hubs in Singapore, India, and the UK. The R&D framework focuses on sustainable materials innovation, process automation, and AI-based waste analytics.

Key partnerships include collaborations with IIT Delhi, NTU Singapore, and municipal bodies across India for pilot-scale waste-to-value initiatives and digital waste management projects.



Best Practices

Blue Planet's approach aligns with the UN Sustainable Development Goals and the circular economy model.

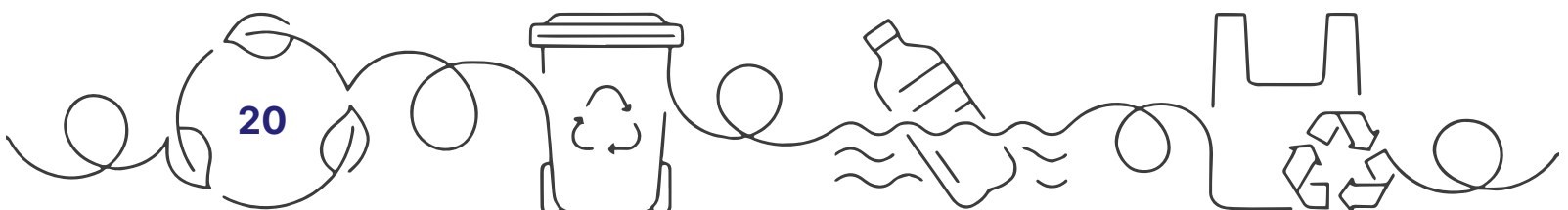
Key best practices include:

- **Technology Integration:** AI-enabled segregation, IoT-based tracking, and blockchain for waste traceability.
- **Community Engagement:** "Zero Waste Campus" programs for schools and corporates.
- **Circular Resource Recovery:** Converting plastic, e-waste, and organic waste into reusable raw materials and energy.
- **Sustainability Metrics:** Real-time carbon tracking and lifecycle assessment tools to measure impact.
- **Workforce Inclusion:** Integrating informal waste workers into the formal economy through training and digital tools.

These initiatives ensure holistic waste management while fostering local employment, innovation, and environmental stewardship.

Future Plans

Blue Planet aims to expand its integrated waste management ecosystem across Southeast Asia and Africa. Upcoming projects include AI-led waste analytics platforms, large-scale waste-to-energy parks, and carbon-credit-linked recycling systems—positioning the company as a global leader in sustainable urban infrastructure and net-zero transformation.





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5. Blue Star Ltd



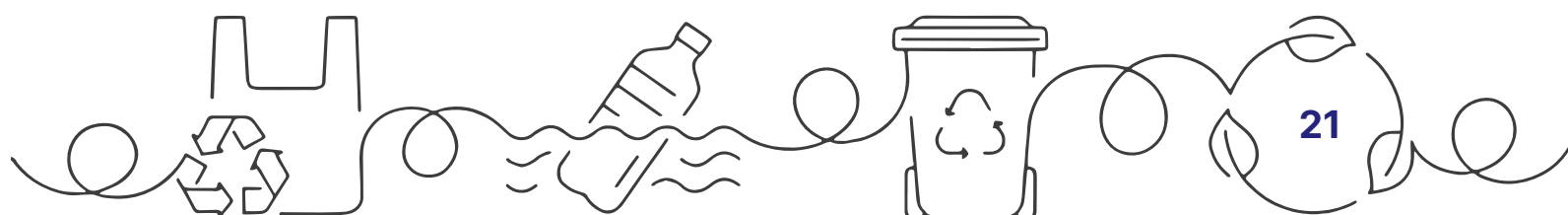
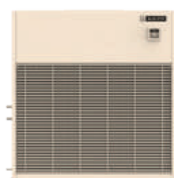
About Company

Blue Star is India's leading Heating, Ventilation, Air conditioning and Commercial Refrigeration (HVAC&R) Company, a network of 30 offices, 7 modern manufacturing facilities including the new state-of-the-art deep freezer facility at Wada, and Blue Star Climatech Limited's world-class facility at Sri City. The Company has 10,000 retail outlets for room ACs, packaged air conditioners, chillers, cold rooms as well as refrigeration products and systems. The 5,000 delivery partners reach customers in over 900 Indian towns, and more than 20 countries from North America to East Asia. Blue Star's integrated business model of a manufacturer, contractor and after-sales service provider enables it to offer an end-to-end solution to its customers, which has proved to be a significant differentiator in the marketplace. Blue Star has also forayed into the residential water purifiers business with a stylish and differentiated range including India's first RO+UV Hot & Cold water purifier; as well as the air purifiers and air coolers businesses.

About the Products

Blue Star has their flagship Q Series-

Super Energy Efficient Inverter AC. High ISEER Of 6.25 will enable more savings in terms of electricity consumed. Smart Wi-Fi AC With Smart App allows you to set the desired temperature and control your AC. Unique 6-in-1 cooling mode to run your AC at 6 different capacities as per the desired comfort. It optimizes power usage in real time as per your cooling needs. AC comes with PM2.5 Filter with Activated Carbon and High-density Dust Filter. Turbo Cool, pre-set mode to instantly cool the room during extreme summers. 4 Way Swing, designed with a motorized horizontal and vertical swing. iFeel, ensures the desired cooling comfort around you, with a sensor built in the remote. 100% Copper Condenser (IDU, ODU & Installation kit)



R & D Structure and Collaborations and Partnerships

Blue Star has world class R&D Centers in India and abroad which are known for developing cutting-edge products based on consumer insights across various fields of Heating, Ventilation, Air conditioning and Commercial Refrigeration. These R&D Centers have state of the art research facilities which attracts top talent. Blue Star has expanded their R&D ecosystem and are actively engaged with various world renowned universities and startups to develop sustainable technologies for creating a better planet to live. We have launched super efficient AC's in 1 TR and 1.5 TR segment. Blue Star has invested over 2.7 % of its revenue in last 5 years in R&D for optimizing cost and improving quality

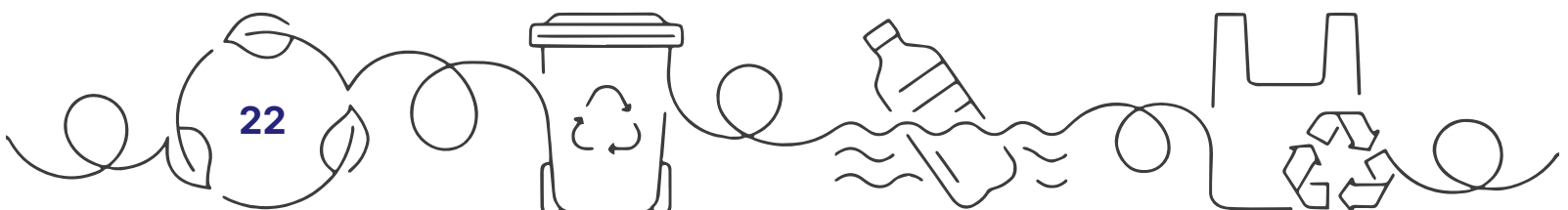
Best Practices

Defective Raw material returned to warehouse are recycled through CPCB authorised recyclers across India. In FY 2025 – 300 MT recycled out of the recycling target. For finished goods it is 13849 MT. Phased-out R 22 based room air conditioners production much ahead of the time frame notified by the Government of India. R290 & R600a Low Global Warming Potential Refrigerant & Cyclopentane-based PUF insulation in Deep Freezer, it has been awarded by India Design Mark. Running buy back old AC scheme through digital platform in the market as active participants in E-waste recycling process, reaching out to end consumers & creating awareness.

Replacing Risk with Responsibility"- Replaced gas fired furnace to air-to-air heat Pump & Replaced gas/ oil fired boilers to air to water heat pump.Total 93 MT Carbon Footprint in tCO₂ were saved in 2024-2025

Future Plans

Installation of Energy efficient meter for major power equipment for water flow, air flow, fuel flow. Solar / Renewable energy investments / installations. Water management through STP, ETP, RWH, Flow fixtures, Metering, Sensors, Reuse/ Recycle. HVAC-Retrofitting 7 yrs + old AC's with VRF. Heat Pumps in place of Electrical heating. sUse of 51% micron plastic for packaging & 100% Biodegradable Pet Strap (this is in R&D) Conduct yearly external Audits.





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India's Leading companies in Managing Waste



6. Cummins India Ltd

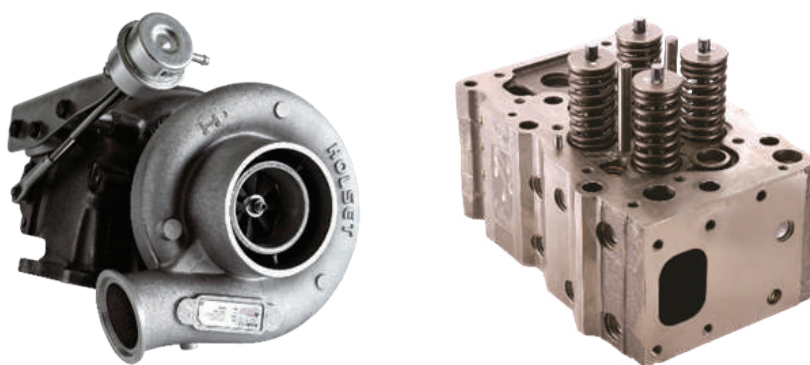


About Company

Cummins India Limited, a global power leader, designs, manufactures, and services engines and related technologies with a strong commitment to sustainability. Its ReCon Division exemplifies circular economy principles by reconditioning used components to “as-good-as-new” standards, conserving natural resources, minimizing waste generation, and reducing the overall environmental footprint across operations.

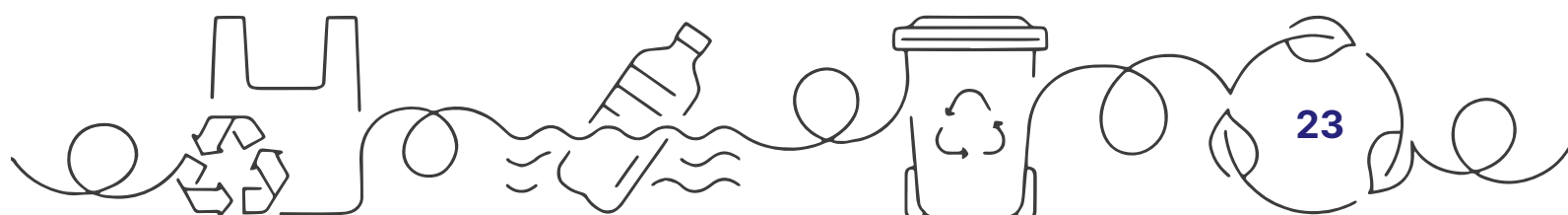
About the Products

ReCon parts originated from a Cummins engine and have gone through stringent remanufacturing processes including disassembly, inspection, cleaning, calibration and testing to ensure they meet the same specifications as new Cummins parts. Cummins ReCon parts are then offered for individual sale or used to build Cummins ReCon engines at a lower price after core exchange with warranty coverage include. Product Offerings – Turbocharger, Lube Oil Pumps, QSK Cylinder head, HHP heads, Water pumps, Cam Follower.



R & D Structure and Collaborations and Partnerships

The ReCon R&D team operates under Cummins Technical Center India, focusing on process innovation, material recovery, product life extension. Advanced testing and validation ensure remanufactured parts meet global quality standards.



Collaborations & Partnerships :

1. Customer segment - for product feedback,
2. Outsourced process suppliers - for specialized recovery operations
3. Infield upgrades to extend life cycle of product (dual fuel kits, Retrofitting)
4. Participation in CII initiative - Waste to worth - Circular economy advancement

Best Practices

1. Component Rebuild for Critical Zones:

Engine components are engineered with build-up processes in critical wear zones, making them suitable for remanufacturing while complying with Cummins' global warranty and performance standards. This approach enhances part durability, reduces failure rates, and significantly decreases the requirement for new raw materials, contributing to substantial resource conservation.

2. Industry-Unique Remanufacturing Capability:

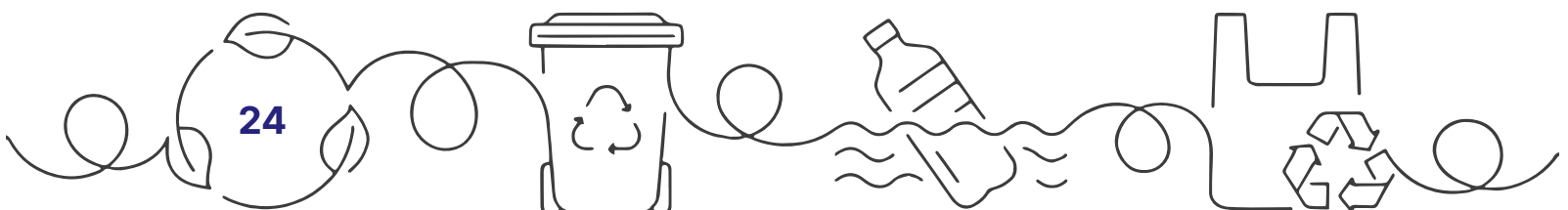
Cummins Recon is the only facility in India that reconditions engine components to enable complete engine remanufacturing. This capability not only reduces scrap generation and minimizes waste sent to landfill but also promotes reuse across the product lifecycle. It positions Cummins as an industry leader in sustainable manufacturing practices.

3. Certified Carbon Footprint Reduction: First time in India

The plant has achieved Product Carbon Footprint Certification from Bureau Veritas for its remanufactured engines. This certification demonstrates measurable carbon savings and validates Cummins' commitment to circular economy practices, waste reduction.

Future Plans

1. Expand the Recon product portfolio and identify additional components suitable for reconditioning, targeting 90% circularity in line with Cummins' Destination Zero goals.
2. Enhance business share for remanufactured components and engines by leveraging engineered innovations, advanced remanufacturing processes, and sustainable practices to drive growth while minimizing environmental impact.





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7. Dr. Reddy's Laboratories

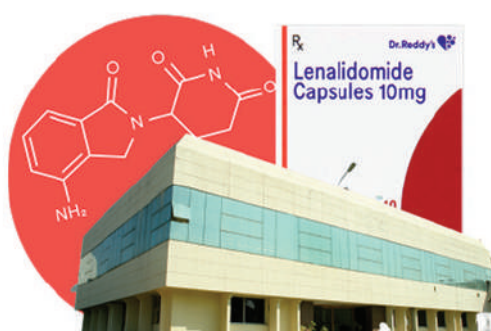


About the Company:

Dr. Reddy's Laboratories Ltd. is an integrated pharmaceutical company, committed to accelerating access to affordable and innovative medicines. Through its three businesses – Pharmaceutical Services & Active Ingredients, Global Generics and Proprietary Products – Dr. Reddy's offers a portfolio of products and services including APIs, Aurigene Pharmaceuticals Services Limited (APSL), generics, biosimilars and differentiated formulations.

About the Products:

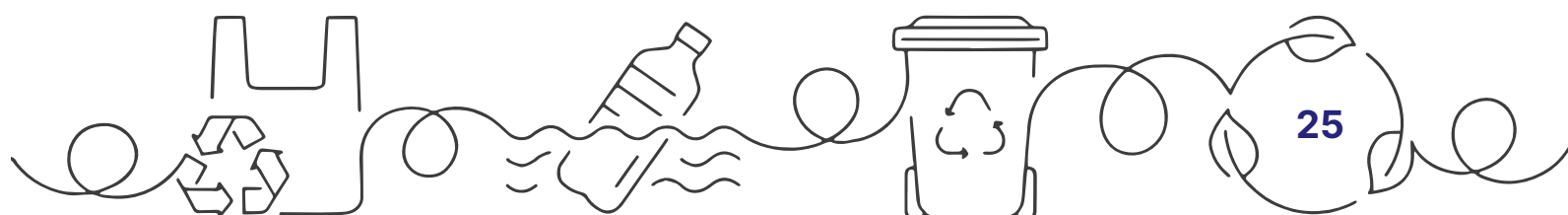
The company major therapeutic areas of focus are gastrointestinal, cardiovascular, diabetology, oncology, pain management and dermatology. Dr. Reddy's operates in markets across the globe. They operate a network of 23 manufacturing facilities and 9 R&D facilities worldwide.



R & D Structure and Collaborations and Partnerships:

Dr.Reddy's research and development facilities are located in the states of Telangana and Andhra Pradesh in India and Cambridge in UK. Their 9 R&D centres develop innovative therapies. They invest in technologies in collaboration with various partners to improve the environmental and social impact of our products.

Along with their deep and diverse expertise across chemistry, engineering, biology and formulations, Dr. Reddy's are also exploring advanced manufacturing technologies which



include environmental and sustainability related technologies to conserve resources and minimize the waste generation like developing green chemistry principles for the product for process improvement, analytics & controls, modelling & simulation and digital innovation. In short, R&D capabilities play a key role in fulfilling our promise of addressing unmet patient needs, bringing expensive medicines within reach and helping patients manage disease better.

Best Practices:

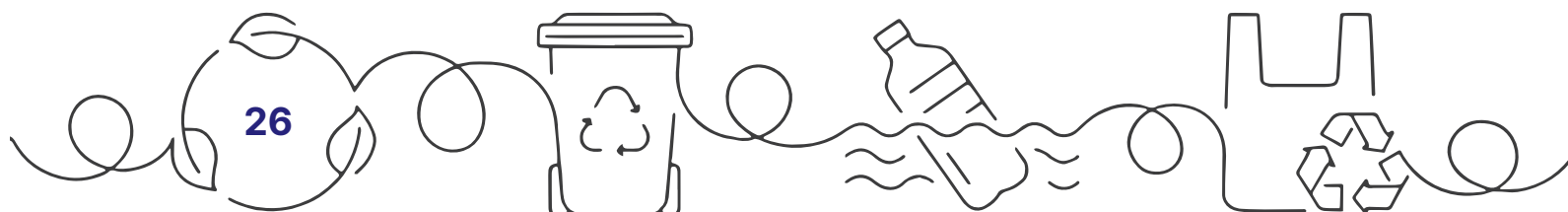
Dr. Reddy's has implemented a comprehensive environmental stewardship program focused on waste minimization at source, resource recovery, recycling efficiency, and regulatory compliance. Continuous yield improvement of the products/intermediates and reducing the waste at source through Kaizens from operational excellence program. Also, Dr. Reddy's green chemistry program develops principles to minimize the generation of waste at source.

Apart from this, Dr. Reddy's invested in technology upgradations like sludge drier to reduce sludge generation, HHO gas for boiler to reduce boiler Ash, Closed circuit RO system to reduce the rejects from RO plants, Low temperature evaporator to reduce steam consumption, Solvent recovery systems reducing the need of additional solvents.

Dr. Reddy's efforts in digitalization of ETP resulted in reduction of chemical consumption and sludge generation in collaboration with implementation partner. All manufacturing sites, are ISO 14001 certified with zero landfill and EPR compliance. They have also attained "Zero Waste to Landfill" certification during this year with diamond standard performance.

Future Plans

The organization plans to implement advanced technologies including low-steam solvent recovery, waste heat evaporators for HTDS effluents, oxygen concentrators, and nano bubble systems for aeration. These innovations aim to enhance energy efficiency, reduce waste generation, optimize wastewater treatment, and reinforce the organization's commitment to sustainable operations and global environmental best practices. Also, Dr. Reddy's aims to engage with its supply chain partners on implementation of best practices in value chain.





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8. EnviGrow Sustainable Solutions LLP



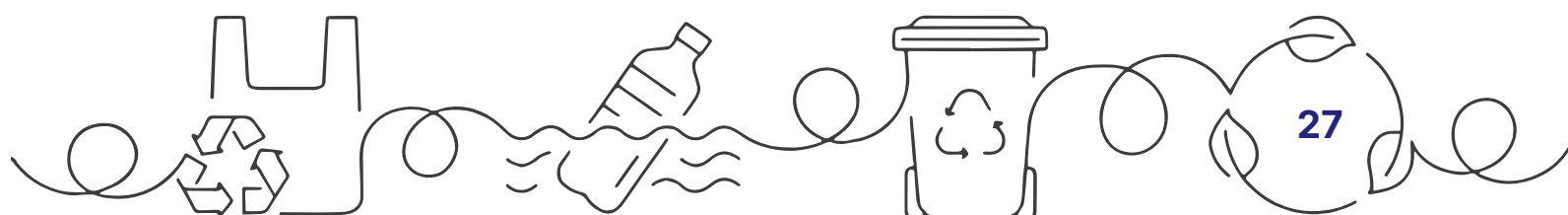
About Company

EnviGrow Sustainable Solutions LLP is a fast-growing environmental enterprise dedicated to advancing India's transition toward a circular economy through sustainable solid waste management. The firm specializes in designing and implementing integrated waste solutions, focusing on decentralized processing, Material Recovery Facilities, composting technologies, biomining of legacy waste, and, and citizen engagement to achieve zero waste to landfill in both urban and semi-urban areas.



About the Products

1. **Zero Waste Model** – A replicable framework S2C2E integrating collection, segregation, composting, recycling, and recovery to achieve 100% landfill diversion.
2. **Solar-Based Polyhouse**-Covered ASP Composting System – Climate-resilient, energy-efficient composting with reduced odor and faster processing.
3. **Compact Modular Composting Units (CMCU)** – Plug-and-play units enabling localized biodegradable waste treatment, minimizing transport and emissions.



R & D Structure and Collaborations and Partnerships

EnviGrow's R&D division operates in collaboration with State Urban Local Bodies (ULBs), research consultants, and private partners for pilot testing and optimization of waste treatment technologies. The internal R&D process involves technology design → field validation → performance evaluation → scalability assessment. The firm also partners with Cantonment Boards, municipal councils, and industrial estates to co-develop data-driven waste management frameworks and integrate digital monitoring tools for transparent operations. Partnerships with Tata Power DISCOMs, SHGs, and technology innovators strengthen adoption.

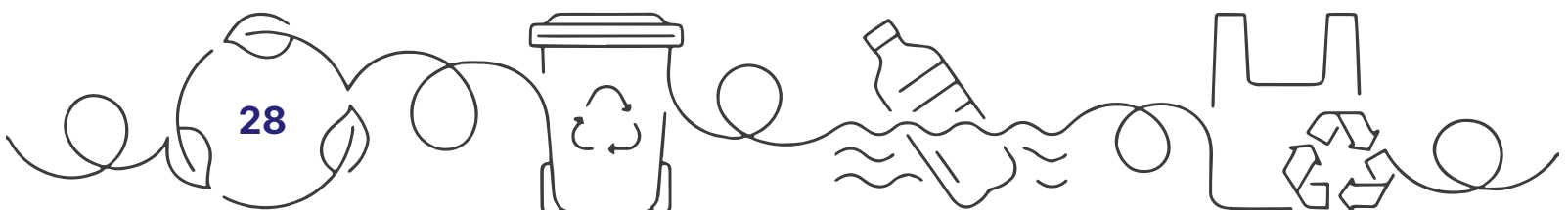
Best Practices

EnviGrow's flagship implementation of the S2C2E Zero Waste Model in Nagar Panchayat Lalkuan (Uttarakhand) transformed the town into the first in the state to achieve top ranking in Swachh Survekshan among small towns, later awarded as Uttarakhand's Cleanest City in Swachh Survekshan 2025. The project pioneered the state's first men's SHG, "Gulmohar," actively engaged in waste management operations, creating a unique model of inclusive community participation. An Integrated Solid Waste Management Facility was developed combining door-to-door collection, material recovery, composting, and legacy waste remediation.

In Kotdwar, EnviGrow strengthened financial sustainability by increasing user fee collection by 50% and enabling a complete transition to digital user fee collection systems, ensuring transparency and accountability. Other notable projects include Laksar, Dwarahat, and Lansdowne, where EnviGrow executed biomining of dumpsites, IEC campaigns, and field mock assessments. Across projects, our process emphasizes resource recovery, stakeholder engagement, and community-driven segregation aligned with India's 4R principles (Reduce, Reuse, Recycle, Recover).

Future Plans

EnviGrow aims to expand its S2C2E Zero Waste Model across ULBs by 2027, establish decentralized composting hubs, and set up its first plastic recycling facility for large-scale resource recovery. We will integrate biomethanation/CBG technologies, scale the Green Aadhaar dashboard, and leverage AI-based monitoring to build circular, community-driven sustainability across India.





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9. Ganesha Ecosphere Ltd



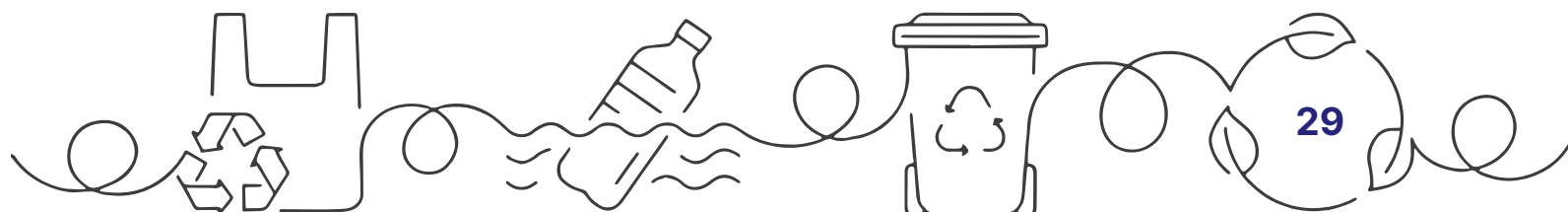
About the Company

Go Rewise by Ganesha Ecosphere Ltd. is a leading PET recycling innovator, converting post-consumer PET waste into high-value circular materials for global brands. With advanced facilities and three decades-strong sustainability vision, they deliver scale, consistency, and certified quality to support ambitious recycled-content and EPR goals. Their operations are backed by globally recognized certifications including GRS, OEKO-TEX, ISO standards and food-grade regulatory approvals such as USFDA, FSSAI and EFSA, ensuring trust, scale and responsible impact.

About the Products

The company's circular product portfolio powers sustainable transformation:

- 1. Recycled Polyester Yarns & Speciality Filament Yarns:** Designed for durability, comfort, and precision in performance wear, athleisure, fashion and advanced industrial applications.
- 2. Recycled Polyester Fibres & Speciality Fibres:** Engineered for softness, resilience and versatility across apparel, home textiles, mobility and technical solutions.
- 3. Certified rPET Granules (Bottle-grade & Textile-grade):** Enabling true closed-loop circularity with global compliance, exceptional purity and consistent melt performance.



R&D Structure, Collaborations & Partnerships

The company operate dedicated R&D laboratories across three manufacturing facilities, investing 0.5–1% of annual revenue in process innovation, polymer performance enhancement, and advanced decontamination. There collaborative approach has enabled technical partnerships with 40+ leading brands in beverages, packaging and textiles, shaping next-generation circular solutions and strengthening industry-wide sustainable transformation.

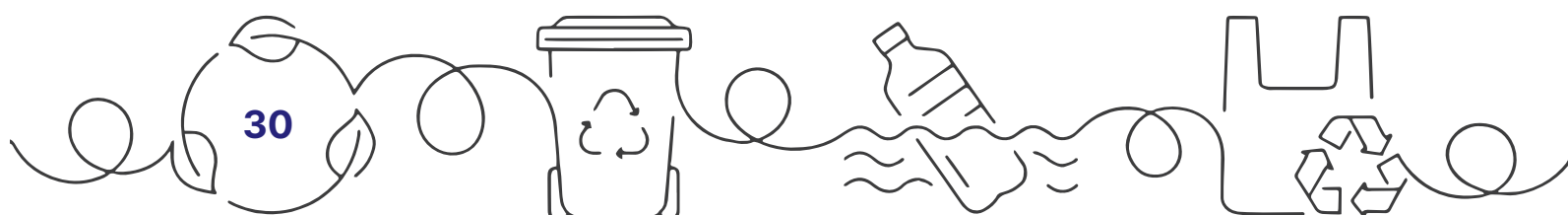
Best Practices

The company drive operational excellence through innovation, efficiency and responsible resource management. Advanced sorting technology, in-house engineering enhancements and data-driven controls help significantly reduce yield loss and optimize recovery. A major leadership practice is upcycling of by-products. Dedicated lines allow us to recover and decontaminate secondary polymer streams that were earlier waste. For instance, polypropylene (PP) is now upcycled in partnership with downstream manufacturers to create durable consumer products like furniture, giving the material a second productive life and diverting waste from landfills.

Strong quality systems, renewable-energy integration, skill development programs, and traceable circular supply chains further reinforce our sustainability commitment. These practices enable measurable environmental impact while setting higher benchmarks for India's PET recycling ecosystem.

Future Plans

The company aim to recycle 30% of India's PET waste through expanded bottle-to-bottle capacity, deeper global brand collaborations, and accelerated innovation in circular polymer solutions. The company focus is to drive a scalable, technology-led shift toward a low-carbon, zero-waste future for the industry.





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10. Godrej Industries Ltd



About Company

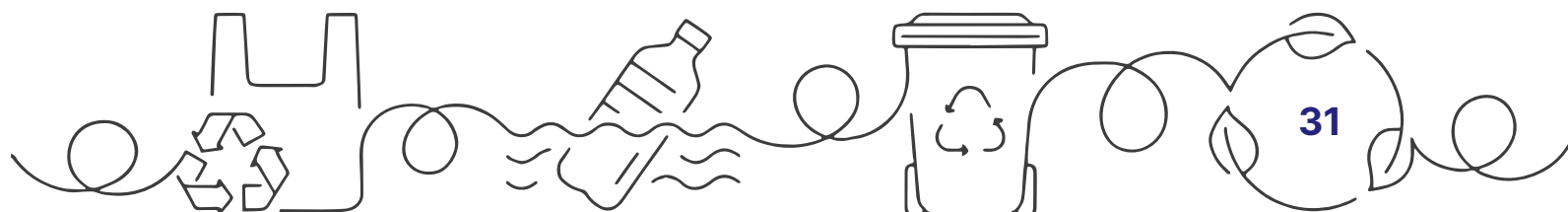
Godrej Industries Limited, a flagship of the Godrej Group, stands at the forefront of green chemistry innovation, crafting sustainable oleochemicals, surfactants, specialty, and biotech solutions. With world-class facilities at Valia, Ambarnath, Goa and Kheda we serve over 80 countries advancing circularity, renewable feedstocks, and responsible growth under our Good & Green vision for a better planet.

About the Products

Godrej diverse product portfolio includes oleochemicals, surfactants, specialty chemicals, and biotech innovations derived largely from renewable vegetable oils. They offer a wide range of fatty acids, fatty alcohols, glycerine, AOS, SLS, SLES, and sustainable biosurfactants like Sophorolipids. These products serve multiple industries-home and personal care, agrochemicals, pharmaceuticals, oil and gas, food and beverages, paints and coatings, and lubricants. we blend science, sustainability, and innovation to create next-generation ingredients that are both high-performing

R & D Structure and Collaborations and Partnerships

Godrej R&D ecosystem, anchored at the Nadir Godrej Centre for Science, Technology and Applications Research (NGSTAR), drives innovation in green and sustainable chemistries. Equipped with advanced analytical and microbiology labs, it fosters collaboration between



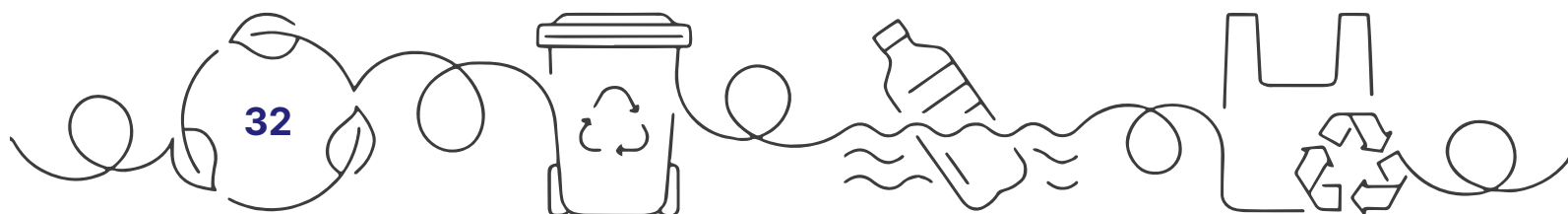
R&D, manufacturing, and commercial teams. They partner with academic institutions, industry bodies, and technology providers to co-develop bio-based, high-performance, and low-impact solutions that advance our GEM (Green, Efficient, Milder) strategy.

Best Practices

At Godrej Industries Limited, we embed the 4R principles- Reduce, Reuse, Recycle and Repair- across our operations to drive circularity and minimize environmental impact. Their in-house ETP, RO, and MEE systems enable zero liquid discharge and real-time waste monitoring. Innovative initiatives such as Nickel Catalyst Recovery, Residue Reuse in Behenyl Alcohol and Polyhouse Sludge Drying are few initiatives significantly reduce waste to landfill. Packaging optimization and IBC recycling have eliminated over 30 MT of plastic annually. Their 6.6 MW Hybrid Power Project (Solar + Wind) will generate 3.10 crore kWh green power annually, which will avoid Approx 20,000 tonnes of CO₂ emissions and advancing our EP100 commitment. Circular interventions like heat integration, closed-loop water circulation, and bio-briquette cogeneration further boost resource efficiency. Through supplier ESG training, 5S initiatives, and community awareness drives, we champion responsible waste management for a sustainable and replicable model.

Future Plans

The company aspire to achieve Zero Waste to Landfill by 2030 by expanding waste-to-wealth initiatives, adopting Bio-CNG utilization, and enhancing Technology-based waste tracking. Strengthening circular partnerships, and deepening supplier and community engagement will drive our transition toward a fully circular, low-carbon, and resource-efficient manufacturing ecosystem.





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11. Indian Pollution Control Association



About Company

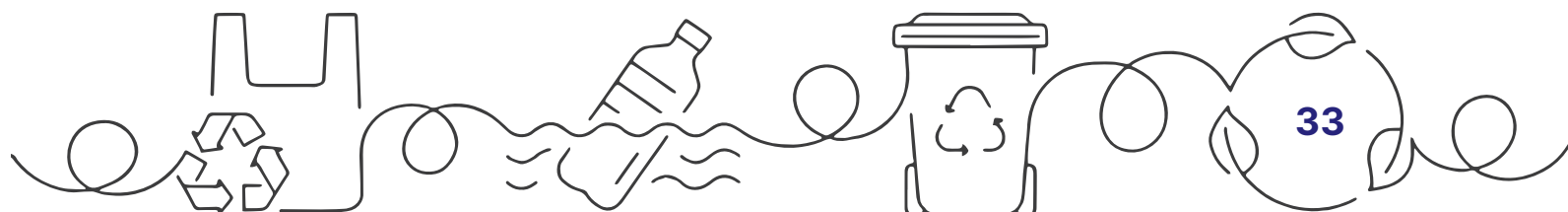
IPCA is a non-profit organization leading environmental sustainability in India since 2001. Listed with CPCB & registered as a PRO with CPCC, IPCA implements EPR services for plastic, tyre, e-waste, and battery waste, operates 9 MRFs & 3 PRFs. With a strong focus on community engagement, capacity building, waste workers upliftment and policy advocacy, IPCA continues to develop innovative solutions to tackle the country's growing environmental challenges.

About the Products

IPCA has implemented effective measures for managing municipal solid waste under the name Zero Waste Campaign. They implement MSW management by onboarding societies to make them aware and implement segregated waste collection. Wet waste is converted into high quality compost using Aerobin composters. Aerobin runs without electricity and without manual intervention, supports the health and dignity of waste workers.

Low-value plastic waste is recycled at our recycling plant into useful products such as Park Benches, school desks and all other multi-utility recycled products. Their recycling plant operates using PNG fuel, involves zero usage of water, adhesive, or chemicals during processing, and does not emit harmful emission.

To implement decentralized approach managing the MSW, the very first step undergone is awareness campaign for segregation of waste at source. The segregated wet and dry waste



are processed through distinct supply chains as illustrated in the flow chart below, closing the loop and enabling resource recovery.

R & D Structure and Collaborations and Partnerships

The Zero waste campaign is being run in partnership with Municipal Corporation of Delhi (MCD). IPCA is in active liasioning with Save Mother Earth, Dwarka Progressive Society, Asmi Foundation to promote awareness for source segregation in educational institutions and residential societies.

Best Practices:

Key practices include decentralized solid waste management, promoting source segregation where residents segregate waste, achieving 80% segregation efficiency. Wet waste is treated onsite via low-maintenance, odor-free Aerobin composters leveraging aerobic decomposition without manual/electricity inputs, producing quality compost.

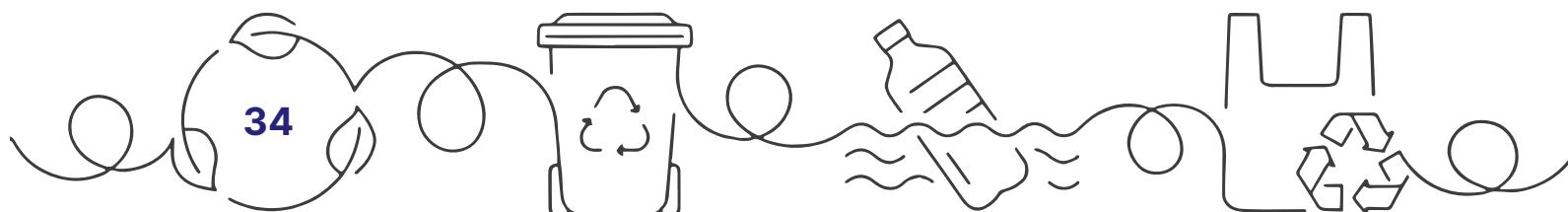
Dry waste is channelized to Material Recovery Facilities (MRFs) and Plastic Recycling Facilities (PRFs). The recycling unit uses eco-friendly PNG fuel and hot/cold press technology with zero water usage, minimizing emissions. IPCA has formalized waste workers, providing PPE kits, health check-ups, ESIC insurance, and income increments (Rs. 250 per capita).

Extensive IEC activities, i.e, workshops, pictorial materials, door-to-door campaigns, radio campaigns, clean-up drives drive community engagement & awareness. Additionally, skill development workshops enhance waste workers' knowledge on segregation, collection, and safety.

Future Plans:

IPCA plan to include more societies and more zones of the MCD in the Zero Waste Campaign to divert waste sent landfill and promote onsite waste treatment and plastic recycling. Awareness campaigns will be leveraged to encourage resource recovery and educate people to establish the concept of "sustainability is a shared responsibility".

Additionally, manual waste sorting centres will be upgraded to automatic systems to enhance efficiency in waste processing.





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12. JBM Environment Management Pvt Ltd



About Company

JBM Environment Management Private Limited,(JBM Enviro)) is a part of JBM Group, a \$2.6bn global conglomerate. JBM Enviro has successfully installed and is operating the first integrated waste-to-energy (WTE) plant in Haryana State. The plant, located in the Sonapat-Panipat cluster, has a power generation capacity of 10 MW and has been running successfully since August 2021. This WTE project is the first and only One plant of Haryana and is also first of its kind ISWM project under a public-private partnership (PPP) model in India

About the Products

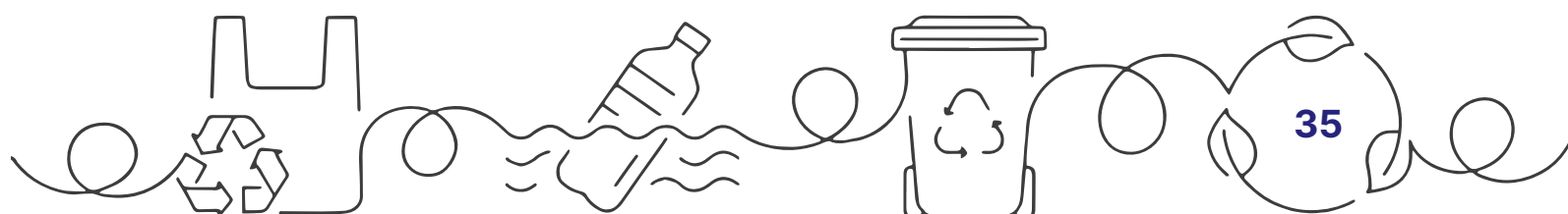
The Project includes Door to door collection ,transportation and processing of approximately 600 TPD of MSW from 4 cities including Panipat /Sonapat ,Samalkha and Ganore it touching about 2.8 Lakh households. For processing It uses proven incineration technology and includes advanced designed flue gas cleaning systems to keep emissions within regulatory limits. The project is designed as a "zero waste plant," with water recovered from waste reused in boilers and ash residues handled scientifically to minimize environmental impact.

JBM Environment Management Private Limited is committed to driving sustainability and resource efficiency through innovative solutions in waste management and renewable energy. With a focus on circular economy principles, we actively promote the 4Rs – Reduce, Reuse, Recycle, and Recover – across our operations and projects and conducting Educational programs in societies and educational institutions

Best Practices

Under our Integrated Solid Waste Management Project, we have implemented a comprehensive model that transforms waste into valuable resources. The key highlights of JBM Enviro initiative include:

- **Waste Reduction through Power Generation:** Process optimization and adoption of advanced technologies to minimize input wastage at source through our 8 MW Waste to Energy Plant in Sonipat.
- **Door to Door Collection of Waste:** 100% door to door collection of waste with practicing source segregation at house hold level only.



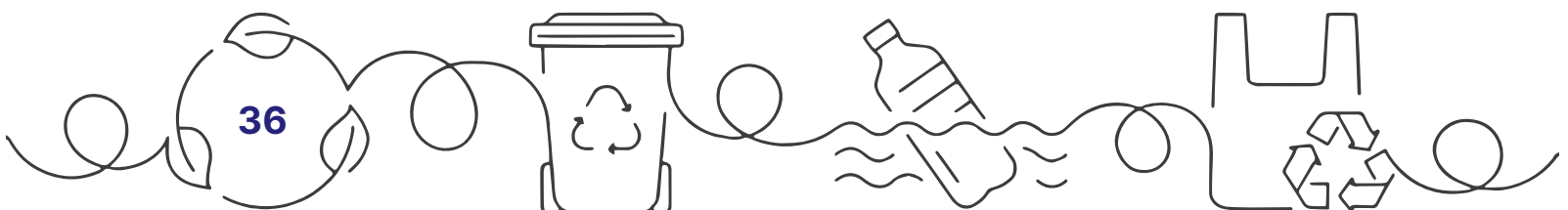
- **IEC Activity:** Information-Education & Communication activity being considered in all wards and sector of Sonapat Cluster for awareness for waste type and its use.
- **Social inclusion :** Engaged and included Rag Pickers and private Rickshaw collectors in JBM collection and resource recovery team
- **Reuse:** Recovery of by-products such as treated water, compost, Raw Biogas for industrial and agricultural applications.
- **Recycling:** Integration of Material Recovery Facilities (MRFs) to segregate and recycle plastics, paper, metals, and other recyclable fractions.
- Diverted **14.16 Lac Tons of waste** from landfills annually.
- Generated **24.9 Gigawatt of Power till date**, replacing conventional fuel.
- Created direct and indirect employment opportunities for the local community.

Future plans

JBM Enviro efforts align with India's vision of Swachh Bharat, Atmanirbhar Bharat, and Net Zero goals. By fostering collaboration with local stakeholders, municipalities, and industries, we aim to scale this model for broader impact.

Through the CII 4R platform, we reaffirm our commitment to resource efficiency, innovation, and building a sustainable future.

In Swachh Survekshan 2024 Sonapat is on 2nd Position in Haryana and 38th Position in National ranking, as compare to 12th rank in Haryana State in Swachh Survekshan 2023 and 260th in National ranking. In Garbage Free City (GFC) 2024 Assessment- Sonapat has been considered as 3 Star rank in Garbage Free City ranking.





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13. JCB India Ltd



About Company

JCB Group is a global leader in construction and agricultural equipment, operating in 150+ countries. Committed to sustainability and safety, JCB pioneers electric, hydrogen, and HVO-powered machines. Its product range includes excavators, backhoe loaders, telehandlers, and access equipment.



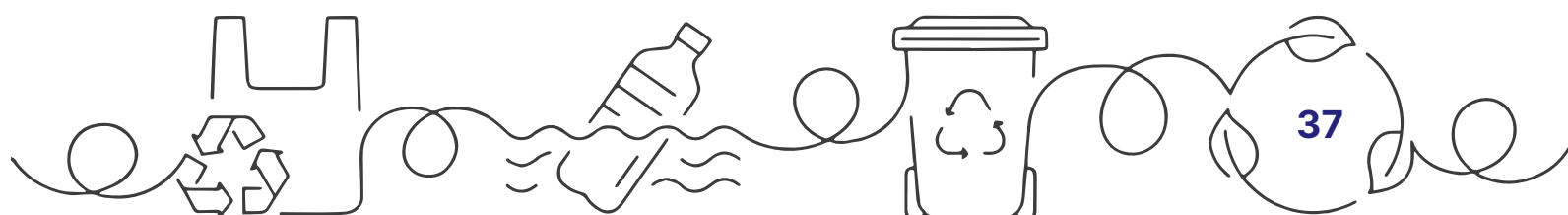
JCB India's Pune facility in Talegaon is a key engineering and manufacturing hub, contributing 75% to global engineering. It produces tracked excavators (1.6T-38.5T), exports to 125+ countries, and features a state-of-the-art design centre. The plant emphasizes innovation, localization, and EHS excellence with advanced telematics and safety system

About The Product

JCB products are globally recognized as best-in-class, combining cutting-edge technology, robust engineering, and unmatched reliability. With a legacy of innovation and customer-centric design, JCB leads the world in construction and earthmoving equipment. Its machines are built to deliver superior performance, fuel efficiency, and operator comfort, while integrating advanced safety and EHS features. Trusted in over 150 countries, JCB continues to set benchmarks in quality and sustainability.

Excavators (Tracked)

- Range: From 1T Mini Excavators to 50T Mining Excavators
- USP: Designed for Indian conditions, validated at in-house test track, high localization



Wheel Loaders

- Range: From 3T to 5T Loading capacity
- USP: Designed with customer input for performance, reliability, and comfort

Compactors

- Range: Soil compactors, mini tandem rollers
- USP: High compaction per pass, precision engineering

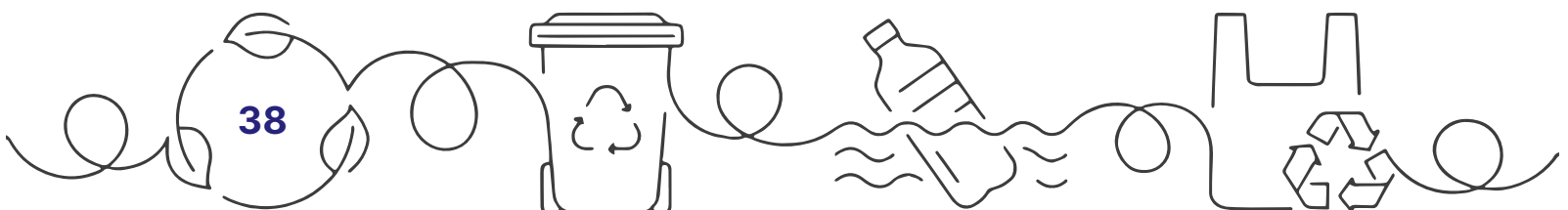
Best Practices

JCB Talegaon has implemented a range of innovative strategies to minimize waste generation during manufacturing, reinforcing its commitment to sustainability and a circular economy.

- **Optimized Material Utilization:** The facility has enhanced nesting efficiency, optimizing the layout of metal components to significantly reduce metal scrap.
- **Efficient Paint Application:** Advanced electrostatic spray guns ensure precise paint application, reducing paint waste and minimizing environmental impact.
- **Reuse and Returnable Solutions:** Initiatives include repurposing welding wire bobbins and spools, reusing plastic caps, and adopting returnable packaging systems to cut down on single-use materials.
- **Comprehensive Recycling Programs:** Materials such as paint thinner, paint sludge, and sewage treatment plant (STP) sludge are carefully sorted, processed, and either reintegrated into production or repurposed for alternative uses.
- **Repair and Life Extension Programs:** Through the JCB Connect and REMAN programs, the facility extends the life cycle of machinery and components, reducing the need for new resources and supporting a zero-waste philosophy

Future Plan

JCB Talegaon has achieved a 5% reduction in coolant waste by introducing automated mixing systems and delivered a 10% year-on-year reduction in packaging waste through design optimization and material efficiency. Repair and refurbishment practices have improved by 3% to 5%. JCB Talegaon ensures 100% recycling of hazardous waste, uses FSC-certified wood for packaging, and has achieved complete elimination of single-use plastic in imported materials. These measures collectively reinforce JCB's commitment to zero waste to landfill and sustainable operations





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14. Maruti Suzuki India Ltd



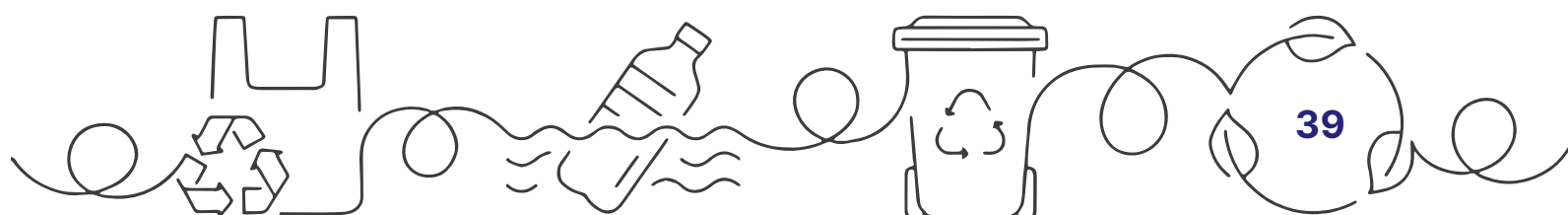
About Company:

Maruti Suzuki India Ltd is the leading Automobile manufacturer in India, known for producing reliable, fuel-efficient, eco-friendly and affordable vehicles. It was established in 1981 by the Government of India as a joint venture with Suzuki, becoming the first Japanese automaker to invest in India. It holds the largest share of the domestic passenger car market in India and is also the country's largest exporter of passenger vehicles, exporting to over 100 countries. In September 2025, Maruti Suzuki India Ltd became the world's 8th most valuable automaker with a market capitalization of \$57.6 billion overtaking global automobile manufacturing giants.



About the Products:

Maruti Suzuki offers a diverse range of vehicles designed to meet the needs of every customer and promoting eco-friendly mobility through its advanced CNG and hybrid vehicle options. Its product portfolio includes stylish hatchbacks like Alto, Swift, Baleno; premium sedan like Swift Dzire; powerful MPVs like Ertiga, XL6, Invicto and powerful SUVs like Brezza, Fronx, Jimny, Grand Vitara and Victoris SUV. For over four decades, it has been empowering India with the 'Joy of Mobility' by offering every type of car in demand and in vogue. Maruti Suzuki is the only OEM in India to achieve significant milestone of 2 million sales of passenger vehicles in a single calendar year.



R & D Structure and Collaboration and Partnerships :

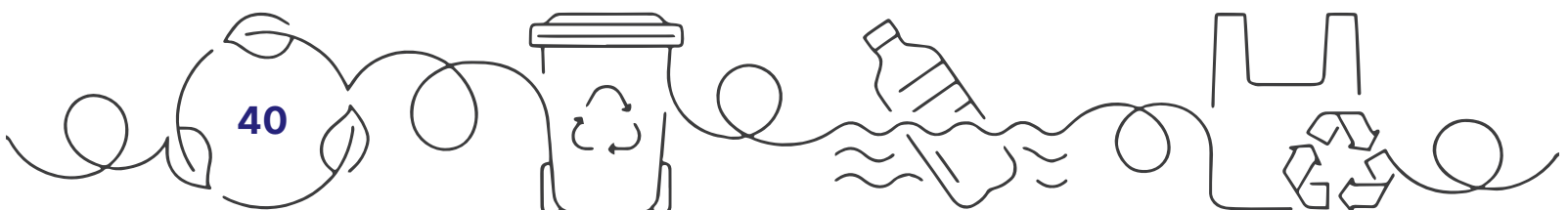
Maruti Suzuki India Limited promotes awareness about the importance of environmental Sustainability, recycling of plastic packaging through authorized recyclers and collection & segregation of materials through a robust network of waste management systems. For continuous awareness among employees, there have been year-long environmental initiatives like training & awareness sessions, displaying E-modules, sharing frequent corporate communication on key dates and compliance sessions.

Best Practices:

Maruti Suzuki India Ltd is committed to promote environmental Sustainability through eco-friendly manufacturing processes as well as responsible waste management through active awareness and behavioral change initiatives. The company conducts impactful public campaigns, vendor engagement programs and specialized training for coordinators. Maruti Suzuki has established efficient waste management systems for segregation, recycling and plastic waste recovery. The company's Plastic Waste Management initiative focuses on segregation at the source, secondary processing at designated units, and recycling through authorized partners.

Future Plans:

With continuing efforts towards commitment to promote environmental sustainability, MSIL has achieved total installed solar power capacity of 79 MWp as of FY24-25 with the target of achieving 319 MWp by FY2030-31. With the vision "SEV2050" towards carbon neutrality, MSIL's key initiatives are weight reduction of vehicle, introduction of carbon-neutral fuel technology including electric & flex fuel vehicles, continuing with environment-friendly initiatives like plastic packaging reduction & using eco-friendly packaging materials and promoting circular economy.





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India's Leading companies in Managing Waste



15. Patanjali Research Foundation

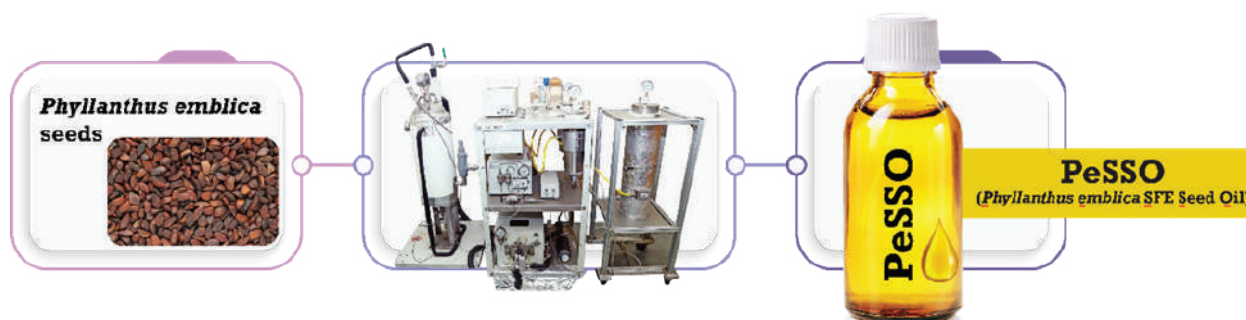


About Company

Patanjali Research Foundation (PRF) was established in 2017 as a pioneering multidisciplinary research organisation governed by the Patanjali Research Foundation Trust. The organisation is committed to integrating ancient Ayurvedic wisdom with modern scientific techniques. With a team of over 300 scientists, most of whom hold PhDs and Post-doctoral qualifications in their respective fields, PRF prioritises innovation in herbal research and sustainable development.

About the Products

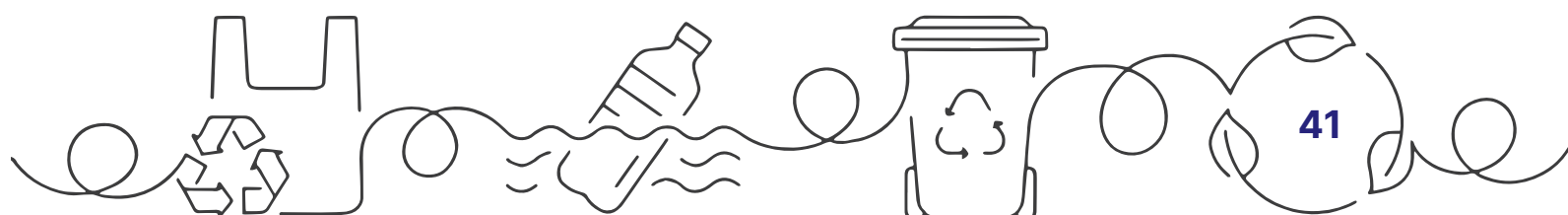
Through innovative research, PRF has developed Amla Seed Oil using Supercritical Fluid Extraction (SCF-CO₂) technique, a sustainable, chemical-free, and environmentally friendly technology. This oil exhibits potent antibacterial and biofilm-disrupting properties against various pathogens, including *E. coli*, *K. pneumoniae*, and *P. aeruginosa*. Robust scientific validation has demonstrated that Amla seed oil effectively breaks down bacterial biofilms and reduces antibiotic resistance, providing a natural, safe, and effective antimicrobial alternative.



R & D Structure and Collaborations and Partnerships

PRF operates within a well-organised R&D framework comprising multidisciplinary divisions, including: Drug Discovery and Development Division, Herbal Research Division, Ayurveda and Sanskrit Division and Clinical Research Division.

The Drug Discovery and Development Division have state-of-the-art facilities. They signed some MOUS with notable institutes



Best Practices

PRF seamlessly combines ancient Ayurvedic wisdom with modern scientific methods. It utilises advanced in-vitro and in-vivo studies involving model organisms such as *C. elegans*, *Drosophila melanogaster*, and zebrafish to scientifically validate the Ayurvedic herbs mentioned in ancient texts.

In addition, PRF explores novel bioactive compounds from medicinal plants using scientifically advanced analytical tools such as UHPLC, HPTLC, LC-MS-TQ, LC-MS-Q-TOF, GC-MS and GC-FID.

Also, it incorporates microbiological assessments, including environmental monitoring, microbial limit testing, and evaluations of antimicrobial activity.

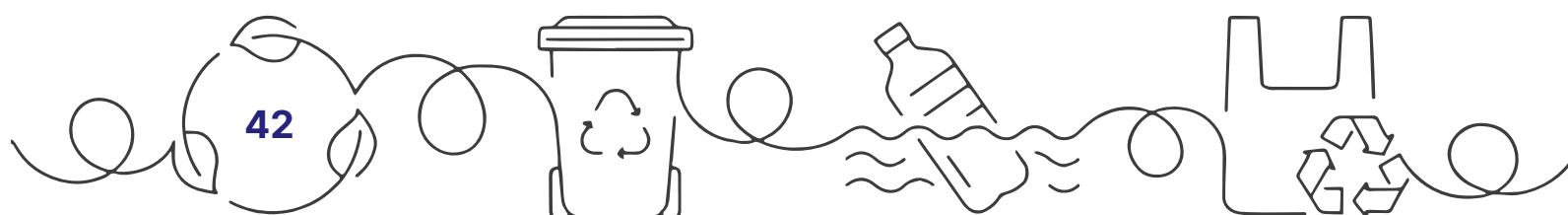
As part of its commitment to sustainability, PRF employs a Zero-Waste initiative utilising SCF-CO₂ technology to minimise the use of harmful organic solvents.

Future Plans

PRF future goals include improving sustainable agro-waste management, which is traditionally discarded after pulp extraction. This bioactive-rich Amla seed oil will also be introduced to the food, cosmetic, and pharmaceutical sectors as a safe alternative to synthetic chemicals.

PRF also aims to scientifically utilise other botanical waste by-products and promote new plant-based bioactives.

With the help of these small yet impactful initiatives, PRF is working towards exemplifying the principles of a circular economy, significantly reducing food and agricultural waste while helping to create a greener and more sustainable future.





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16. Pravin Masalewale



About Company

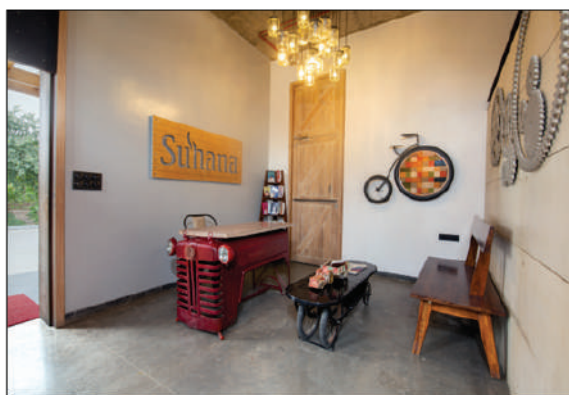
Founded in Pune in 1962 by Shri Hukmichand Chordia and Smt. Kamalbai Chordia, Pravin Masalewale has grown into a global flavour icon. With its trusted brands – Suhana, Ambari, and Pravin – the company celebrates the authentic taste, purity, and aroma of Indian cuisine, cherished by millions of consumers worldwide.

About the Products

Suhana is achieving Net Zero Waste by transforming 4,000 MT of biodegradable waste—including garlic/onion peels, spice stems, leaves into mulch for food forests, creating biodiversity-rich green zones within factory premises. Waste is further recycled into paper, fuel pellets, and biogas. In a breakthrough circularity model, plastic waste is upcycled into tiles, paver blocks, furniture, while pyrolysis technology converts plastic into biofuel, reducing diesel dependency. Scrap metals are artistically repurposed into décor and functional furniture.



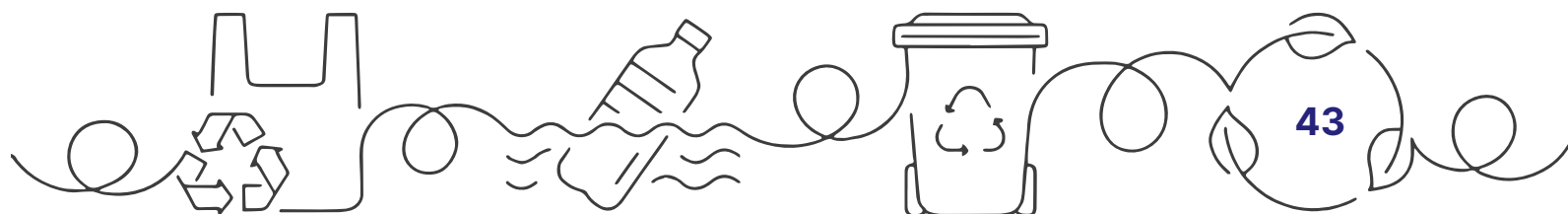
Paper from Onion & Garlic waste



Scrap metals transformed into functional art and furniture.

R & D Structure and Collaborations and Partnerships

At Pravin Masalewale, they ensure optimal utilization of all factory-generated waste—organic or inorganic. Each waste stream is scientifically analyzed to identify the most effective conversion pathway, transforming it into compost, bio-oil, paper, pellets, tiles, bricks, or other value-added products. The company collaborates with sustainability experts, scientists, and NABL-accredited laboratories for guidance and innovation. Comprehensive data on waste



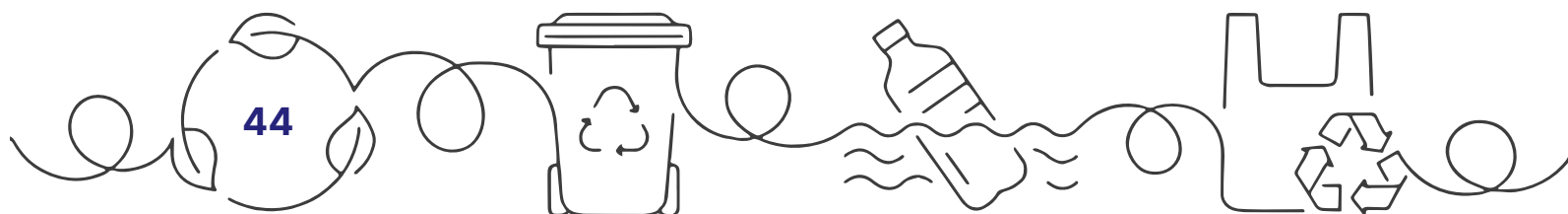
generation and recycling processes is systematically maintained to ensure continuous improvement, transparency, and traceability.

Best Practices

1. Suhana has recognized India's first Net Zero Energy Certified Food Factory warehouse, recently achieving provisional Net Zero Water, Net Zero Waste certifications from GNfZ — a remarkable milestone in the decarbonization of the food industry. Achieving this distinction involved integrating solar energy, rainwater harvesting (yielding over 1.5 lakh liters annually), and root-zone wastewater treatment. The facility's passive architectural design further enhances energy efficiency, while thriving biodiversity zone—home to various trees and bird species.
2. Waste Management Park also serves as a learning and awareness centre for employees and citizens promoting sustainable practices and environmental responsibility.

Future Plans

Future plans include establishing Waste Management Parks at all factory locations, achieving zero-waste operations, and creating value-added products from waste to conserve natural resources. Annual tree plantation drives, water and energy conservation measures, and a gradual transition to renewable energy sources like solar and biogas will further reduce the carbon footprint and become carbon neutral food processing industry.





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17. Re Sustainability Ltd



Re Sustainability, a KKR company, is Asia's leading provider of integrated sustainability solutions. Re Sustainability aims to be a global enabler of circular economy and provides a range of environmental infrastructure, services and circular economy solutions for cities and industries.

Its businesses include Waste Management (including hazardous, municipal, bio-medical, MARPOL & e-waste); Waste to Energy; Wastewater Solutions, Recycling & Resource Recovery (including plastics, E-waste, paper, ELV's, C&D waste and a number of other commodities). Re Sustainability also offers EPC services, consultancy and bespoke environmental solutions.

With a workforce that is over 22,000 strong, Re Sustainability has a global footprint, including more than 100 operating facilities and plants spread across India, Singapore, USA, UAE, Qatar, Saudi Arabia, Kuwait, Oman, Jordan and Tanzania.

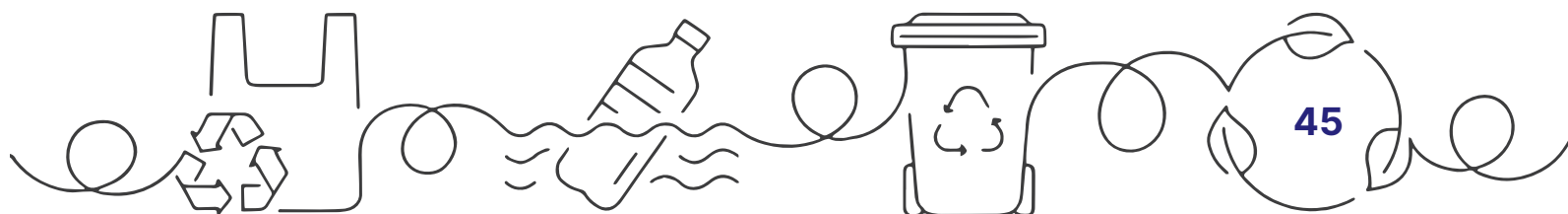
Re Sustainability is independently rated by Standard & Poor's CSA (earlier known as the Dow Jones Sustainability Index). In January 2025, ReSL was ranked as the highest rated environmental services company globally.

Integrated Sustainability Solutions (ISS): SUSTAINABILITY DELIVERED

Integrated Sustainability Solutions (ISS) is Re Sustainability's flagship platform, a future-ready suite of environmental and sustainability services designed to address the complex, interconnected challenges of a changing planet.

Powered by ReSL's 30-year legacy and strengthened by the strategic partnership with global investment firm KKR, ISS integrates advisory, engineering, and implementation under one powerful delivery model. It unites climate ambition with operational excellence, offering a single platform for organizations ready to embed sustainability into the heart of their business.

From ESG strategy and regulatory permitting to decarbonisation, resource recovery, and infrastructure development, ISS eliminates silos and delivers cohesive, measurable impact. It empowers governments, industries, and institutions to move from compliance to competitiveness, turning sustainability into a driver of innovation, credibility, and financial performance.



India's Leading companies in Managing Waste



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The Re Sustainability Ecosystem: A Network of Purpose-Driven Brands

Re Sustainability's impact is amplified through a family of specialized brands that together form one of the most comprehensive sustainability ecosystems in the world. Each brand addresses a critical dimension of the environmental value chain, backed by technology, expertise, and a shared mission of enabling a low-carbon, circular future.



A one-stop sustainability transformation engine that integrates strategy, permitting, decarbonisation, and ESG delivery, helping organizations align their operations with climate and resource-efficiency goals.



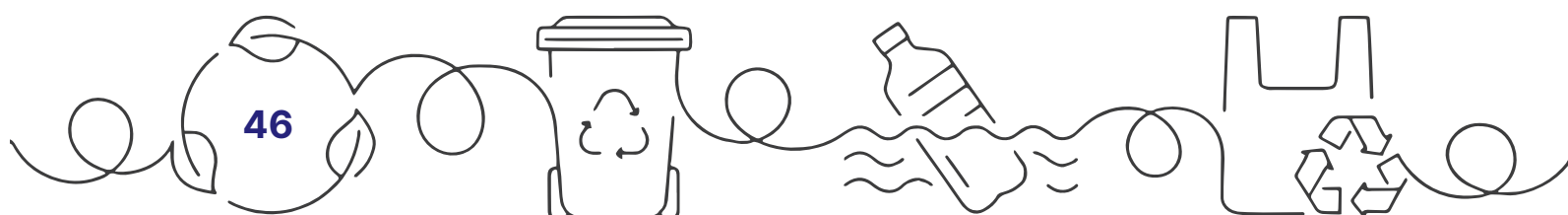
The climate-action arm driving measurable carbon reduction through verified carbon credits, offset generation, and circular economy programs. netZERO enables compliance with global sustainability frameworks while unlocking access to green finance and voluntary carbon markets.



Re Ignite is the alternative fuels and industrial decarbonisation division of Re Sustainability, partnering with industries to reduce fossil fuel dependency and lower carbon intensity across manufacturing and process operations. It develops and supplies sustainable alternative fuels derived from waste, enabling industries such as cement, steel, and energy to transition toward cleaner production. By converting non-recyclable waste into high-calorific fuels and promoting circular resource use, Re Ignite supports India's journey toward a low-carbon industrial economy.



The scientific core of the ecosystem, Re Analytical offers advanced testing and monitoring for air, water, wastewater, soil, stack emissions, and solid waste, including emerging contaminants like PFAS, microplastics, and VOCs. It transforms environmental data into actionable intelligence, enabling industries to make informed, compliant, and future-ready decisions.





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A pioneer in End-of-Life Vehicle (ELV) recycling, Re Carma ensures that every vehicle retired from India's roads is scientifically depolluted, dismantled, and recycled. Its advanced facility in Jhajjar, Haryana recovers metals, plastics, and rubber while preventing the release of hazardous fluids into soil and groundwater, closing the loop for sustainable mobility.



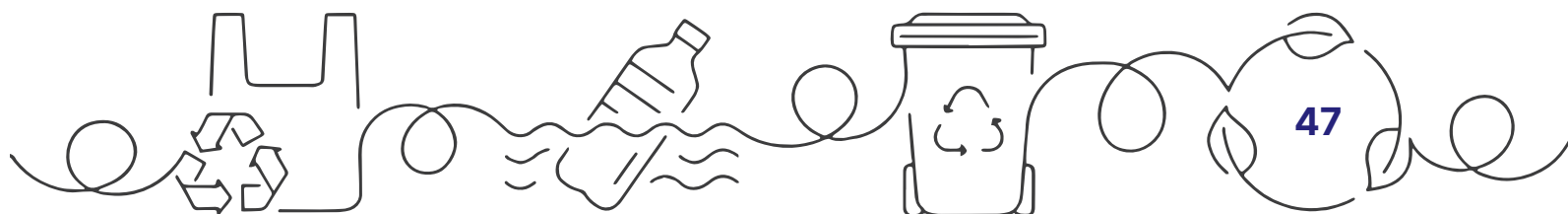
A citizen-centric digital platform that connects households, RWAs, corporates, and recyclers for doorstep waste collection. Aakri promotes segregation at source, real-time traceability, and reward-based participation, bringing the principles of circularity directly to people's fingertips and making responsible disposal effortless and transparent.



The community and climate-resilience arm of Re Sustainability, Resilience Actions works with populations most vulnerable to the effects of climate change. Through programs in education, livelihood creation, water conservation, and environmental restoration, it helps communities adapt, rebuild, and thrive in the face of climate disruptions, ensuring that sustainability is inclusive and human-centred.

Together, these brands form a unified ecosystem that integrates science, technology, people, and purpose, positioning Re Sustainability as a leader not just in environmental management but in building the systems that will define the sustainable economies of tomorrow.

Re Sustainability stands at the forefront of a global transformation where sustainability is no longer a promise but a practice. Through its science-backed, technology-driven, and outcome-led solutions, Re Sustainability is shaping industries, enabling green investments, and accelerating the transition toward a resilient, low-carbon future.



18. Saint Gobain Glass India Pvt Ltd



About Company

In India Saint-Gobain is present in Glass and Glass Solutions for architectural, automotive, solar, and homes; Plasterboard and Plasters; Industrial mortars; Construction Chemicals; Abrasives; Ceramics; Performance Plastics and Life Sciences. Saint-Gobain is an innovation-driven company and investments in Saint-Gobain Research India, a world-class Research Centre in Chennai, are aimed at developing innovative solutions that combine performance and sustainability for hot and humid climates. Saint-Gobain has over 75 plants across 35 locations in the country with an employee strength of around 9000 of which 15% are women employees.

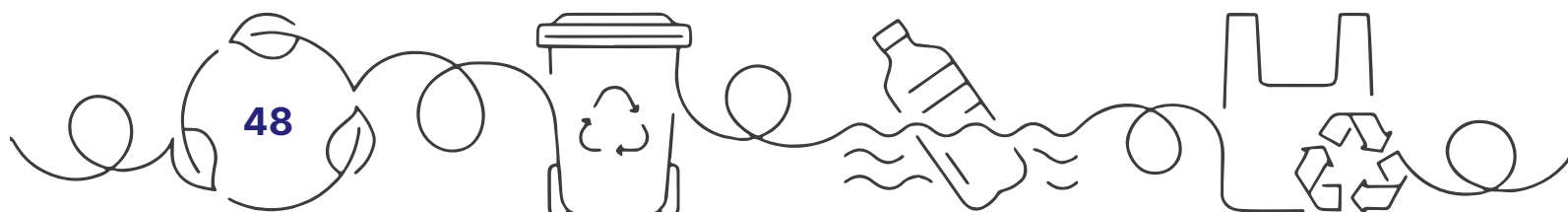


About the Products

SGG Envision (SKN) -High Performance Solar Control & Thermal Insulation Glass

SGG Envision (SKN) is a high performance offline soft-coated glass engineered for superior solar control and energy efficiency. It is manufactured by applying multiple thin metal oxide layers onto float glass (such as SGG PLANILUX or SGG PARSOL) by magnetron sputtering process under vacuum conditions.

SGG Envision being a double-silver Low-E glass offers high spectral selectivity, exceptional optical clarity, enhanced solar control and thermal insulation. Ideal for commercial, institutional and premium residential projects seeking energy efficient facades and enhanced indoor comfort.





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R & D Structure and Collaborations and Partnerships

Saint-Gobain Research India (SGR India) located in IIT – Madras research park is one of the eight transversal R&D centers for the Saint-Gobain Group set up to develop products, systems and solutions for hot-and-humid climates. The center supports Saint-Gobain's existing businesses while enabling creation of new businesses enabling the Group to accelerate its growth and create customized products & services for its customers. For the future, while continuing R&D in the areas of core-materials and related technologies, there will also be an increasing focus on sustainability initiatives, digitalization and combinatorial innovation to keep up with India's fast-growing economy and the constantly transforming environment.

Best Practices

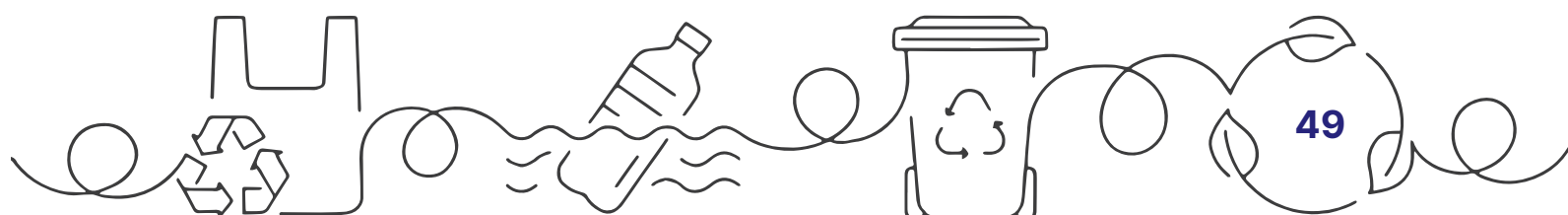
Glass Business – Sriperumbudur, Kanchipuram District, Tamil Nadu.

Zero waste to landfill. Solid waste generation reduction – 54% reduced compared to year 2022. Plastic jumbo bags reduction – 84%, Wooden pallets generation reduction 83% since Y2022. Waste recycling – Batch and ESP wastes used back in the process to reduce waste generation. Waste recycling – Average Cullet recycling 1.96 Lacs tons/year. CO₂ Savings of 62K Tons/year. Waste management digital application for inhouse waste generation tracking, trend analysis and controlling of generation.

Future Plans

Glass Business – Sriperumbudur, Kanchipuram District, Tamil Nadu.

Waste circularity website for tracking, managing and utilizing wastes within the group companies in India. Saint Gobain R& D team collaborating with IIT-M for re-use of wastes in industries based on analysis of wastes. Leveraging digital tools to increase the external cullet waste recycling to 7.5X by Y2030 compared to Y2020 levels. 50% reduction in freshwater consumption by Y2030 compared to Y2017 levels despite increase in production and lines.



19. Siemens Ltd

SIEMENS

About the Company

Siemens Limited is a leading technology company focused on industry, infrastructure and mobility. The Company's purpose is to create technology to transform the everyday, for everyone. By combining the real and the digital worlds, Siemens empowers customers to accelerate their digital and sustainability transformations, making factories more efficient, cities more livable, and transportation more sustainable.

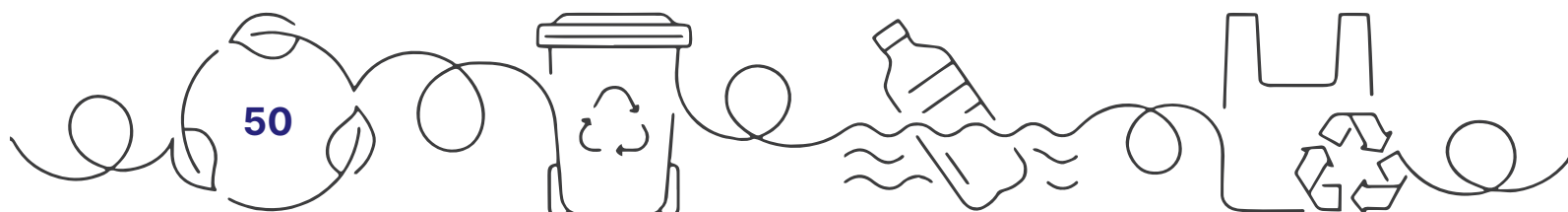


About the Products

With its end-to-end automation, digitalization, electrification and mobility solutions, Siemens Limited caters to both public and private sector customers in discrete and process industries like Aerospace and Defence, Automotive, Chemicals and Petrochemicals, Data Centres, Food & Beverages, Water Treatment, Mining & Cement, Intralogistics, Oil & Gas, Pharmaceuticals, Ports, Power Utilities, Railways, Renewables and Transportation.

R&D Structure, Collaborations & Partnerships

The Siemens R&D framework operates through multi-tiered Innovation Clusters integrated with Global Competence Centers and Digital Engineering Hubs. Architecture fosters cross-functional innovation across materials science, additive manufacturing, and circular design. Strategic collaborations with academia, startups, and supply-chain partners under the DEGREE sustainability framework ensure product eco-innovation and regulatory compliance. Tools like SESIS and EcoTransparency Suite enable AI-assisted monitoring of waste streams and carbon intensity across the value chain.





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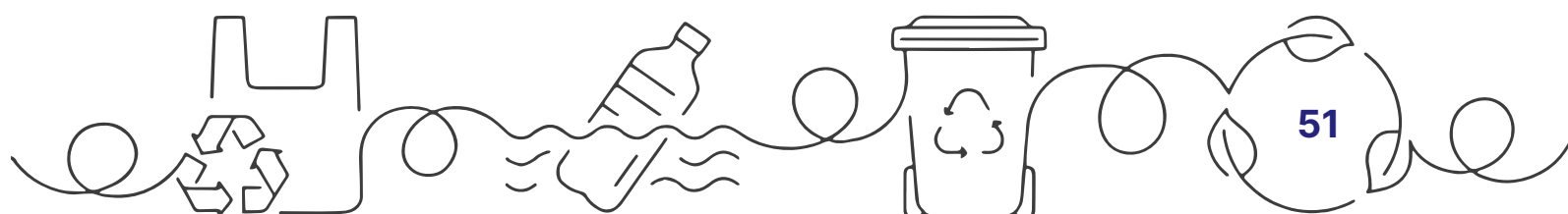


Best Practices

Siemens has institutionalized a closed-loop waste management architecture anchored in the 4R paradigm—Reduce, Reuse, Recycle, and Repurpose. Siemens Limited has implemented several impactful sustainable packaging initiatives like Source Reduction, Packaging Optimization, Circular Recovery and Sustainable Logistics across factories in India to reduce plastic by 35 tons through Green Initiatives like replacement of foam rolls and bubble sheets with biodegradable plastics reduced plastic usage, substituting plastic air fills with honeycomb paper cut plastic, Re-engineering product packaging to reduce steel weight led to a saving steel by 170 tons, and wood usage was reduced by 88 tons by modifying the packaging sizes and replacing wooden pallets with durable, recyclable HDPE pallets also reusing of wooden packaging from suppliers to great extent. Process and redesigned mold saved 135 tons of thermoset plastic waste. Circular Recovery was implemented by Repair, Refurbish, Retrofit and recovery of obsolete electrical components which saved approx. 26 tons of material (Plastic, e-waste, metal and packaging material), extending equipment lifespan by over 15 years. Conversion of ceramic insulators into thermally efficient bricks enhanced material circularity by 86%. Siemens has achieved 100% EPR compliance across plastic, e-waste, and battery categories through advanced traceability and certified recycling networks. Sustainable Logistics was implemented by transition to multimodal transport (rail/LNG) saved about 10,000 liters of diesel and reduced 855 tons CO₂ emissions.

Future Plans

Siemens envisions advancing towards next-generation sustainable manufacturing through AI-based lifecycle analytics, predictive maintenance, and material substitution. FY26 goals targets reduction in virgin plastic, compostable packaging integration, and enhanced product circularity index—reinforcing Siemens' leadership in climate-positive and zero-waste industrial innovation by implementing defined strategic measures year on year.



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20. Skoda Auto Volkswagen India Pvt Ltd

SKODA | VOLKSWAGEN

Skoda Auto Volkswagen India Private Limited

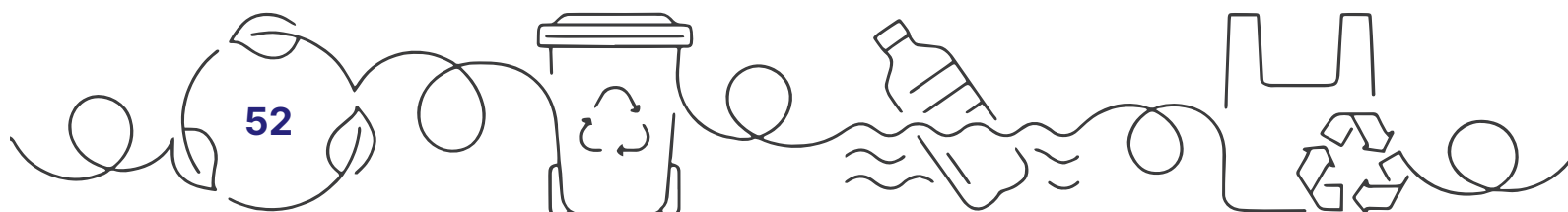
About Company :

Škoda Auto Volkswagen India Private Limited represents six iconic Volkswagen Group brands—Škoda, Volkswagen, Audi, Bentley, Porsche and Lamborghini—in India. Committed to sustainable growth, SAVWIPL integrates advanced environmental technologies and circular economy practices, emphasizing the 4Rs—Reduce, Reuse, Repair, and Recycle—to ensure efficient waste management across its manufacturing operations.



About the Products:

With a portfolio of over 40 models across six iconic brands—Škoda, Volkswagen, Audi, Bentley, Porsche and Lamborghini—Škoda Auto Volkswagen India Private Limited (SAVWIPL) is committed to sustainable manufacturing. Waste management is a critical focus, guided by the Group's "Go to Zero Impact Factory" vision. By adopting the 4Rs across all waste streams, the Pune plant achieved Zero Waste to Landfill certification, attaining a 100% waste diversion rate in 2025.





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R&D Structure and Collaborations and Partnerships:

Through collaborations with universities, NGOs, and research institutions, SAVWIPL drives innovation in sustainable manufacturing. In alignment with its 4R-driven approach to waste reduction, the company has developed customized sludge drier technology and deployed robotic systems in the paint shop to minimize waste generation, enhancing process efficiency and environmental performance.

Best Practices :

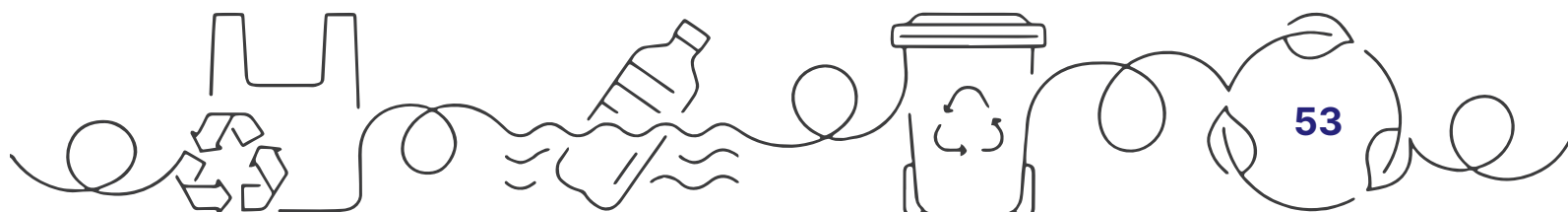
Sustainability is embedded in every aspect of Škoda Auto Volkswagen India Private Limited's operations. The company's Pune and Chakan (CSN) plants exemplify responsible manufacturing through initiatives that minimize environmental impact and optimize resource use.

- Achieving Zero Waste to Landfill certification and maintaining Zero Liquid Discharge facilities reflect its commitment to eliminating waste and conserving water.
- Extensive solar energy integration across both plants contributes substantially to renewable energy usage.
- Water conservation efforts—spanning recycling, watershed management, and rainwater harvesting—have enabled SAVWIPL to achieve net water positive status.
- Continuous improvements in sustainable manufacturing processes further reduce waste and enhance energy efficiency, aligning with the Group's vision of a Go to Zero Impact Factory.

Together, these practices underscore SAVWIPL's holistic approach to environmental stewardship, setting industry benchmarks in sustainable and waste-conscious automotive manufacturing.

Future Plans :

SAVWIPL is progressing toward complete decarbonization and achieving the Zero Impact Factory vision by 2030. Ongoing investments in rainwater harvesting and watershed development will strengthen its Net Water Positive status, while the company continues to uphold Zero Liquid Discharge and Zero Waste to Landfill standards across operations.



21. SRF Ltd



About Company

Since the inauguration of SRF's first plant in 1974, the company has evolved into a manufacturing powerhouse with businesses spanning multiple verticals. With an annual turnover of ₹12,910 crore (US\$ 1.6 billion), the company's diversified business portfolio covers Fluorochemicals, Specialty Chemicals, Performance Films and Foil, Technical Textiles and Coated and Laminated Fabrics. Anchored by a strong workforce of ~9,000 employees from different nationalities working across thirteen manufacturing plants in India and one each in Thailand, South Africa and Hungary, the company exports to 100+ countries.

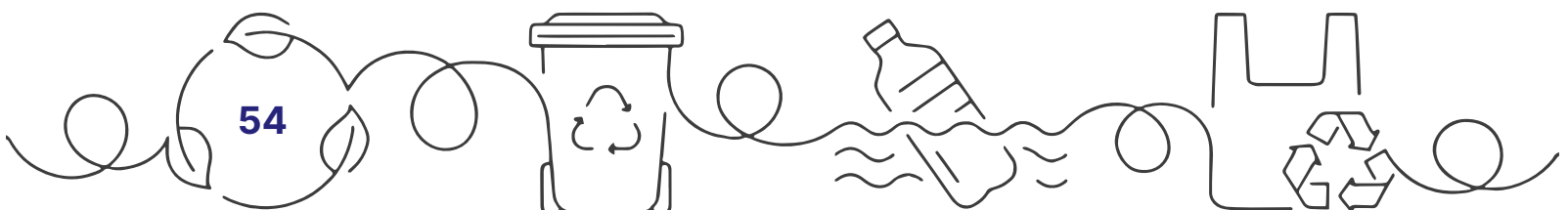
About the Products

SRF's Performance Films and Foil Business (PFB) is a global leader in high-performance films and aluminium foil solutions, catering to demand in over 90 countries through facilities in India, Thailand, South Africa, and Hungary. Under brands like PETLAR (BOPET), OPLAR (BOPP), PAPLAR (Paper), CASLAR(CPP) and RAFLAR (Aluminium Foil), PFB delivers versatile, eco-friendly films for packaging, labelling, and industrial applications. Sustainability drives every process, with energy-efficient manufacturing, resource conservation, and circular economy principles integrated into operations. Products meet global standards for performance and environmental safety.

R & D Structure and Collaborations and Partnerships

At SRF, sustainability is more than a goal—it's a culture embedded across operations. Guided by the 4R principles—Reduce, Reuse, Recycle, and Repair—SRF has implemented innovative practices to minimize virgin material consumption and reduce environmental impact.

The plant is divided into 50+ TIE zones, where employees actively participate in daily 5S and Kaizen activities, fostering grassroots ownership of sustainability. A standout initiative involves co-developing recycling machinery with Indian vendors to convert non-recyclable process waste into usable polymer. This has led to a reduction of 1020 MT of carbon emissions annually and saved 600 MT of virgin polymer.





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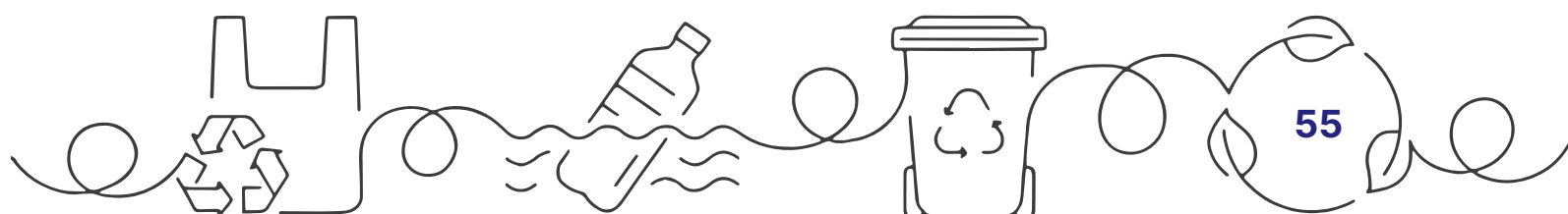
Best Practices

Reuse initiatives, such as refurbishing packing materials and sourcing used pallets, have saved 98,000+ cubic feet of wood, while dealer partnerships have cut 935 MT of wood usage and 1620 MT of carbon emissions. Repair efforts, including in-house refurbishment of 17 electronic drives, have saved 3.8 MT of emissions.

SRF operate seven recycling units and share its circular economy practices at national and international forums to encourage industry-wide adoption. Through continuous innovation—like modifying furnace nozzles to reuse spent ash—SRF reinforce their commitment to sustainability and resource efficiency.

Future Plans:

SRF plans to scale its 4R initiatives globally, ensuring consistent adoption across all manufacturing units. The company will increase PCR and PIR content in packaging films in the coming years; it also plans to increase the capacity of its indigenously developed recycling unit by 20% in this year thus reducing reliance on virgin materials. Investments are underway for next-generation recycling plants capable of handling complex multi-layer waste streams and converting them into high-quality polymers for reuse. SRF will also install rooftop solar systems at all major facilities, significantly reducing carbon footprint and promoting renewable energy use. Additionally, SRF intends to deploy digital monitoring systems for real-time waste and energy tracking, ensuring transparency and compliance. Strategic collaborations with recyclers, technology partners, and brand owners will accelerate the development of innovative packaging solutions aligned with circular economy principles.



22. Sulochana Cotton Spinning Mills Pvt Ltd



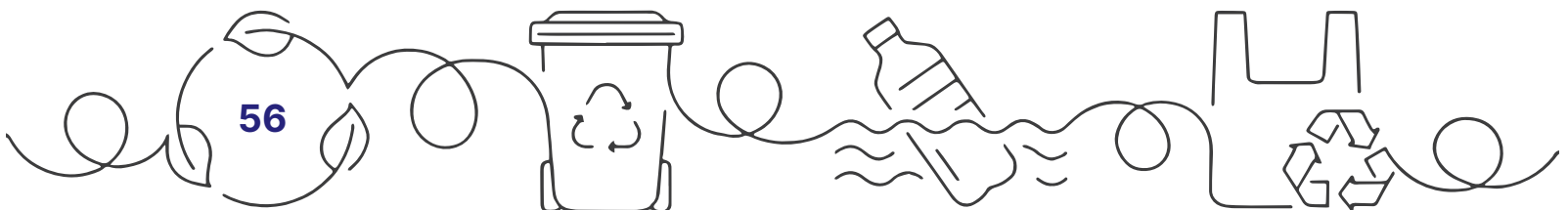
About Company

At Sulochana, with 8 decades of commitment to textile industry, they provide end to end Circularity solutions ensuring highest sustainable values. They are one of the largest producers of Mélange yarn , also into the space of Circularity, Sustainability and in Recycling. Sulochana is differentiates itself from other recyclers, while waste is being sustainably recycled, they ensure the energy required in process of recycling is through 100% Renewable sources (94% Wind, 6% Solar), thus making both the product and process sustainable.



About the Products

S.NO	Process	Products	Installed capacity
1	Recycling 7 Million pet bottles per day	Recycled dope dyed Polyester Fibres	135 Tonnes/ Day
2	Ring Spinning - 1,60,000 spindles)	Melange yarns	80 Tonnes/ Day
3	Circular Knitting	Fabrics	20 Tonnes/ Day
4	Garments	Knitted garments	18,000 Pcs / Day





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R & D Structure and Collaborations and Partnerships

Team constructed with experienced & qualified members led by JMD's, Also engaged in implementing various innovations across textile value chain. Recent focus and more promising R&D is textile to textile recycling. Across globe, only 1% of textile gets recycled. Thus success of this trial helps us to recycle post consumer polyester enzymatically

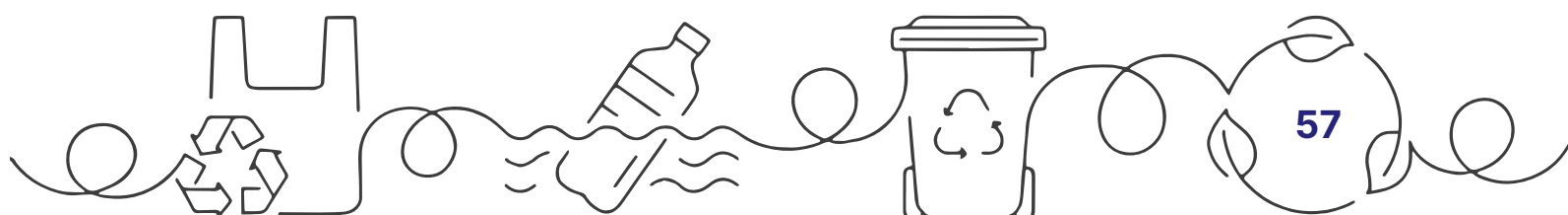
Best Practices

In 2019, Based on GHG Audit conducted by South Pole of Switzerland, they have already neutralized 94.85% of GHG Emission. Due to Dope dyeing technology, the fibre gets dyed without using single drop of water, salt and other additives are also not used in this process, due to which it leaves no effluents. The remaining's like PVC labels and PP caps of PET bottles is separated carefully and sent to other industries. PP Caps are converted to PP Pellets and are sent to plastic manufacturers, used in manufacturing plastic chairs, mouldings, dashboards, mud flaps etc.

PVC Labels have high calorific value, hence these are sent to cement Industries to generate energy, and the residues of the labels are mixed with Cements. Thus the company responsibly ensure Zero to landfill. Sulochana has conducted LCA on Dope dyed Polyester to measure Environment impact saving against GHG, Energy and Blue water

Future Plans

In polyester recycling, the biggest challenge is detection of BPA (Bisphenol A) due to polycarbonate bottle contamination. AI based bottle sorting technology, thus eliminating BPA in recycled polyester fibres.



23. Sundaram Lanka Tyres Ltd



About Company

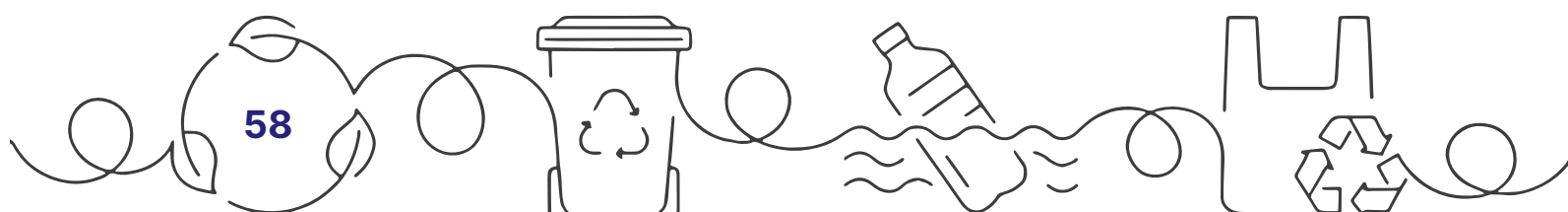
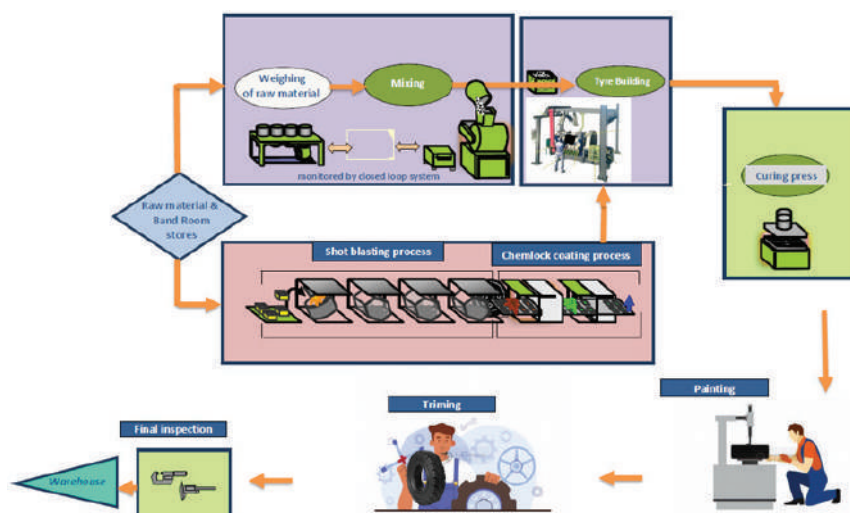
Sundaram Lanka Tyres (SUN-TWS) manufactures solid industrial tyres in Sri Lanka's BOI Biyagama EPZ, serving global OEM and aftermarket customers. The company export-focused plants run on lean/TPM systems, robust compliance and data governance, with circularity assurance, delivering consistent quality, safety and resource efficiency across resilient solid and press-on band tyres with low maintenance mobility solutions.



About the Products

SUN-TWS designs and manufactures solid industrial tyres for material-handling equipment. Their range covers resilient solid tyres and precision press-on band (POB) tyres, offered in non-marking, antistatic and heat-resistant compounds with low rolling resistance. Steel-band bonding ensures accurate interference fit and high bond durability. Applications include forklifts, reach trucks and AGVs. Each product is validated through lab compounding, drum endurance, abrasion and bond tests to deliver long, low-maintenance service life.

R & D Structure and Collaborations and Partnerships





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Best Practices

Source reduction: optimized mould venting caps flash to <1.2%; spacers enable multi-size molding; biodegradable chemical pouches cut packaging. Poka-yoke + barcodes prevent wrong mould, steel-band and green-tyre loading; in-house SPC/build software locks recipes, controls green-tyre weight, and stops out-of-spec builds; controlled mixing and chemlok application eliminate variability. Curing reliability: PLC-controlled presses with steam auto-cutoff and cycle-time control prevent press drops and temperature excursions.

Utilities: PFMS dashboards, condensate recovery >85%, compressor leak audits, and use of scrap wooden pallets as boiler fuel.

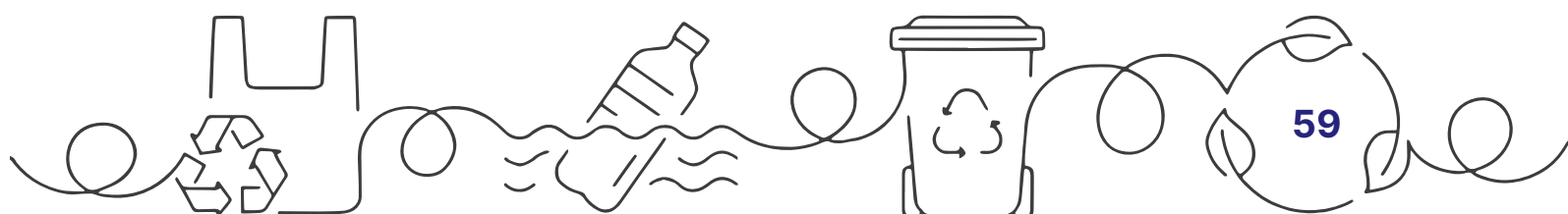
Asset care: structured PM/TPM, thermography and vibration analysis.

Digital ops: online OEE, digital attendance, hydraulic-oil management and filtration (~50 L/month) for reuse. Circularity: ≤30% friction-cord reuse, reclaim-rubber substitution, recovery/re-bonding of steel bands, cured flash to castor-wheel makers, and scrap tyres to reclaimers.

Future Plans

Launch a Super Solid Tyres (SST) product line for ultra-heavy-duty and port/warehouse duty cycles.

- Reduce Scope 3 (purchased goods, upstream logistics, waste) intensity through material circularity and supplier engagement.
- Expand plant capacity with quality-centric automation and energy/circularity guardrails.
- Deepen digital governance (PFMS/OEE/EMS/Barcode) and third-party assurance for sustainability.



24. Tata Consumer Products Ltd

TATA
CONSUMER
PRODUCTS

About the Company

Tata Consumer Products unifies the Tata Group's food and beverage interests under one umbrella. Established five years ago by merging the Tata Global beverages and food business of Tata Chemicals Ltd, the company began with a focus on tea, coffee, and salt, and has since evolved into a diversified portfolio of packaged food and beverage offerings. With scalable platforms, expanded reach, and future-ready capabilities, TCPL continues to innovate across categories and consumption occasions, reinforcing its position as a leading player in India's consumer goods landscape.

About the Product

Launched in 1983, Tata Salt was India's first national branded iodized salt, revolutionizing a market dominated by local brands. It pioneered salt iodization and with vacuum-evaporation technology, setting new standards for purity. Today, as the category leader and one of most trusted food brands, Tata Salt reaches to about 90 crore consumers nationwide. Its enduring promise of "Desh ki Sehat, Desh ka Namak" reflects a legacy of quality, trust, and commitment to nation's health.

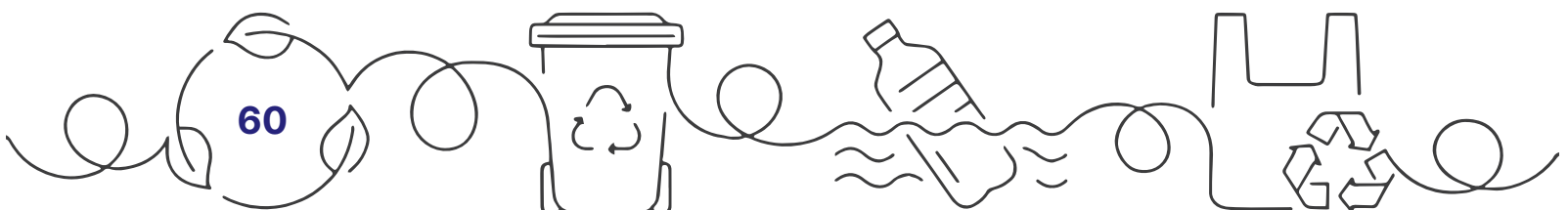
R & D Structure and Collaborations and Partnerships

TCPL's Business and sustainability teams collaborate cross-functionally with CFAs, legal, and packaging vendors to design scalable reuse models. Sustainability is deeply embedded in TCPL's operations, driven by the 4R principles-Reduce, Reuse, Recycle, and Repair. The company holds an EPR license and maintains SOP-driven traceability across all packaging inputs.

Best Practices

TCPL is one of the founding members of the India Plastics Pact. Tata Salt is among pioneers in 4R philosophy executing this at such large scale -

1. Recycle- Tata Salt pioneered recyclable packaging by developing recyclable molecules in 2016 in partnership with Dow Chemicals, and today 94% of its packs use recyclable mono-material films, advancing toward 100% recyclability.





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2. Reuse - TCPL has long reused 50kg bulk bags from its Mithapur plant for repacking 1kg SKUs as FG, achieving 65% reuse and minimizing new plastic consumption.

3. Repair - in FY22, team downgauged the laminate structure of Tata Salt saved 500 tonnes of virgin plastic,

4. Reduce –

a. Reducing pack height from 222mm to 217mm saved 300 tonnes plastic.

b. Another height reduction project in 2024 was done to bring it from 217mm to 209mm getting another 500 tons plastic saving.

c. Plastic Audit in 2023 revealed that TCPL purchased 16.6 lakh new bags of 25kg every month, while 8–9 lakh bulk bags of 50kg were discarded. To address this, TCPL executed “cut-and-use” model, resizing and stitching bulk bags for reuse in 25kg SKUs. Once successful, they increased the pack size from 25kg to 30kg, reducing the need for 20% bags further.

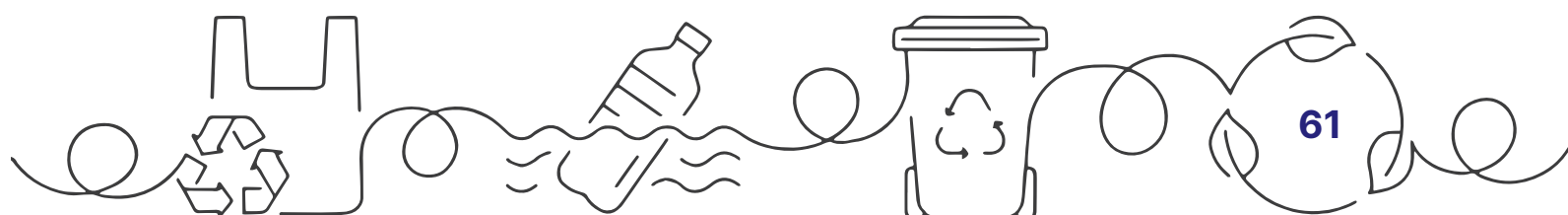


Future plans :

TCPL rolled this out slowly across various depots, completing 56% of implementation in 2025, this effort reduced monthly bag purchases by ~50 lakh bags and saving 267 tonnes of plastic and Rs.1.8 cr in value in FY25. Future plan is to scaled this to 90%, targeting 400 tonnes in annual savings.



The next phase focuses on repurposing the upper portion of discarded bulk bags—currently recycled as scrap—into small utility bags through cutting, stitching, and handle punching. This innovation transforms 1 crore secondary bag which were scrapped into functional packaging, and even long lasting reinforcing TCPL's commitment. The model is very common sense driven, low-tech, cost-effective, and among the most scalable reuse solutions in India's FMCG sector.



25. TCS Life Science Research

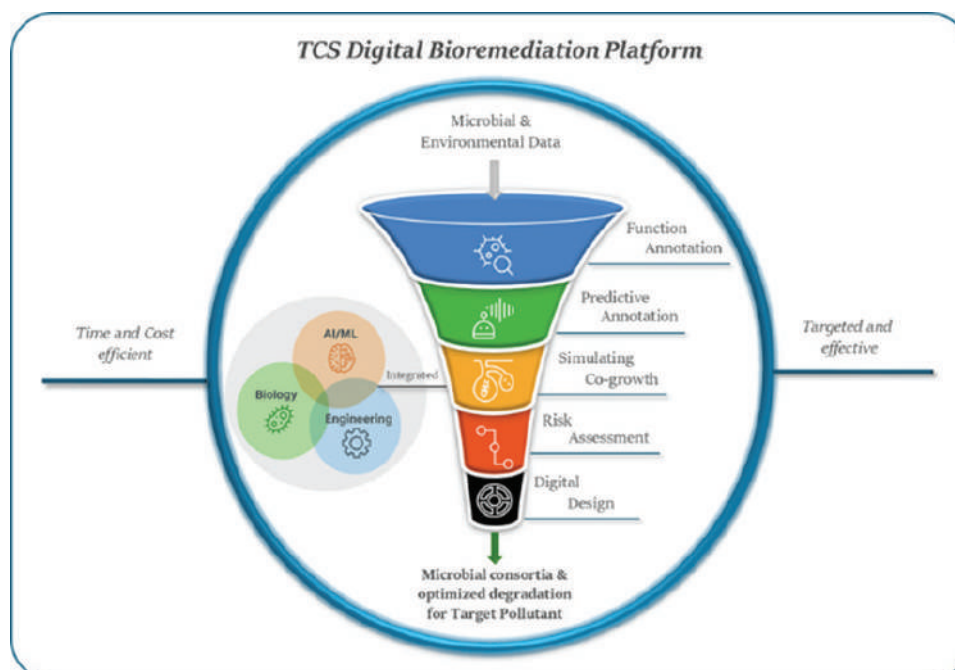
tcs TATA
CONSULTANCY
SERVICES

About Company

Tata Consultancy Services (TCS) is a global IT services and consulting leader. At TCS Research, we build sustainable solutions focused on people, planet, and purpose – advancing digital, scalable transformation with the 4R framework and ESG tracking embedded across operations and innovation.

About the Products

- Digital Bioremediation Platform:** An AI/ML and genomics driven engine that designs pollutant specific, non GMO microbial consortia for safe, complete degradation of pollutants; features biosafety gating and co-culture simulation for enhanced safety and scalability.
- Deployable Microbial Consortia:** Co cultivable, biosafe formulations tailored to industrial contexts, addressing persistent toxins (e.g., PCBs, plastics) and enabling measurable “Reduce/Recycle” outcomes.





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R & D Structure and Collaborations and Partnerships

Address limitations of traditional bioremediation -> Develop AI-driven platform -> Integrate microbial & environmental data -> Predict pollutant-specific consortia & routes -> Validate (PCBs-TERI, PET/LDPE-IIT Kharagpur) -> Plan MoEFCC-aligned trials -> Secure 2 patents -> Deploy from lab to field

Partnerships:

- The Energy and Resources Institute (TERI): Lab validation, consortia optimization.
- Ministry of Environment, Forest and Climate Change (MoEFCC): Regulatory alignment, facilitation of field trials (SAIL Bhilai).
- IIT Kharagpur: Lab-scale validation for PET/ LDPE degradation

Best Practices

Bioremediation platform: Uses biosafety and co-cultivability checks as key criteria to select optimal microbial consortia, ensuring safe, effective, and scalable bioremediation; thereby maximizing environmental safety and operational reliability. Lab-scale validation of persistent pollutant bioremediation showed >90% PCB removal within 72 hours and 16–69% PET/LDPE degradation over 120 days.

TCS operationalizes 4R through enterprise programs and digital governance: ~89% reduction in per capita paper consumption since 2008. Elimination of single use plastics across all campuses. Smart building controls, IoT enabled efficiency, and “Green IT” to reduce resource use. Smart food digital twin initiative: ~86% of office sites achieved “zero waste to landfill” certification. Consumables (paper, toner, packaging) recycled by design; e waste and biomedical waste routed only via certified recyclers. A Digital ESG solution tracks metrics and aligns disclosures with GRI/TCFD, ensuring continuous performance management.

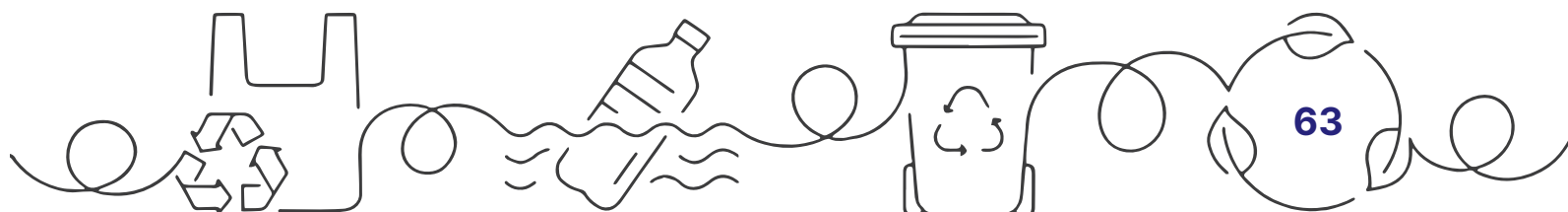
Future Plans

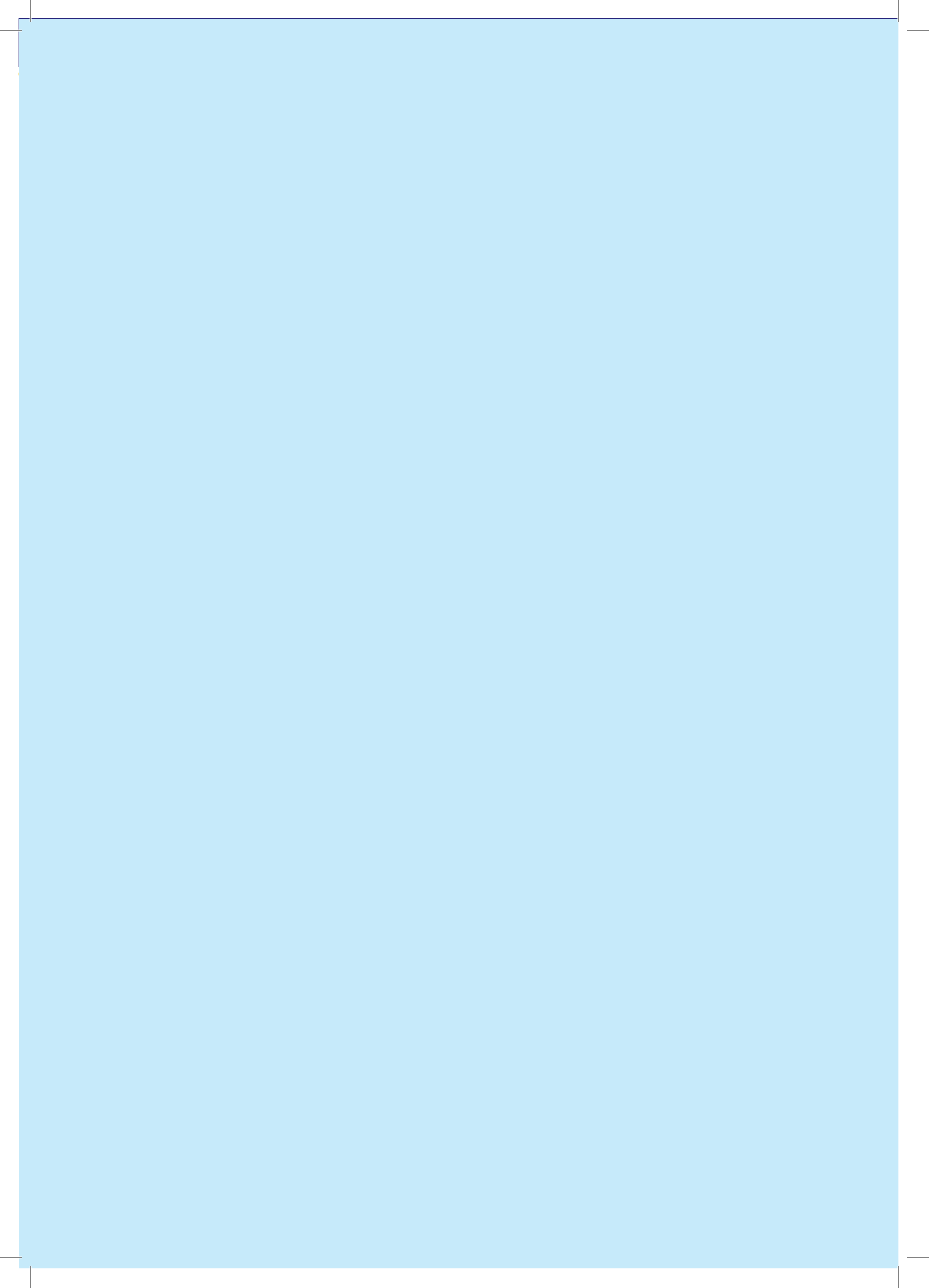
Scale the platform’s knowledge base (~25k→50k genomes).

Deploy AI driven multi agent design workflows.

Advance PCB bioremediation to >TRL 4 via pilots at Bhilai.

Diversify into PET/PFAS, complex polluted environments, real time diagnostics, and biomanufacturing to convert waste into sustainable materials and fuels. Enable businesses to offer Bioremediation-as-a-Service.





**Other notable
Success Stories:**
Minimizing and
Managing Waste across
the country

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1. 3R zerowaste Pvt Ltd



About Company

In just five years, 3R Zerowaste Private Limited has grown from a bold sustainability vision into one of India's most dynamic climate-tech enterprises, championing the principles of Reduce, Reuse, and Recycle through data-driven waste management solutions. Founded with the mission to build a circular economy where waste becomes a valuable resource, 3R Zerowaste has successfully implemented scalable models in E-waste, Industrial waste, and Municipal Solid Waste management across North India. They have been defined by a blend of on-ground infrastructure and digital innovation.

About the Products

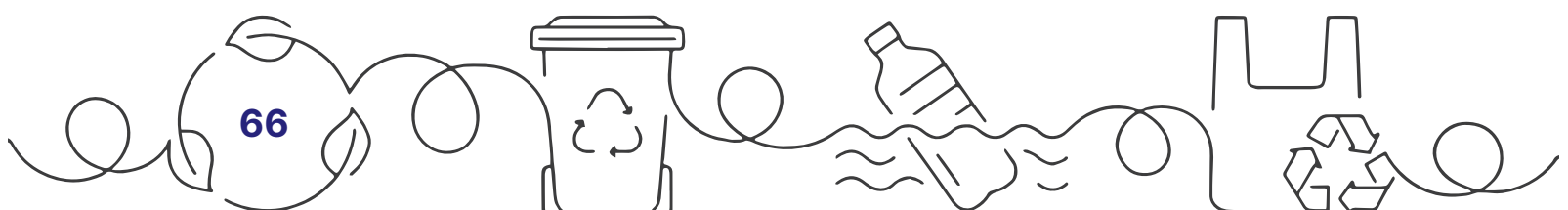
3R Zerowaste have established Material Recovery Facilities (MRFs), waste collection networks, and reverse logistics systems for industrial and municipal clients. Alongside, they launched the KarmaCoins mobile application, a revolutionary citizen engagement platform that rewards individuals for sustainable gestures like recycling, composting, and responsible disposal. KarmaCoins has become the digital bridge between communities and circular economy goals, driving behavioral change at scale. In recognition of its innovation and social impact, 3R Zerowaste has been selected by IIT Kanpur's Incubation Centre for the 2025 Social Innovation Lab 3.0, positioning the company among India's most promising sustainability startups.

R & D Structure and Collaborations and Partnerships

Over the years, 3R Zerowaste has received 35+ national and international awards, honoring our contribution to clean technology, ESG consulting, and sustainable urban development. They are also pioneering the 4-bin waste segregation model, expanding upon India's traditional 2-bin approach, to enhance material recovery and reduce landfill dependency.

Future Plans

3R Zerowaste focus is on leveraging AI, IoT, and blockchain to create transparent, traceable, and efficient waste value chains. 3R Zerowaste envisions becoming a catalyst in India's journey towards net-zero and circular economy transformation, where sustainability, technology, and community empowerment work hand in hand for a cleaner and more resilient planet.





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2. Aindri Initiatives Pvt Ltd



About Company

Aindri Initiatives Pvt Ltd is a Mumbai based startup working towards decentralised waste management solutions. The company set up Biogas Plants to convert organic waste into electricity within the premises, thereby reducing waste going to landfills and promoting a circular economy. The company modular captive consumption Biogas Plant converts biodegradable waste into electricity within large premises such as residential or industrial townships, airports, hotels, and IT parks.

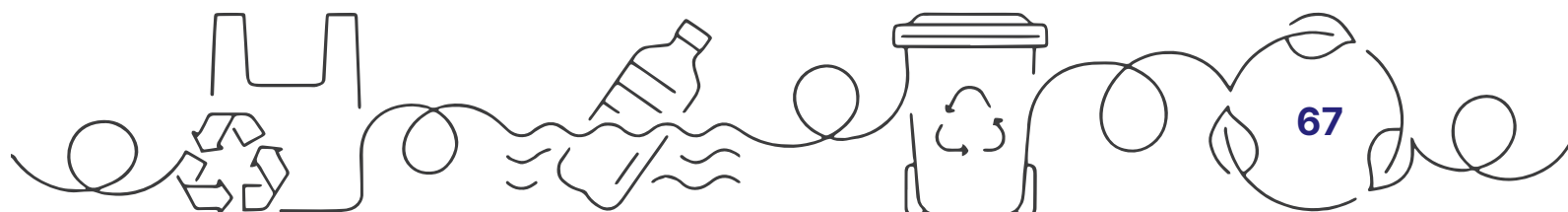


About the Products

As space is a major constraint, we have developed an innovative pre fabricated tank in tank Biogas Plant requiring minimal area. The plant uses few electromechanical components to maintain low operational costs, and integrated Hydrogen Sulfide scrubbers to eliminate foul odour. It delivers effective energy generation while optimising OPEX, CAPEX, space, and maintaining hygienic conditions.

R & D Structure and Collaborations and Partnerships

Aindri's R&D team developed the unique Tank-in-Tank design, integrating primary and secondary digesters in a single unit to optimise space, reduce material use, and improve biogas yield. This innovation emerged from in-house R&D in collaboration with Dr. Sharad P. Kale, Padma Shri Awardee from BARC. In order to develop Biogas plants for different kinds of Biomass like Spent Wash and Presmud we have partnered with Primove Engineering Pvt Ltd and Gangotree Energy Projects Pvt Ltd. Additionally, to improve their sales outreach we have partnered with an industry leader in Organic Waste Composter Excel Industries Ltd.

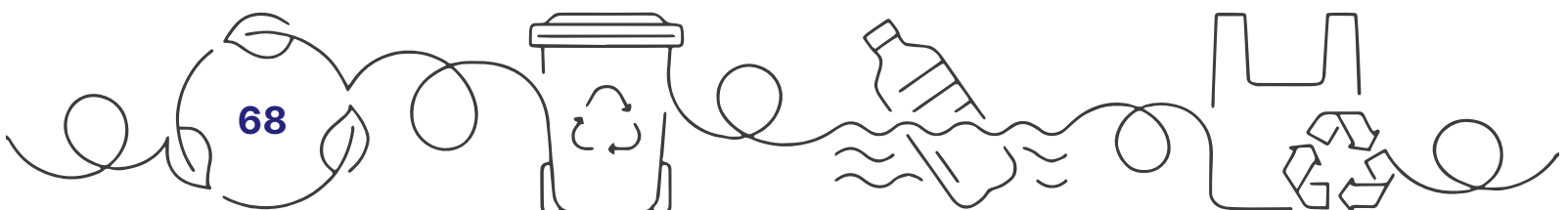


Best Practices

Aindri's biogas solution follows a circular, zero waste approach. By processing waste at source, their model eliminates transportation, reduces carbon footprint, and ensures energy is reused within the same premises. They deploy prefabricated modular tanks, reducing setup time and optimising space utilisation in urban developments. The company systems include automatic feeding and odour control units for improved hygiene and user experience. Each project is monitored digitally to track waste input, biogas generation, and electricity output. The company business model emphasises on local employment. They created over 43 direct and indirect jobs and had a measurable impact, diverting 10.95 lakh kg of waste from landfills and generating 1.09 lakh kWh of renewable energy annually. Five operational projects in Maharashtra have been executed successfully for reputed clients including Prestige Group, Lodha, Hubtown, Kolte Patil, and Paranjape Schemes.

Future Plans

Looking ahead, Aindri plans to scale its processing capacity from 3 TPD to 13 TPD through eight upcoming projects across Maharashtra, Rajasthan, Karnataka, and Tamil Nadu. The company long-term goal is to partner with waste generators, promoting sustainable biogas adoption and contributing significantly to India's renewable energy and waste reduction targets.





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3. Bosch Chassis System India Pvt Ltd



About Company

Established in 1985, RBIC is a subsidiary of the Bosch Group in India.

RBIC's business areas include actuation and modulation of the Braking System. The company manufactures world-class Brake System components to comply with the stringent requirements of leading OEMs in the automobile industry. RBIC manufactures Brake System Components for Three-wheelers, Passenger Cars, Utility Vehicles and Light Commercial Vehicles. The organization has manufacturing and assembly locations at Chakan (near Pune) and Manesar (near Gurgaon). Purpose "World Class Products For A Safer India."

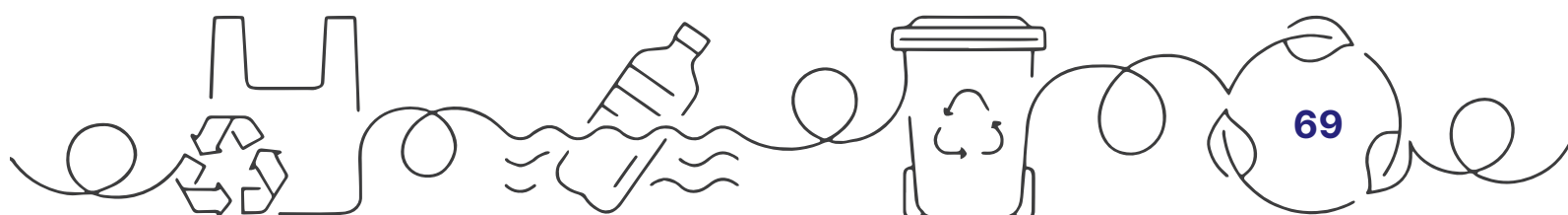
About the Products



Antilock braking system (ABS) is the consistent further development of the Bosch active driving safety system. The most important feature is the scalable product concept with modular software architecture. Generation 9 offers an ideal brake control system for all vehicle segments – whether for small cars or premium vehicles right up to light trucks

iBooster: More efficient combustion engines, hybrid and electric drives, as well as modern driver assistance functions require modular and scalable vacuum-independent solutions for the braking system. With the iBooster, Bosch has developed a vacuum-independent, electromechanical brake booster that meets the demands of a modern braking system.

Electronic Stability Program : The electronic stability program (ESP®) supports the driver in nearly all critical driving situations. It comprises the functions of the antilock braking system (ABS) and the traction control system but can do considerably more. It detects vehicle skidding movements and actively counteracts them. This considerably improves driving safety.



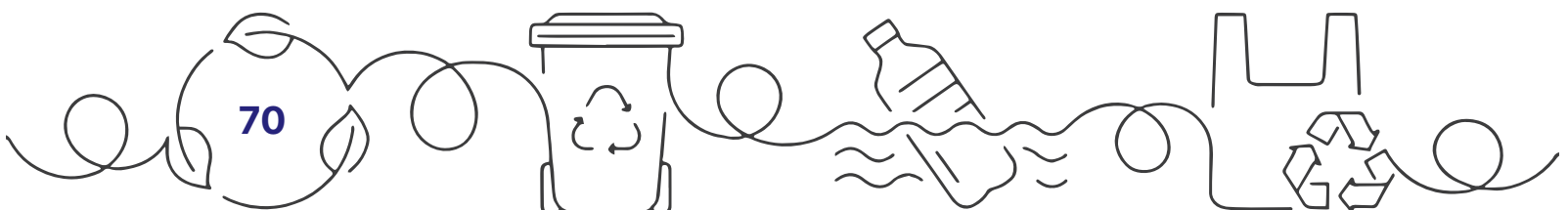
Best Practices

Bosch has a clear vision with SQCD approach. SQCD starts with S- Safety, Q- Quality, C- Cost, D- Delivery. Also, Bosch has its own Safety standards for compliance. There are guidelines defined for safety and environment protection focusing on the key aspects like sustainability, responsibility, continuous improvement, product and process. These safety guidelines are repetitively communicated to all employees in a language and manner they understand

- 1) Plant achieved Zero waste to landfill
- 2) 4R Approach for circular economy
- 3) More than 90 % returnable packaging for OEM customer
- 4) One Month-One Campaign
- 5) Our Waste – Our Responsibility initiative
- 6) Best out of waste innovation projects
- 7) Swacchata hi Seva
- 8) Employee engagement at plant & Social drives.

Future Plans

Bosch's future plans center on transforming into a software-driven technology company, with a strategic focus on Artificial Intelligence of Things (AIoT), sustainable technologies, and digital services. The company aims to achieve this by integrating AI and IoT across all its business sectors, from mobility to manufacturing, and by expanding its role in emerging markets like India.





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4. CSIR-Indian Institute of Chemical Technology



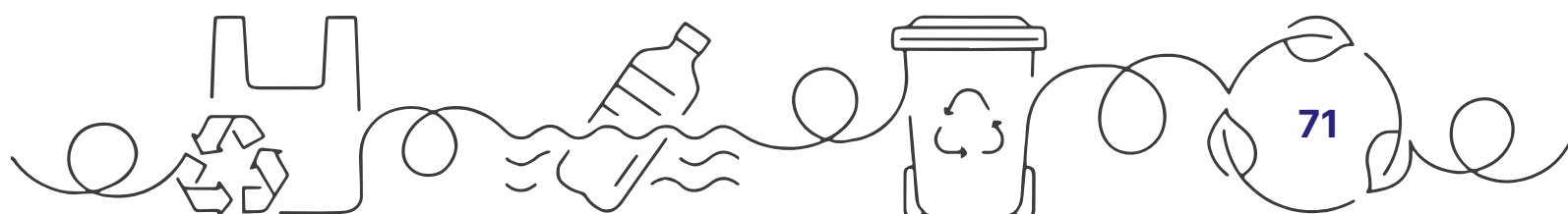
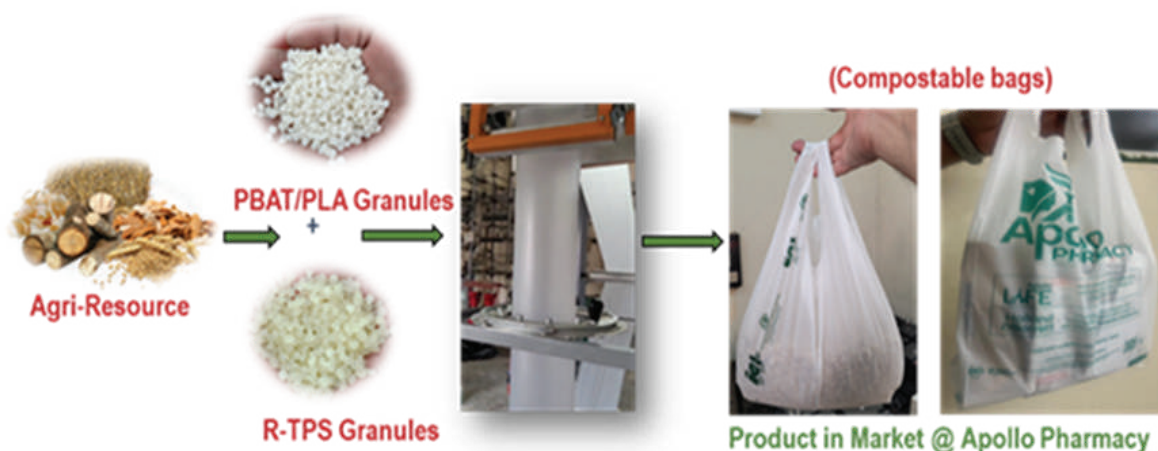
About Company

The Council of Scientific and Industrial Research – Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, under the Ministry of Science and Technology, Government of India, is a leading R&D institute driving sustainable innovations in process chemistry and materials engineering.

About the Products

Nanocellulose-Engineered Thermoplastic Starch Blends for Compostable Carry Bags: A Sustainable Strategy for Improved Waste Management and Valorization

Guided by the 4R principles, CSIR-IICT has developed nanocellulose-Engineered Thermoplastic Starch (r-TPS) Blends for Compostable Carry Bags, designed as an eco-friendly replacement for conventional plastics. It adopted a holistic approach toward circular economy practices that integrate reusing process by-products, recycling post-consumer materials into value-added products, and waste valorization to minimize environmental footprints across industries.



R & D Structure and Collaborations and Partnerships

In line with India's Plastic Waste Management Rules (2016), Swachh Bharat Mission, and Atmanirbhar Bharat, CSIR-IICT's r-TPS Blends for Compostable Carry Bags, offering a viable and eco-friendly replacement for single-use plastics. This innovative technology converts renewable agricultural residues into high-performance, compostable polymers. Nanocellulose is extracted through delignification and acid hydrolysis and reinforced into a thermoplastic starch matrix to form r-TPS granules with improved tensile strength, flexibility, and barrier properties. These compostable bags completely degrade within 90–180 days under industrial composting conditions, as validated by CIPET, ensuring a sustainable end-of-life cycle with zero microplastic formation.

The R&D framework integrates biomass valorization, polymer compounding, and sustainable product design within its Chemical Engineering & Process Technology Division. Through a dynamic collaboration with GreenWorks Bio Pvt. Ltd., Hyderabad, this technology has been successfully commercialized at TRL-9 with the launch of nineteen compostable products, marking a milestone achievement in India's biodegradable polymer sector.

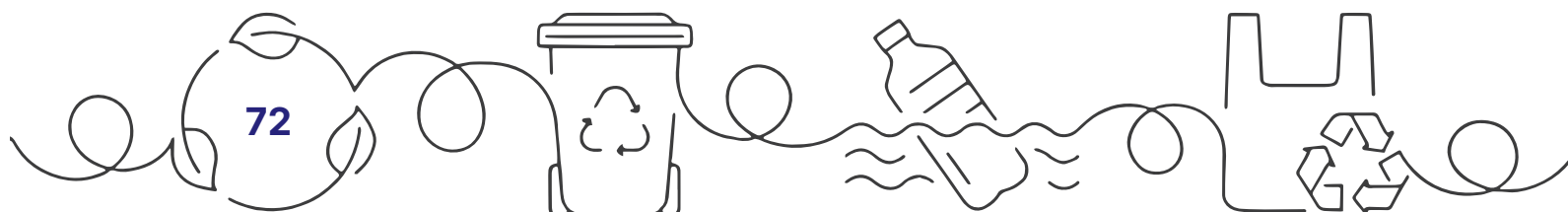


Best Practices

The developed technology showcases sustainable waste management by converting agricultural residues into biodegradable packaging materials, now commercially available in the market. This approach simultaneously mitigates plastic pollution and promotes biomass waste utilization. The technology follows a circular resource flow, valorizing renewable feedstocks such as corn, cassava, and millet into compostable biopolymers. Industry-ready scalability is realized via continuous compounding and extrusion processes compatible with existing polymer production infrastructure, enabling seamless adoption by manufacturers.

Future Plans

CSIR-IICT's 4R-based practices—reducing plastic dependency, reusing waste biomass, recycling by-products into high-value polymers, and recovering resources through green processing, exemplify sustainable innovation in action. Moving forward, the institute envisions expanding this compostable polymer platform to industrial packaging, agricultural mulch films, and bio-based monomers such as adipic acid and 1,4-butanediol from waste biomass. These efforts reinforce India's transition toward a resilient, circular, and environmentally responsible materials economy for a sustainable future.





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5. ESL Steel Ltd, Vedanta



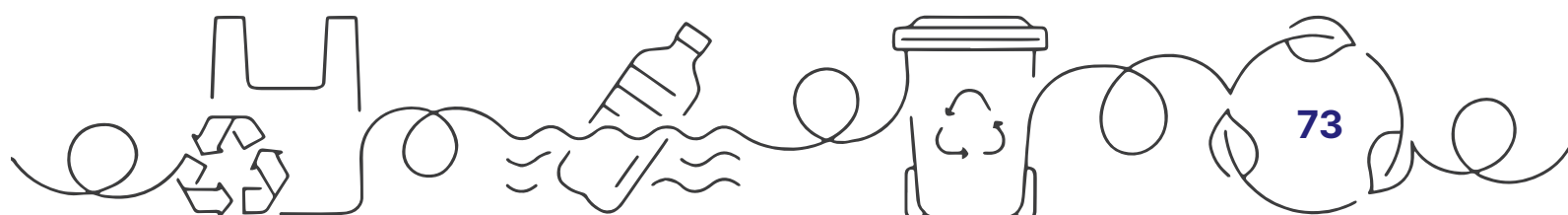
About Company

ESL Steel Ltd, a Vedanta Group company, is a prominent integrated steel manufacturer of 1.5 MTPA capacity in Bokaro, Jharkhand. The company is committed to excellence in quality, environment, and occupational health and safety is evidenced by various ISO certifications, including ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018. They are recognized for strong growth, operational efficiency, and significant commitment to sustainability and community development.



About the Products

ESL products are V-XEGA TMT bars, manufactured confirming to IS standards for superior strength and seismic resistance, making them ideal for construction; V-WIRRO wire rods are hot-rolled steel products available in low, medium, and high-carbon grades, in sizes ranging from 5.5mm to 16mm. Produced using advanced technology, they offer superior drawability, excellent surface finish, and uniform mechanical properties, conforming to relevant IS standards. These are critical for applications in the engineering, construction, power, and automotive industries and V-DUCPIPE ductile iron pipes, which are inherently corrosion-resistant and used for water supply and pressure sewerage. These products meet stringent quality standards and are critical for infrastructure development.



R & D Structure and Collaborations and Partnerships

ESL Steel, in collaboration with IIT (ISM) Dhanbad, is researching the upcycling of fly ash and cement slurry from its Ductile Iron Pipe (DIP) plant. The study focuses on determining the optimal ratio for blending these waste materials to develop sustainable, high-value products for applications like construction. This R&D effort transforms industrial byproducts into valuable resources, reduces landfill waste, and strengthens the circular economy.

Best practices:

At ESL Steel, environmental responsibility is central to its "Zero Harm, Zero Waste, Zero Discharge" philosophy, implemented through sustainable best practices.

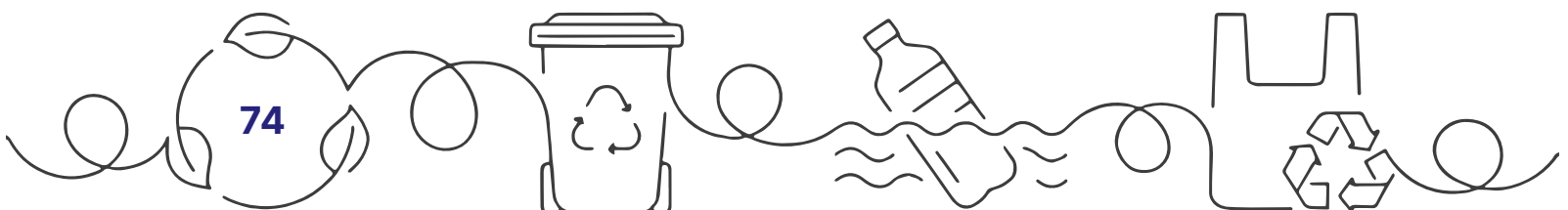
Developed two Miyawaki forestry site of total 3.6 Acre area planting over 70000 + saplings of various native species. The site are equipped with drip irrigation facility & being maintained to suppress the unnecessary weed growth. The Miyawaki site are home to various birds and small animals.

The company has installed five STPs with a total capacity of 575 KLD, enabling efficient wastewater recycling and reducing freshwater dependency. This advanced water management contributed to a 27% recycling rate, reusing 1.3 million cubic meters of water in FY2025.

The company achieves 100% utilization of industrial by-products like ash and BF Granulated slag, converting waste into valuable resources for cement and construction sectors. ESL also extends its sustainable ethos to its supply chain through a green procurement policy, ensuring vendors align with stringent ESG criteria.

Future plans:

ESL Steel is expanding its Bokaro plant capacity, driven by strong domestic demand. Future plans focus on green steel production, including deploying Coke Dry Quenching (CDQ) technology for energy efficiency, installation of TRT at Blast Furnace for power generation and installing rooftop solar panels to boost renewable energy generation. The company also aims to explore greener technologies like green hydrogen.





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6. Gangotree Energy Projects Pvt Ltd

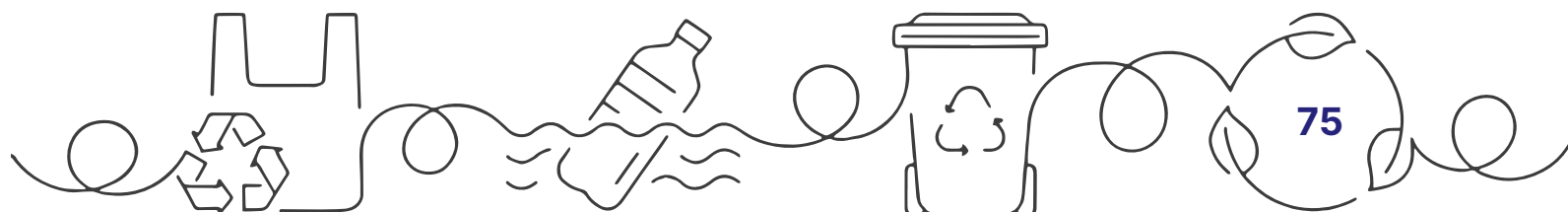


About the Company

Gangotree Energy Projects Pvt. Ltd. (GEPPL) is a Pune-based cleantech company championing decentralized waste-to-energy solutions, with a focus on converting non-recyclable dry waste into renewable fuel pellets branded as 'Urjwala'.

About the Products

- **Urjwala Pelleting Plants** for dry and garden waste incapacities 500 kgs /day to 5 Tons/day
- **Urjwala RDF Pellets:** Produced from non-recyclable dry waste and garden waste, these 8mm pellets offer a calorific value of 3800–4500 kcal/kg and are used for co firing in solid fuel fired industrial boilers and gasifiers.
- **Waste Vision App:** An AI-driven mobile tool for real-time waste characterization, material prediction, traceability and batch analytics for decentralized processing.



R&D Structure & Collaborations

GEP has an in-house R&D team focused on dry waste characterization, emission trials, machine design, and IoT system development. Collaborations include Thermax Ltd. For combustion co-firing trials and cooperating NGOs like Saahas , Kushaagra , Uboontu foundations , etc . The 'Waste Vision' AI tool and smart automated plants reflect GEP's innovation-driven growth.

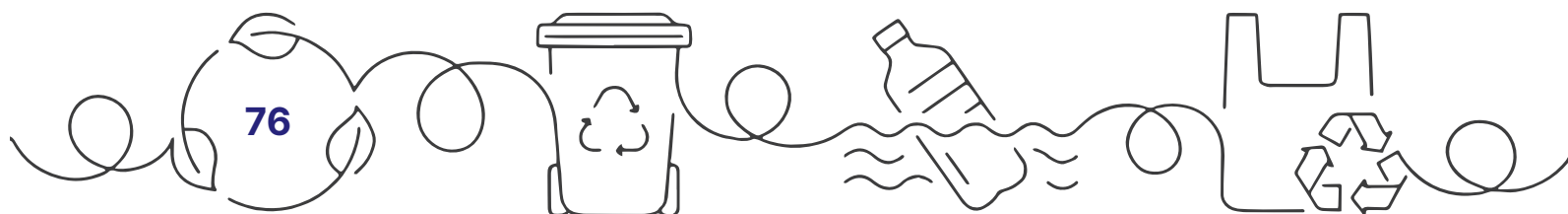
Best Practices

Gangotree's decentralized RDF pelleting model enables waste-to-energy conversion close to the source. Key practices include:

- Source segregation awareness drives in campuses and residential colonies.
- Modular processing units (300 kg/day to 5 TPD) with IoT monitoring.
- Scientific co-firing in boilers, verified with emission trials and approvals.
- Community participation through dignified employment of waste workers as 'Urojdaatas', offering PPE, insurance, and skill training.
- Engagement with ULBs, defense campuses, and industries for plug-and-play WtE deployments.
- Real-time waste prediction via Waste Vision App giving traceability and predictive analytics . These practices align with SWM 2024 rules and promote zero-landfill, energy-positive models.

Future Plans

Gangotree Energy aims at mainstreaming De Centralized Waste Management and deploy 250 + decentralized Urjwala RDF pelleting plants waste centers working with local waste management companies across India by 2027, integrating AI, IoT, and carbon credit-linked W2E clusters across Indian towns and cities.





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7. IISc Bangalore



About Company

VOILA is a deep-tech start-up of IISc Bangalore dedicated to accelerating the circular economy by converting complex plastic waste streams into high-performance, value-added products. VOILA integrates advanced materials science with additive manufacturing to create truly sustainable, closed-loop solutions for industrial and consumer goods.

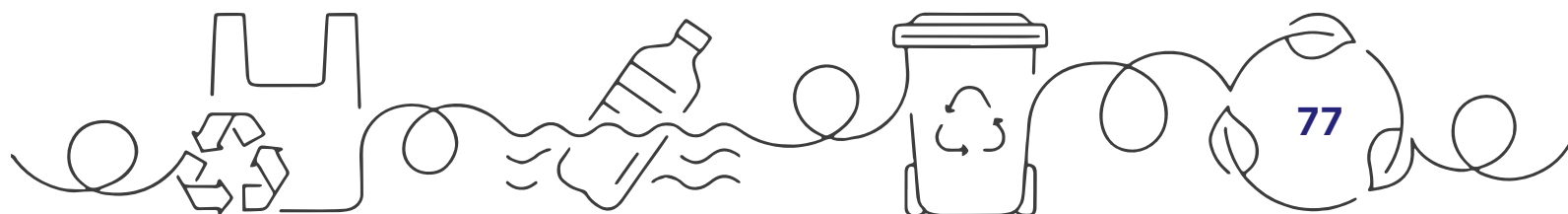
About the Products

VOILA produces highly customized industrial prototypes and functional consumer goods using recycled plastic waste. VOILA's core product is a line of Durable Connectors and Structural Nodes for modular furniture, offering superior strength and rigidity. They also produce Aesthetic Household Items (e.g., modern planters, desk accessories). All products are designed for infinite recyclability through their proprietary process.



R & D Structure and Collaborations and Partnerships

VOILA R&D focuses on Material Science for Extrusion-Based 3D Printing. VOILA's structure involves iterative testing of polymers, specifically focusing on Vitrimers Chemistry to achieve precise rheological control. They currently collaborate with the IISc's Department of Materials Engineering for polymer characterization and validation, and with a local Material Recycling Facility (MRF) for sourcing high-quality, segregated waste.



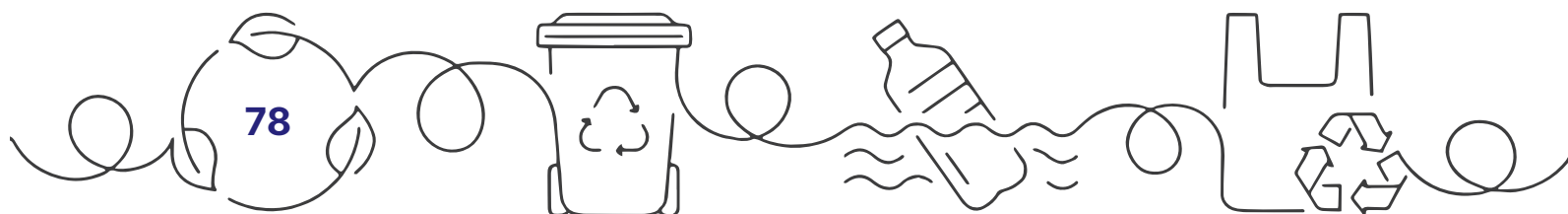
Best Practices

VOILA's best practice centers on molecular-level waste valorization. Traditional 3D printing often degrades recycled plastics due to high heat and shear, causing a fatal drop in viscosity and mechanical failure. They overcome this using Vitrimer Chemistry. By introducing dynamic covalent bonds into the waste plastic matrix during the compounding stage, we achieve two things:

1. **Controlled Flow:** The Vitrimers control the melt viscosity and prevent polymer chain scission (degradation), ensuring flawless print quality and consistency.
2. **Infinite Recyclability:** The printed parts, when at end-of-life, can be easily melted down again. The dynamic bonds rearrange rather than breaking, allowing the material to be re-extruded and re-printed without loss of mechanical integrity—a true closed-loop process. This practice addresses the "Recycle" and "Repair" elements of the 4R framework.

Future Plans

VOILA plan to scale our material production line by integrating a continuous Reactive Extrusion System to process mixed plastic waste streams (PET/PP) using our Vitrimer additive. This will allow us to expand our product line into the automotive and construction sectors, making our sustainable materials competitive globally.





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9. Max Serve Industries Pvt Ltd



About Company

MAXSERVE INDUSTRIES PVT LTD specializes in sustainable waste management and circular economy solutions. With a strong focus on innovation, environmental responsibility, and operational excellence, the company provides integrated waste handling, recycling, and resource recovery services to various industries.



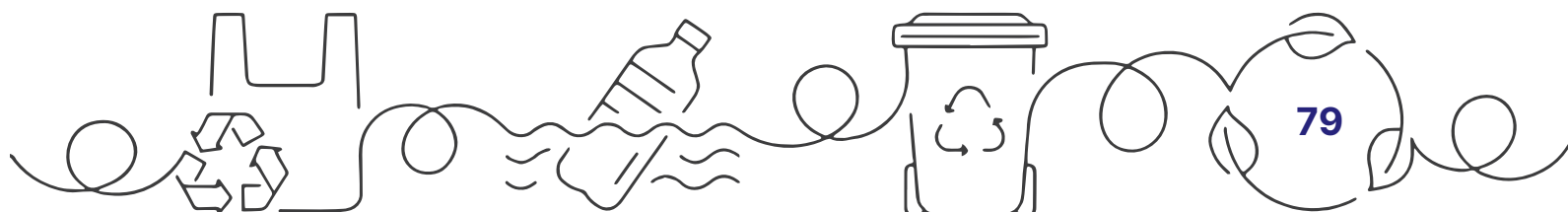
About the Products

The company core offering is an Industrial Plastic Waste Solution. This includes:

1. Controlled Waste Segregation Unit: A digitally monitored system that tracks waste sorting at the source, improving recycling efficiency by over 40%.
2. Circular Economy System: A developed system ensuring complete waste management is tracked, monitored, and accounted for until it returns to the customer in a usable condition. Designed for industries of all sizes, it helps reduce and reuse plastic at all levels and ensures the end customer is aware that packaging is made from recycled plastic.

R & D Structure and Collaborations and Partnerships

The company in-house R&D division operates under a multi-tier innovation model comprising Technology Research, Product Development, and Process Optimization units. We collaborate with large and medium-sized industries for technology validation and joint



product development tailored to their needs. These partnerships also enable the large-scale implementation of recycling projects with data-driven improvements.

Best Practices

Maxserve Industries follows an integrated approach to waste management, combining technology, data analytics, and community engagement. Key best practices include:

Digital Tracking: End-to-end waste traceability using QR coding.

Circular Economy Model: Waste-to-resource initiatives converting plastic waste into usable raw materials.

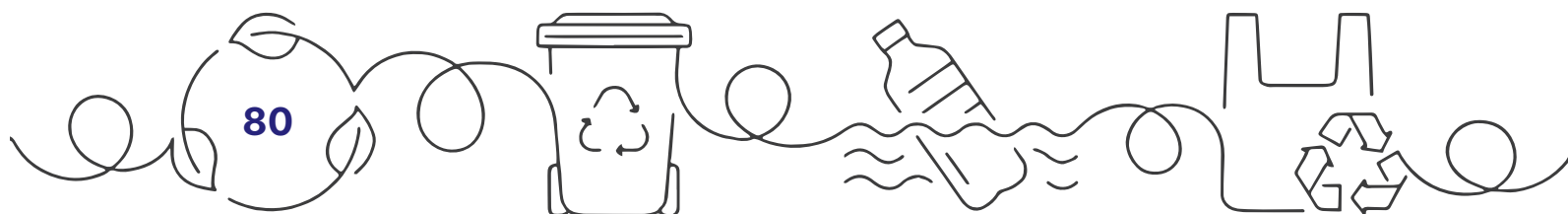
Employee and Community Engagement: Training programs promoting segregation at the source and sustainability awareness.

Green Operations: Zero-landfill operations, optimized logistics for carbon reduction, and the use of renewable energy across facilities.

These practices have resulted in measurable reductions in waste sent to landfills and increased recycling efficiency.

Future Plans

Max Serve Industries aims to expand its waste-to-energy initiatives, enhance digital waste management platforms through AI integration, and scale operations to all sectorial industries. The company also plan to raise awareness across all segments, encouraging end-users to responsibly use and dispose of plastic waste, and prompting brand owners to take responsibility for recycling to reduce pollution, cost, and consumption.





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10. Mouda Super Thermal Power Station (NTPC Ltd.)



About Company

NTPC Mouda (Mouda Super Thermal Power Station) is a coal based power plant owned by NTPC Ltd, located in Nagpur district, Maharashtra. It has an installed capacity of 2,320 MW (Stage I: 2 × 500 MW; Stage II: 2 × 660 MW)



About the Products

NTPC Mouda principally produces electricity for several states including Maharashtra, Gujarat, Madhya Pradesh, Chhattisgarh, Goa, Daman & Diu, Dadra & Nagar Haveli. Key by products is Fly ash which is being used for cement, bricks, road construction, and land filling.

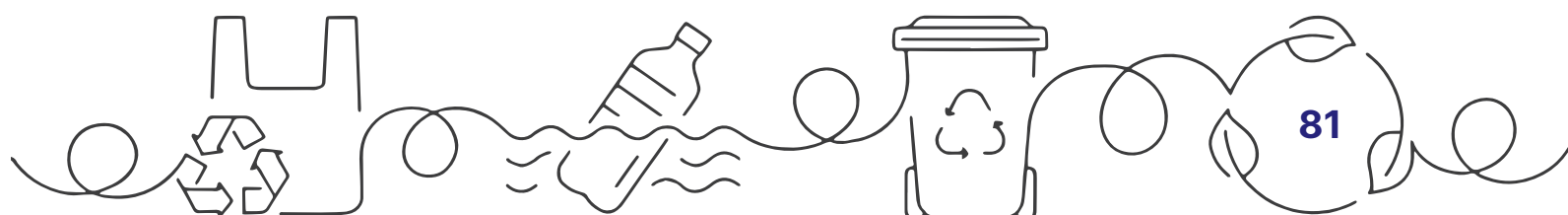
R & D Structure and Collaborations and Partnerships

While specific R&D projects are led by NTPC Energy Technology Research Alliance (NETRA), Mouda plant implements projects that align with NTPC's overall sustainability strategies. Recently, NTPC Mouda in collaboration with NETRA has Commissioned a Rs 5 Crore Non-Thermal Forward Osmosis (NTFO) pilot project treating 240 TPD wastewater from power generation

NTPC Mouda leverages partnerships with premier institutions like NIH Roorkee, NEERI, VNIT Nagpur, IIT Indore, NHAI, BHEL etc for various studies, Plant Equipment's supply etc.

Best Practices

- NTPC Mouda implements the 4R principles—Reduce, Reuse, Recycle, Repair—for sustainable waste and resource management.
- Single-use plastics are banned across the plant and township to reduce waste.
- PRADIP initiative promotes paperless operations, enhancing digital efficiency.
- Biomass co-firing reduces coal consumption; bio-methanation plant converts organic waste into biogas, lowering LPG use.
- RO reject water is reused for sanitation; 1,350 KLD of treated sewage water supports horticulture.



- Sewage water is recycled as raw water via a unique Non-Thermal Forward Osmosis (NTFO) plant.
- Zero Liquid Discharge (ZLD) ensures water from pits is treated and reused in operations. Lakh cubic meters of rainwater harvested (FY 2024-25) for groundwater recharge.
- Over 100% fly ash utilization for bricks, cement, mine backfilling, and roads for six years.
- Hazardous, e-waste, biomedical waste, and used oils managed responsibly via recyclers and CHWTSDf.
- In-house workshop refurbishes spares; predictive maintenance extends equipment life.
- Advanced pollution control: 99.96% efficient ESPs, SOFA system, ongoing FGD installation, noise reduction, and 4.5 LCM rainwater harvesting system

Future Plans

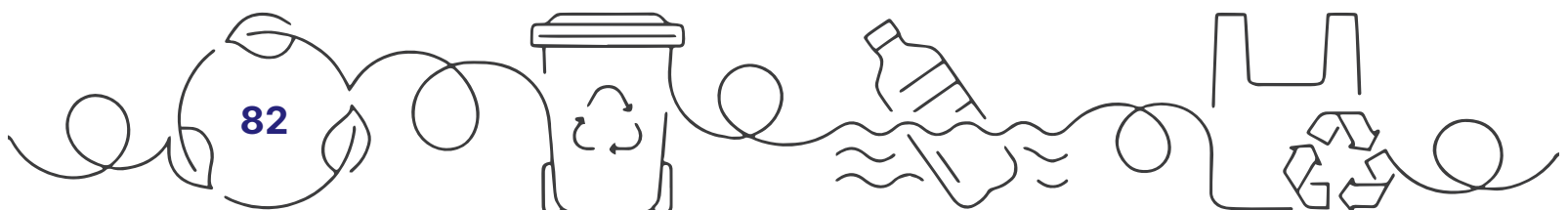
IGBC Net Zero Certification: Aiming for Net Zero Certification in waste, water, and energy for Township.

Biomass Co-Firing: 0.8% biomass used in FY24-25; target 5% by FY26-27.

Solar Energy: Expanding solar capacity from present 1.1 MW to 4 MW by FY26-27.

Ash Bagging: Installing 40 Kg bagging machines for ash transport via rail.

New ash-based products development: Like GPCA- Geo Polymer Coarse Aggregate, NACA - Nano Concrete Aggregate, LWA - Light Weight Aggregate Etc.





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11. National Institute of Ocean Technology



About Company

National Institute of Ocean Technology (NIOT) was established in 1993 under the Ministry of earth Sciences to develop technologies for the sustainable use of ocean resources, both in India's Exclusive Economic Zones and its sites in International waters. NIOT's core work involves several key areas: deep-sea manned submersibles and mining systems for 6000 m operations, coastal and environmental research, building island-based energy and desalination facilities, deploying data and tsunami buoys for ocean observation, pursuing marine biotechnology and managing ships to support various research activities.

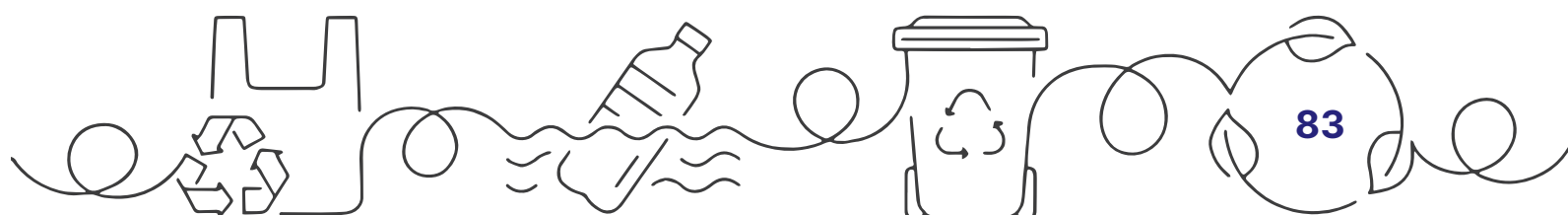
About the Products / Projects

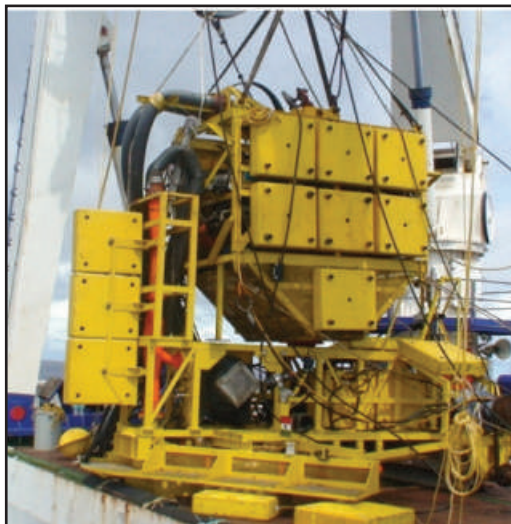
NIOT develops key oceanic systems, including Matsya 6000 - manned submersible for 6000 m, Varaha deep-sea mining system, plants for low-temperature thermal desalination (LTTD) and Ocean Thermal Energy Conversion (OTEC) for the Lakshadweep Islands. In addition, NIOT also creates various underwater vehicles, autonomous coring systems, and marine sensors.

A central part of the organization's research focuses on the "4R" principle (Reduce, Reuse, Recycle, Repair) for waste materials generated during technology development. Other 4R initiatives involve using different types of waste from Chennai—such as fly ash, lake silt, river sand, incinerated sewage ash, and construction debris—materials have been developed for building breakwaters. NIOT is also researching breakwater designs that account for a 1,000-year sea-level rise to help create a new 1,000-acre seafront area.

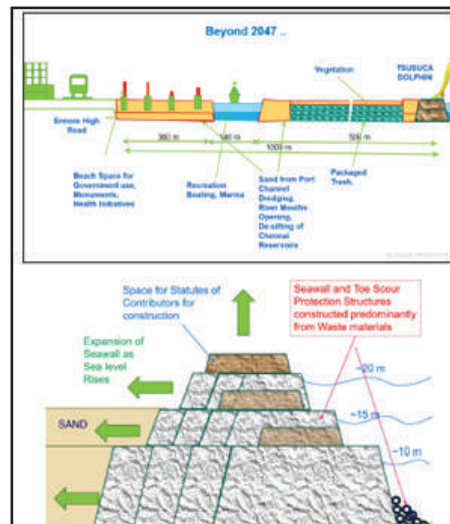
R&D Structure and Collaborations, and Partnerships

The National Institute of Ocean Technology (NIOT) conducts R&D through specialized technology groups focused on areas like ocean observation, deep-sea technology, marine sensors, renewable energy, coastal engineering, and marine biotechnology. The institute also collaborates with both national and international partners, including ISRO, IITs, universities, and CSIR laboratories, to foster joint research, technology exchange, and capacity building.





Deep -sea Exploratory Mining System developed using 4R approaches and tested at 4911 m depth



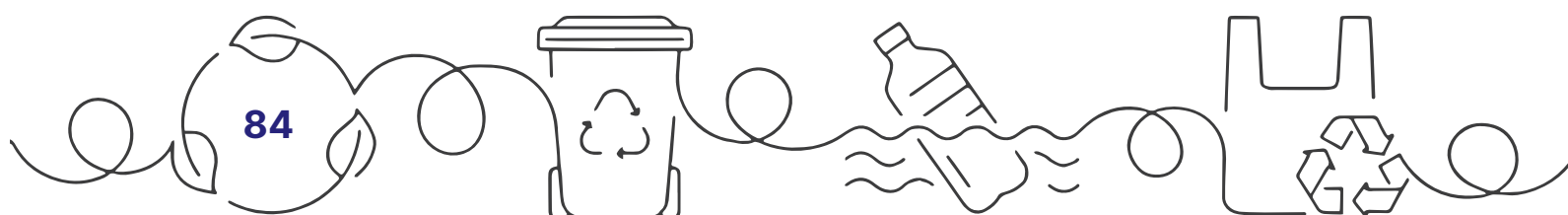
Long Term coastal protection considering sea level rise- using materials developed from all waste generated in cities

Best Practices

Drawing on the 4R principles (Reduce, Reuse, Recycle, and Repair), NIOT is creating a sustainable and energy-efficient campus. NIOT has created a mini-forest and water bodies, which have become a thriving bird habitat. An additional area is dedicated to recreational areas, supporting employee health following standard practices.

Future Plans

NIOT's mission is to align with India's Blue Economy Mission by developing sustainable ocean technologies, including coastal engineering solutions for climate impacts. The institute will also further enhance its eco-friendly campus, increase renewable energy use, and engage communities to promote marine conservation and sustainable livelihoods.



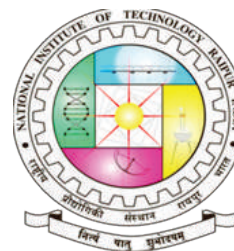


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12. National Institute of Technology Raipur

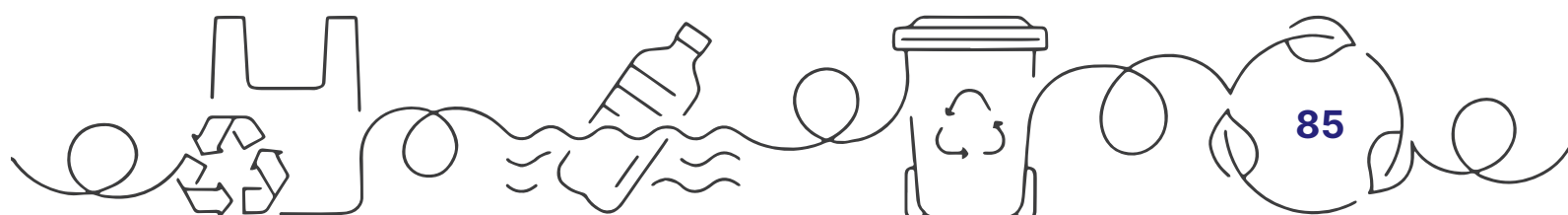


About Institute

National Institute of Technology Raipur is a Central Government funded autonomous educational institute under the Ministry of Higher Education. Activities of the institute is teaching, research, consultancy, and social welfare. As per direction of Govt of India, NIT Raipur is a Nodal Center for 'Unnat Bharat Abhiyan' for Chhattisgarh state, The institute also take care to many schools and colleges of Chhattisgarh in providing trainings, and Scientific and Technology knowledge.

About the Products

Ground water containing fluoride was treated using Electrocoagulation (EC) and adsorption up to drinking water standard. Wastewater from municipal sewage was treated by coagulation, and ion exchange up to CPCB norms. Coking wastewater (Red category) generated from coke oven was treated using EC and adsorption up to recycle limits for quenching of coke in same plant (Patent granted). Wastewater management and treatment of sugar industry wastewater (Red category) was performed using biological aerobic treatment, EC, adsorption and ion exchange. Treated water were up to recycle and discharge norms of CPCB (Sponsor by SERB). Waste water from small scale dye industry, electroplating industry, maize processing industry, distillery, dairy industry etc. were treated by chemical and biological process. Treated water were up to dischargeable limit of CPCB. Methane rich biogas was generated from rice straw, food waste, vegetable waste etc. It can be used as fuel. Base oil of waste grease was recovered and grease was manufactured from this.



R & D Structure and Collaborations and Partnerships

The institute takes various research and consultancy work through the departments of Engineering and Sciences. The institute works on its own capacity without any partnership. The collaborators are Government, foundations, industries and institutions.

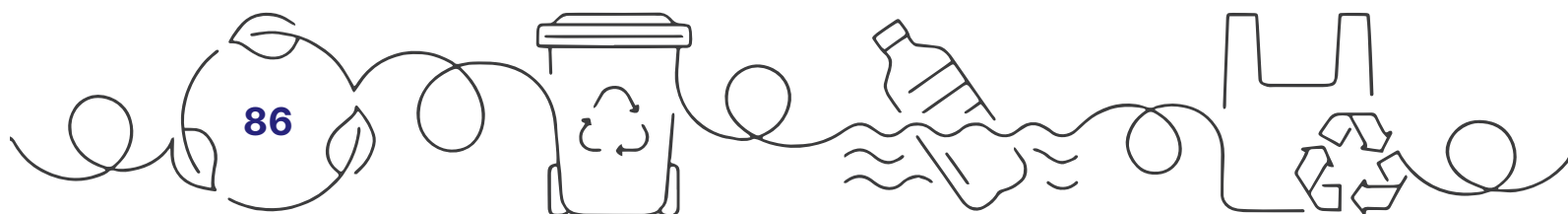
Best Practices

On individual capacity, the waste treatment/management technologies or solution practices already done in laboratories for:

- (A) Treatment of Ground Water, Municipal, and Industrial Wastewater
- (B) Treatment/Waste Management of Agricultural Residues
- (C) Treatment/Waste Management of Industrial/ automobile waste Grease

Future Plans

- (i) Pilot plant studies for production of Methane rich bio-gas from Rice Straw and De-oiled seed cake
- (ii) Pilot plant studies on production of Methane rich bio-gas from Fruit and Vegetable waste and De-oiled seed cake
- (iii) Production of grease and lubricant from waste cooking oils
- (iv) Recovery of base oil from waste grease, and production of lubricant oils and grease from recovered base oil





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13. Netaji Subhas University of Technology West



About the Institute

Netaji Subhas University of Technology (NSUT), West Campus, Jaffarpur Kalan, is a leading technical institution committed to promoting research, innovation, and sustainable engineering solutions. The Civil Engineering Department emphasizes developing environmentally friendly waste management and renewable energy technologies in line with national sustainability objectives.

About the Products

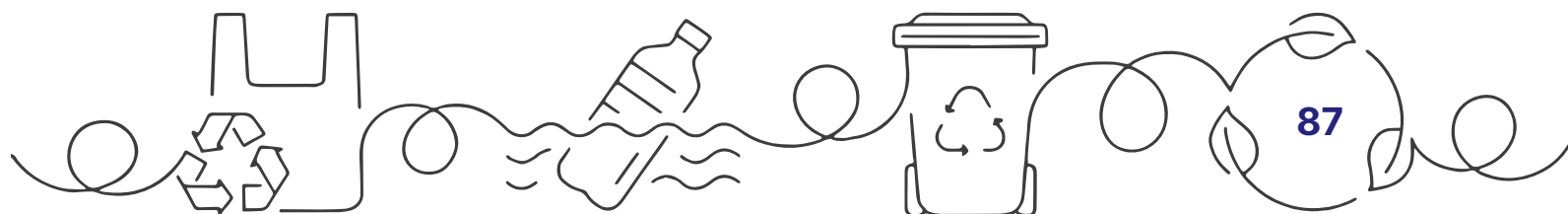
1. Biogas from Herbal Waste: Herbal and ayurvedic industry waste is utilized as feedstock in anaerobic digestion to produce biogas, a clean and renewable energy source.
2. Organic Bio-Fertilizer (Digestate): The by-product of the digestion process is a nutrient-rich organic fertilizer, improving soil health and reducing dependency on chemical fertilizers while supporting circular agricultural practices.



R&D Structure and Collaborations

The research workflow involves waste characterization → biodegradability analysis → methane potential optimization → digestate application assessment.

The project is supported by collaborations with academic institutions and herbal manufacturing partners. Knowledge dissemination is achieved through laboratory



demonstrations, journal publications (SCIE-indexed), student research programs, and training workshops aimed at scaling sustainable waste-to-energy solutions.

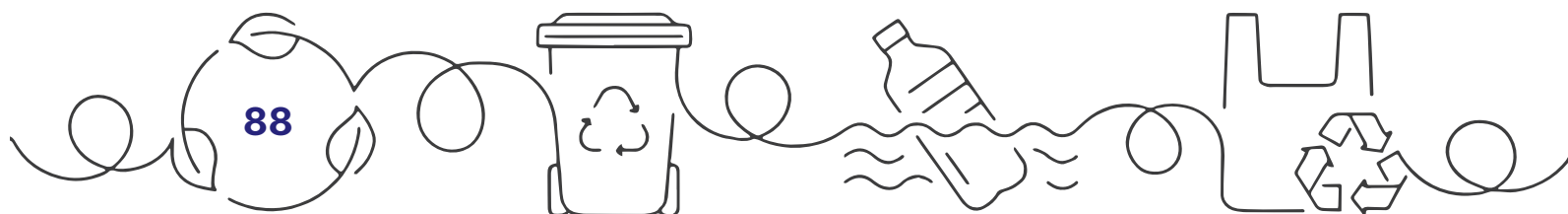
Best Practices

The initiative integrates the 4R principles (Reduce, Reuse, Recycle, Recover) to ensure environmentally sound herbal waste management. Herbal waste, which is often incinerated or dumped, causing air pollution, soil degradation, and groundwater contamination, is instead processed using anaerobic digestion to generate renewable biogas. This method offers technical feasibility, cost-effectiveness, and scalability for small and medium herbal processing industries.

The process supports resource recovery where biogas serves as a sustainable energy source, and the digestate is reused as a natural fertilizer. The project promotes community awareness through training sessions, demonstration units, and industry-academic interaction. This approach reduces waste load, controls pollution, encourages circular economy practices, and creates opportunities for micro-entrepreneurship in rural and peri-urban settings. It also strengthens environmental stewardship within the herbal medicine sector.

Future Plans

The institute aims to scale up anaerobic digestion units at industrial and community levels, optimize biomethane yield for different herbal waste types, and establish decentralized bioenergy systems. Future collaborations will target ayurvedic industries, municipalities, and farmer groups to promote clean energy access, employment generation, and zero-waste sustainability.





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14. Pashupati Group



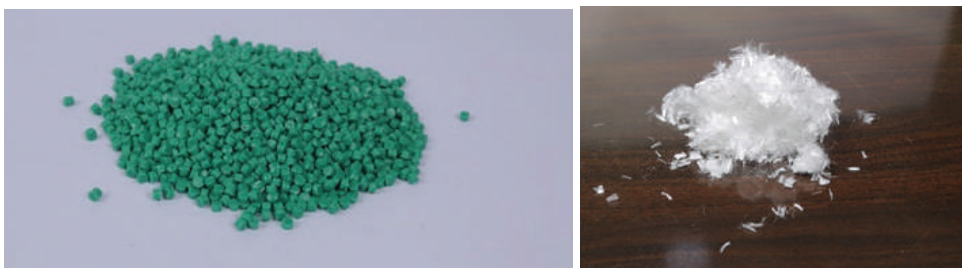
About the Company

Pashupati Group, established in 1979, is a leading name in sustainable industrial transformation. With eight manufacturing facilities and a processing capacity exceeding 300,000 TPA, the Group pioneers plastic waste recycling, packaging, and circular economy solutions across India and abroad. Its integrated operations ensure responsible production, innovation, and resource efficiency.

About the Products

Pashupati Group's diversified product portfolio includes:

- Recycled Polymers: rPET flakes & chips (Food grade and non-Food grade), rPSF fibers, and rPP, rHDPE, rLDPE granules—used by packaging brands.
- Sustainable Packaging: PP/HDPE woven bags, FIBCs, and BOPP laminated sacks with up to 20% recycled content.
- All products comply with FDA, GRS, OEKO-TEX, and ISO 14001 standards, supporting brand owners' Extended Producer Responsibility (EPR) and sustainability commitments.

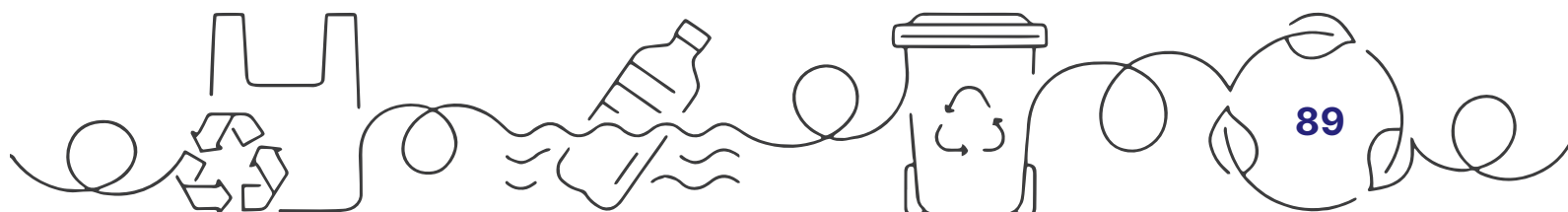


R&D Structure, Collaborations & Partnerships

Pashupati Group's R&D division operates through a centralized structure under the Group R&D Head, collaborating with plant-level technical teams.

R&D Focus Areas: Polymer modification & compounding, Recyclate quality enhancement, Circular packaging innovation

Collaborations: Partnerships with EREMA (Austria), Tomra Sorting (Germany), and Indian Institute of Packaging (IIP) support continuous improvement.



The Group's R&D flow follows:

Idea → Feasibility → Pilot → Validation → Scale-Up → Market Deployment.

Best Practices:

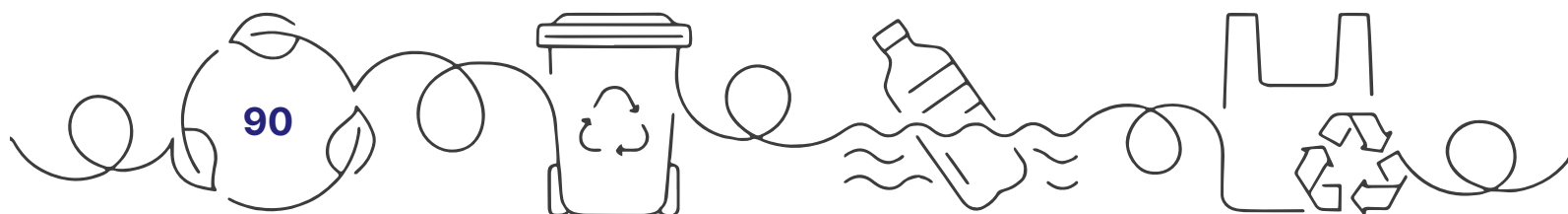
Sustainability is embedded in Pashupati Group's core operations through zero-waste-to-landfill and circular manufacturing systems.

- **100% Plastic Waste Utilization:** Over 300,000 MT/year of post-consumer plastic waste is recycled into rPET, rPSF, and polyolefin granules, reducing virgin resource dependency.
- **Closed-Loop Recycling:** Customized recycled resins are reintegrated into packaging applications, promoting circular economy models for brand owners.
- **Process Optimization:** Advanced AI optical sorters, washing-line sludge recovery, and reuse of internal packaging waste reduce rejects by 15% and minimize environmental footprint.
- **Resource Recovery:** Non-recyclables are co-processed in cement kilns and used in road construction as per CPCB norms.

The Group also uses ERP-based paperless procurement, reuses generated paper waste, and conducts third-party environmental testing to ensure full regulatory compliance and transparency.

Future Plans

Pashupati Group's "Safe Earth through Sustainable Waste Management" roadmap focuses on expanding recycling capacity, including multi-layer and chemical recycling units. Guided by the 4R principle—Reduce, Reuse, Recycle, Recover, it aims for net-positive waste impact by 2030, enhanced digital waste traceability, and large-scale community engagement under the Safe Earth Campaign.





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15. S A Pharmachem Pvt Ltd



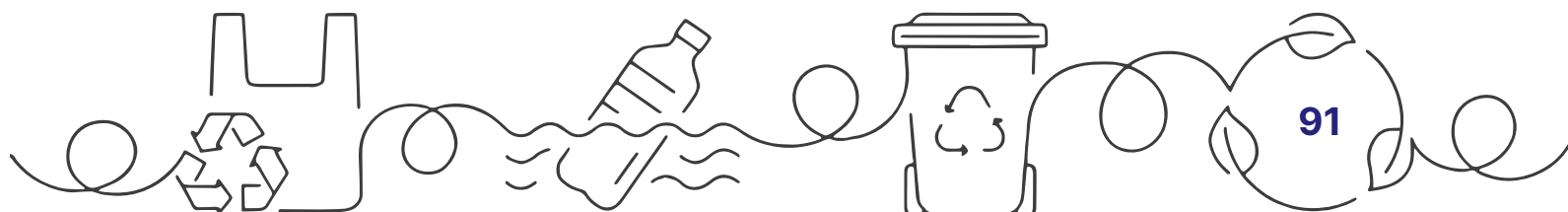
About company

Established in 1986, serving pharmaceuticals, nutraceuticals, food, animal nutrition and textile industries. The company provide world class products, source from leading global players of specialty ingredients. In textile, we offer modified starches, enzyme for wet processing, membrane based system which helps in reducing the effluent load on effluent treatment plant, recover and reuse. The company vision is to be the most preferred source of innovative, specialty ingredients to serve all the industries we represent.

About two products

System	Recovery %	Wastage %	Features	Uniqueness	Sustainability
Caustic Purification System	95%	5%	More purified than virgin caustic	100 % reusable	Less consumption of caustic and saving in the energy & time Less breakdown in CRP Machine
Indigo Dye Recovery System	100%	0%	100% Dye reusable	Reduction in COD & Colour Value	Treatment cost of ETP will reduce drastically
PVA Recovery System	100%	0%	100% Chemical reuse	Hot water comes out from machine also used in washing	Less consumption of PVA No Sludge Formation Energy saving

This reduces discharge of chemicals into the effluent & help to reduce cost of treatments at ETP, Reduces cost of chemical consumption in production activity. This leads to reduce impact on greenhouse gases (CO₂)



R & D Structure and Collaborations and Partnerships

Pilot unit : IP technology collaboration with Membrane manufacturer- Kovalus Separation Solution - USA & design of the system and application registered under trademark.

They are representing Kovalus Separation Solution in India & neighbouring country like Bangladesh, Vietnam, China for Textile applications.



Best Practices

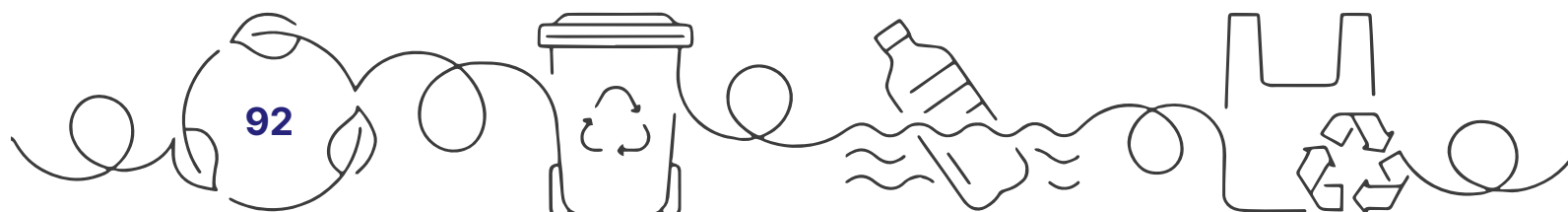
Good Manufacturing Practice (GMP) is a system of regulations ensuring that chemical products like pharmaceuticals, food, and textiles are consistently produced and controlled according to quality standards. It is a proactive approach to quality assurance, ensuring product quality and safety by controlling manufacturing processes from raw materials to distribution. The core principle is that quality must be built into a product during manufacturing, not just tested at the end. Key aspects of GMP include:

- Maintaining clean and hygienic manufacturing facilities
- Follow documenting procedures and recording manufacturing activities
- Provide training to employees to carry out and document procedures correctly
- Calibrating properly designed equipment
- Handle materials correctly to prevent mix-ups and contamination

By minimizing risks like contamination and product defects, GMP protects consumers and ensures product integrity. Adherence to GMP is mandatory in many countries and enforced by regulatory agencies like the FDA. It ultimately safeguards public health and reduces recalls, waste, and fines.

Future Plans

- Built up the system to reduce the effluent for textile customers so that common effluent treatment plant (CETP) will run efficiently as well as RO will run efficiently.
- The company also coming with the concept of plug and play model, ready to offer on rental basis as well as sharing the capital on long term.





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16. Soiltimizer Pvt Ltd



About Company

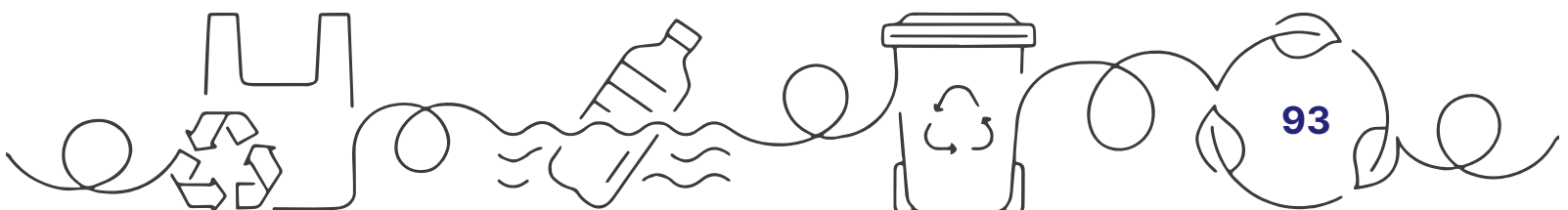
Soiltimizer Pvt Ltd is a Gorakhpur-based enterprise pioneering sustainable waste-to-resource conversion in rural India. The company focuses on transforming agricultural and industrial residues into renewable biofuels and biofertilizers. Through decentralized waste procurement and circular economy principles, Soiltimizer promotes clean energy, soil health, and inclusive rural livelihoods.

About the Products

Bio Pellets: High-calorific biomass fuel produced from agri-waste such as rice husk, sugarcane leaves, and other crop residues. Supplied to NTPC under government tenders as a substitute for coal in thermal power plants, reducing emissions.

Paddy Bales: Compressed paddy straw supplied to IOCL's CBG plants, preventing stubble burning while generating renewable bio-gas.

Biofertilizer: Microbially enriched organic fertilizer derived from biomass digestion residues, enhancing soil fertility and restoring soil biodiversity.



R&D Structure, Collaborations & Partnerships

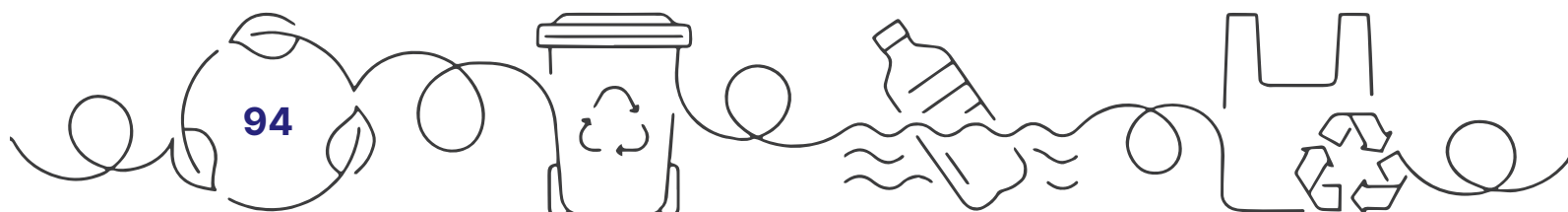
Soiltimizer's R&D focuses on optimizing biomass moisture control, pelletization efficiency, and microbial enrichment for biofertilizers. The startup operates with a lean innovation model integrating on-field trials and feedback loops from industrial clients. It collaborates with Farmer Producer Organisations (FPOs) for decentralized biomass sourcing and is incubated at Jagriti Enterprise Centre Purvanchal (JECF) under the Green Incubation Program, supported by Accenture and RainMatter Foundation, facilitating technical, market, and mentorship support.

Best Practices

Soiltimizer has implemented a decentralized biomass collection model, engaging FPOs, rice mills, and sugar mills for sustainable residue aggregation. The company currently manages over 50,000 tonnes of agri and industrial waste annually, transforming it into value-added products such as bio pellets, paddy bales, and biofertilizers. Through technologically robust pelletization and baling units, Soiltimizer ensures quality control, optimized calorific value, and reduced carbon footprint. Annual supply includes 45,000 tonnes of bio pellets to NTPC and 5,000 tonnes of paddy bales to IOCL, collectively preventing open-field burning and cutting CO₂-equivalent emissions by over 13,000 tonnes yearly. These practices create local employment, replace fossil fuel dependency, and enhance soil productivity—establishing a replicable model of rural green enterprise. The company's operations exemplify the synergy of sustainability, scalability, and socio-economic empowerment through waste valorization.

Future Plans

Soiltimizer plans to expand operations by establishing new bio-pellet units in Kushinagar (U.P.) and Panagarh Industrial Park (West Bengal), alongside resuming biofertilizer production in Gorakhpur. These expansions will enhance waste collection, strengthen renewable fuel supply chains, and scale operations pan-India, further contributing to rural employment and carbon mitigation.





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17. Stellar Information Technology Pvt Ltd

BitRaser®

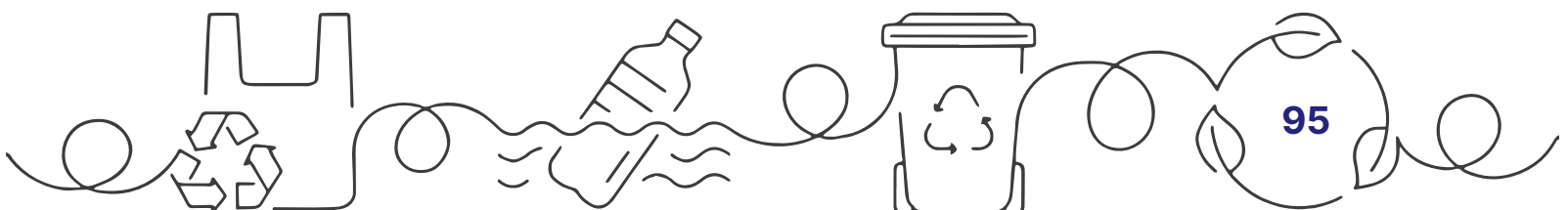
About Company

Stellar, established in 1993, is a global leader in data care solutions. Headquartered in India, with offices in the US & Europe, the ISO 27001 & 9001 certified company offers data recovery, data erasure, mailbox conversion, & file repair solutions. Its flagship software, BitRaser, ensures certified data erasure, regulatory compliance, and sustainable IT asset disposition worldwide.

About the Products

BitRaser, our certified data erasure software, made in India wipes drives & devices on-site & off-site. This helps organizations comply with data protection laws, support sustainable IT asset disposition, and prevent data breaches.

- BitRaser Drive Eraser software erases data from HDD, SSD, PC, Laptop, Mac and Server. It generates erasure reports for organizations to meet global data protection laws & regulations.
- BitRaser Hardware Diagnostics thoroughly tests hardware components in PC, laptop, & Mac to assess system health, detect faults, and verify functionality. This helps promote device reuse.



R&D Structure, Collaborations, and Partnerships

Stellar's R&D division includes over 100+ professionals specializing in software innovation, research, quality assurance, and UI/UX design, collaborating seamlessly from ideation to product release as per the process. The company is a Microsoft AI Cloud Partner and member of the Apple Developer Program. Strategic partnerships with Makor ERP and Razor ERP enable seamless integration with BitRaser, for smooth data transfer.

Best Practices

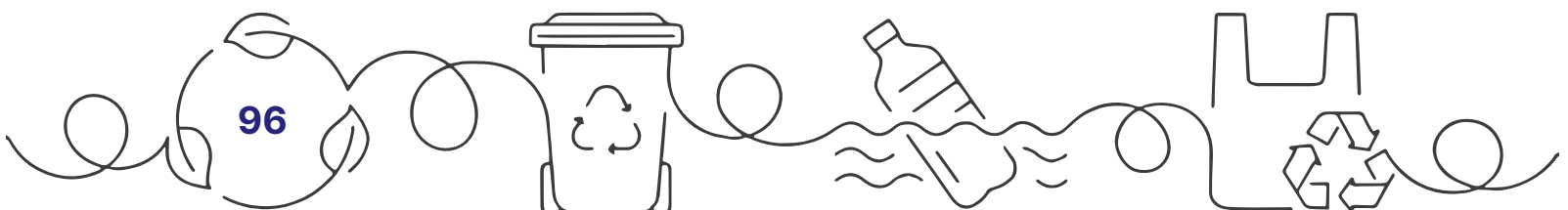
Stellar promotes sustainability through BitRaser, which enables secure data erasure as an eco-friendly alternative to physical destruction. This eliminates the need for shredding or incineration, allowing the reuse, resale, and redeployment of IT assets. By extending device lifecycles, BitRaser fosters the circular economy and minimizes e-waste generation. In FY'24-25, BitRaser securely erased 1.081 million devices, preventing over 2,700 tons of e-waste from landfills and saving 0.27 million tons of CO₂ emissions. Fully compliant with global data sanitization standards, it helps organizations achieve data security, compliance, and sustainability goals simultaneously.

BitRaser upholds the 4R principles – Reduce, Reuse, Recycle, and Recover, transforming potential e-waste into reusable resources. Stellar maintains strict adherence to quality, data privacy, and environmental norms while enabling clients to meet their sustainability objectives.

Future Plans

BitRaser is focused on expanding its product innovation roadmap with solutions such as Network, Switch, and LUN Eraser, MDM Detection, and Mac Remote Wiping. These developments aim at addressing evolving enterprise data security needs as per DPDP Act and global data protection laws.

Alongside product enhancements, company is committed to elevate user experience backed by reliability, efficiency, and responsive support.





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18. Symbiosis International (Deemed University)



About Company

Symbiosis Centre for Waste Resource Management is a research Centre of Symbiosis International (Deemed University). It aims at developing inter- and multi-disciplinary global network of researchers and stakeholders for need-based applied research, developing low-cost, sustainable, and adaptable solutions, building knowledge, disseminating awareness, and improving practices to establish sustainable resource management.

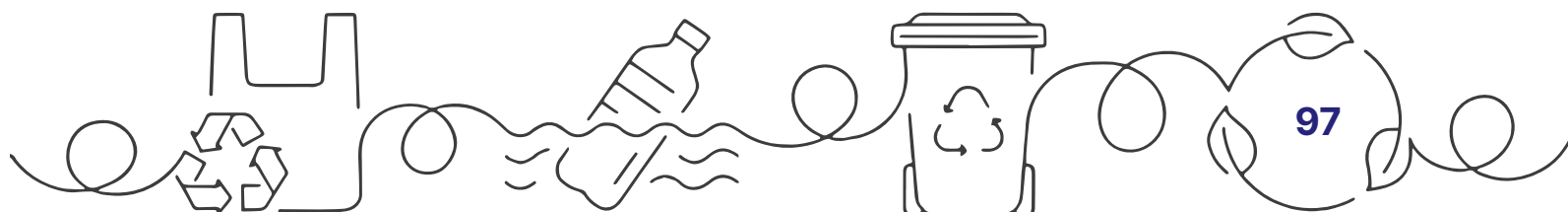
About the Products

1. Digestate-based Fertilizer Formulation- Biogas digestate-based formulation developed as low-cost organic liquid fertilizer for restoring soil fertility. Commercially marketed by a start-up after field trials testing on various crops.
2. Green Fuel- An innovative process and prototype reactor developed to recycle waste oil to hydrocarbons, functioning as an alternative green fuel. This technology aligns with the national SATAT scheme for affordable transportation and addresses hazardous waste recycling for renewable energy product development and circularity.



R & D Structure and Collaborations and Partnerships

Symbiosis Centre for Waste Resource Management focuses its R&D on five core areas: Sustainable waste reduction, Recycling technologies and processes, Circular economy and Entrepreneurship development, Waste to Energy, and Policy development. SCWRM collaborates nationally and internationally with industries, academia and government organizations, including DST, ICMR, DRDO, UBA, of Govt. of India; SWSM, Government of Maharashtra and the US Embassy, Elsevier Foundation Netherlands, GIZ-GmbH Germany and Several Universities. This structure involves R&D and mentoring/incubating start-ups to commercialize technologies.



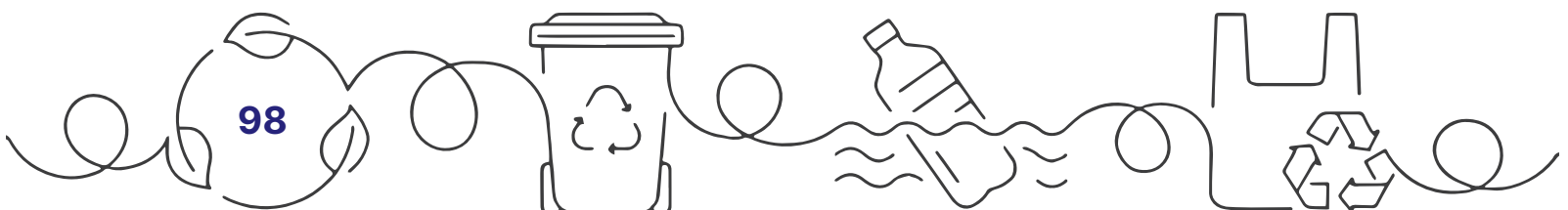
Best Practices

SIU-SCWRM demonstrates several best practices in waste management and sustainability, through campus operations and community engagements:

- **Organic Waste Processing:** The University processes ≈ 180 MT/annum of wet waste using biogas plants, generating ≈ 93 million kcal energy (≈ 410 commercial LPG cylinders) and 325 MT liquid manure. This practice alone helps reduce ≈ 195 MT/annum CO₂e.
- **Technology Development and Implementation:** 'NisargLaxmi'- the accelerated aerobic composting technique developed in-house, processes ≈ 30 MT/annum of organic waste on campus, generating 7.5MT of quality manure and reducing ≈ 59 tonnes/annum of CO₂e. This low-cost, adaptable process disseminated to urban and rural households, supports local cleanliness targeting 'Zero Landfilling', and skill development for capacity building of Self-Help Groups.
- **Water Conservation:** The University treats ≈ 17 L litres/day of wastewater, reusing it for irrigation, conserving ≈ 560 million litres/annum of fresh water. Additionally, two earthen check-dams harvest and store 300 million litres of rainwater and run-off, providing water security and raising the groundwater table.

Future Plans

Going forward SCWRM plans to develop eco-friendly products, scaling-up technologies for transfer, technology demonstrations and capacity building. Simultaneously, targeting establishment of a replicable model on university campus/ in community for sustainable resource management, focusing on strengthening recycling infrastructure, resource recovery and real-time monitoring, ensuring adaptability, circularity and sustainability.





www.ciiwaste2worth.com

India's Leading companies in Managing Waste



20. Tetra Pak India Pvt Ltd



About Company

Tetra Pak, the world's leading food processing and packaging solutions company, has been operating in India for 37 years, partnering with over 400 leading food and beverage brands across the country. The company manufactures and supplies aseptic, paper-based packaging from its state-of-the-art converting factory located in Chakan, India.

About the Products

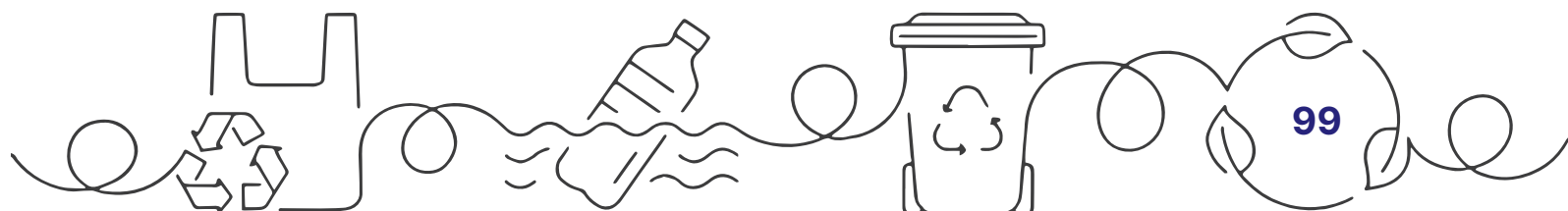
Tetra Pak's Beverage Carton is an innovative six-layered packaging solution that is primarily paper-based & has polymer & aluminum to provide light & oxygen barrier to protect the beverage inside. Today, Tetra Pak's diverse portfolio covers over 240 unique package types and 7,000 unique combinations of sizes, shapes, effects etc., catering to just the beverage packaging business.



R & D Structure and Collaborations and Partnerships

Tetra Pak has played a pivotal role in building a sustainable ecosystem for collecting and recycling Used Beverage Cartons (UBCs) in India investing over INR 85 crores to enhance infrastructure and drive recycling efforts.

Tetra Pak's pan-India network includes 30+ collection partners including startups, 5 key aggregator groups, 15 army collection centres and 10 independent recyclers operating across 11 facilities, with ongoing efforts to expand further. Additionally, numerous paper mills actively recycle cartons due to the high-quality fibre in the paperboard, contributing to improved recycling rates nationwide.



Best Practices

Tetra Pak has been voluntarily executing EPR for UBCs in India for 20+ years in partnership with government agencies, NGOs, the waste trade, and recyclers even before the regulations kicked in. It has introduced interventions at all levels of the carton recycling value chain, engaging with members right from consumption to end-market applications.

It has been actively focusing on programs with partners on promoting waste segregation at source and improving lives of waste workers through better education, healthcare & livelihood opportunities.

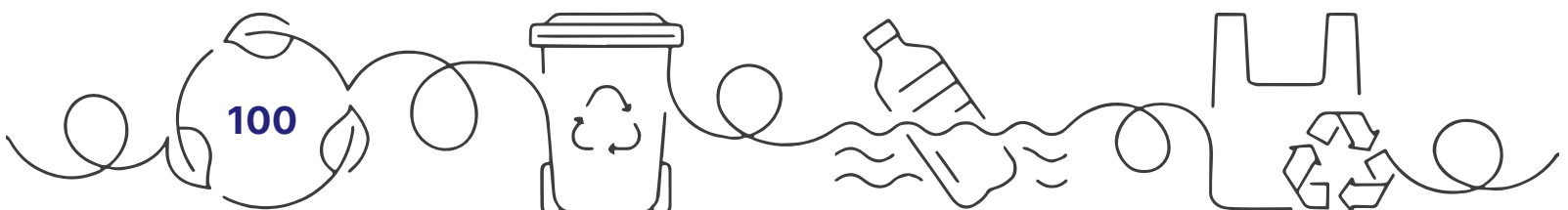
Tetra Pak in addition to deploying awareness & capacity building:

- deploys a financial solution i.e. price incentive for the waste trade aggregators helping them cover transportation and sorting costs
- provides continuous support for development of new end market applications for UBCs such as pallets, roofing sheets, paver blocks and portable furniture
- provides infrastructure support to develop and improve collection and sorting efficiencies and capabilities

Future plans

At Tetra Pak's ambition is to make the most sustainable packaging that is made solely of responsibly sourced renewable or recycled materials that are fully recyclable and carbon neutral.

Globally, Tetra Pak is investing a total of €100 million per year over the next 5-10 years to further enhance the environmental performance of our packaging without compromising the integrity of the package, including reducing use of fossil-based plastics and aluminium and making our packages easier to recycle.





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India's Leading companies in Managing Waste



21. Timken India Ltd

TIMKEN

About Company:

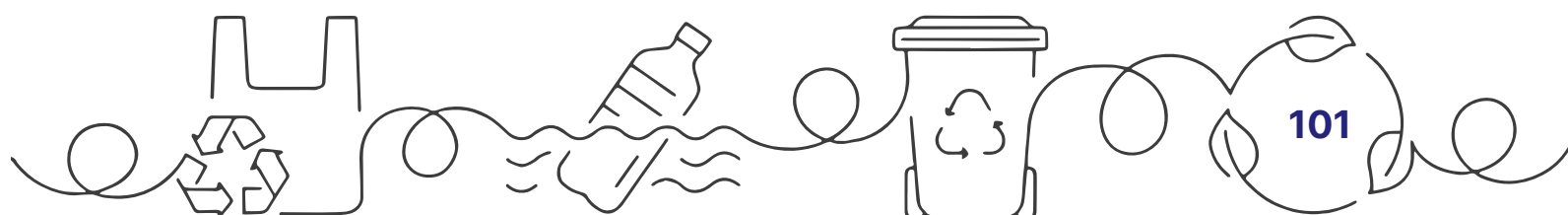
Timken is a global technology leader in engineered bearings and industrial motion products. The Company manufactures and sells anti-friction bearings, components, and mechanical power transmission products for diverse customer base. The Company has manufacturing facilities in Jamshedpur, Jharkhand & Bharuch, Gujarat and distribution centers across the country.

Timken also has a Technology Centre which provides its customers a unique opportunity to access global pool of engineering expertise and the latest technological advancements. Timken businesses in India are headquartered in Bangalore.

About the Products:

Timken engineered bearings feature precision tolerances, proprietary internal geometries and quality materials. Our tapered, spherical, cylindrical, thrust, ball, plain, miniature, precision and housed unit bearings deliver strong performance, consistently and reliably.

Timken industrial motion products designed to improve the reliability & efficiency of industrial equipment & processes. Rollon, Cone Drive, Groeneveld-BEKA Lub Systems, Philadelphia Gear drives, Timken belts, Diamond chains, and Lovejoy couplings provide customers a variety of solutions that keep industry in motion.



R & D Structure and Collaborations and Partnerships

At Timken, innovation is driven by the needs of our customers, real-world challenges. By combining cutting-edge engineering with operational excellence, we collaborate to solve complex challenges and advance industries globally.

Timken R&D Group is organized around five technical platforms:

- Product Fundamentals
- Material Fundamentals & Characterization
- Manufacturing technologies
- Measurement Technologies & NDT evaluation
- Testing & Product Validation.

Best Practices:

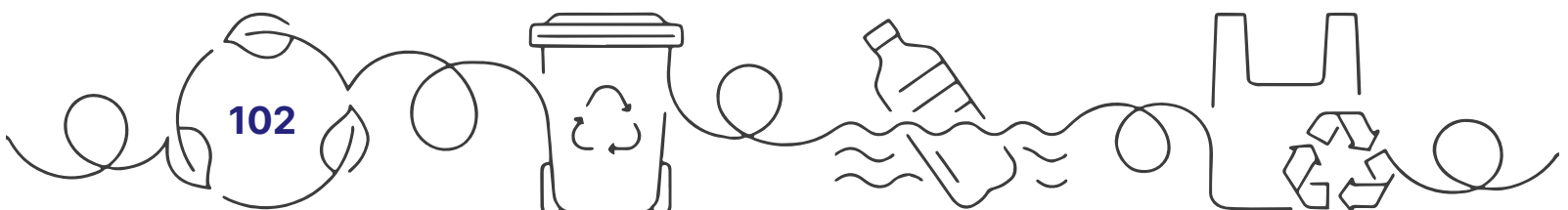
Waste Reduction, Reuse, Repair & Resource Recovery

- Grinding Sludge Reduction & Coolant Reuse - ~ Reduction of 25 MT of CO₂e
- ETP Reduction at source - Roller tumbling - ~ Reduction of 587MT CO₂e
- Repair & Reuse - HT Baskets, Heaters, Retorts -- Reduction of 35MT CO₂e
- Returnable Packaging - Inbound materials. -- Reduction of 51MT CO₂e

With the above actions, we explicitly putting efforts towards sustainable operations and reducing waste and emissions, improving energy and resource efficiency, and building sustainable supply chains implementing eco-friendly packaging. Apart from the Key actions include adopting renewable energy, setting carbon reduction goals, tracking environmental metrics, and using technology to improve operational efficiency and data analysis.

Future Plans:

- Exploration and Horizontal deployment of 4R principles at various other operations and across plants.
- Data collection meters installation at Line wise monitoring of Power, Water consumption and Waste generation.
- Implementation of Energy efficient motors, pumps.
- Improving the Green packaging in all the supply chain operations and Transportation improvement.





www.ciiwaste2worth.com

India's Leading companies in Managing Waste



22. Waste Management Services



About Company

At WMS- Waste Management Services, we're committed to impact waste management by turning today's waste into sustainable resources for tomorrow. WMS mission is to ensure that all waste is recycled and/or sanitized according to Pollution Control Board regulations.

WMS one-stop solution for EPR Compliance under one roof provides seamless waste management services to our clients.

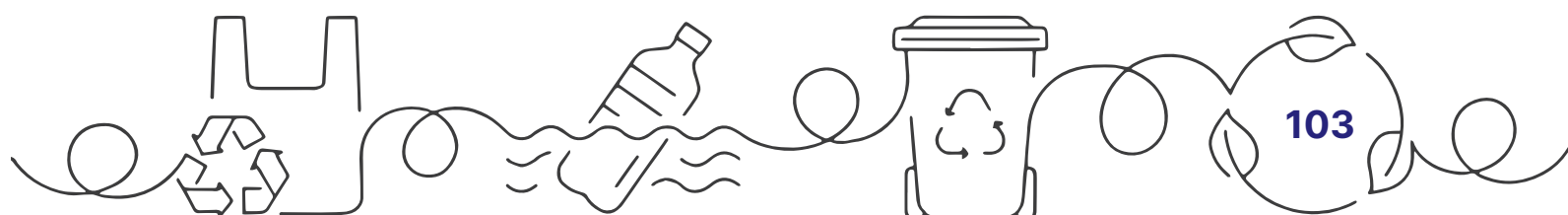
About the Products

- Focus on Regulatory compliance ensuring that our waste management practices are environmentally responsible. WMS recycle waste into valuable resources
- EPR (Extended Producer Responsibility) services: Compliance with EPR regulations for manufacturers and producers.
- Plastic waste management:
- E-waste management:
- Battery waste management:
- Used oil EPR management:
- Paper, metal, and glass EPR
- Hazardous Waste Disposal Services for Safe disposal of expired goods and medicines, hazardous chemicals, paints, solvents, and pesticides.

R & D Structure and Collaborations and Partnerships

- Legal tie-ups with recyclers enables us to provide comprehensive waste management solutions.

WMS offer comprehensive hazardous waste disposal services, ensuring 100% compliance with regulatory requirements. WMS partnership with authorized disposal agencies guarantees environmentally sound and safe disposal practices.



We prioritize sustainability through:

- Waste reduction: Minimizing waste generation.
- Reuse and recycling: Encouraging reuse and recycling of materials.
- Landfill minimization: Reducing reliance on landfills.
- Innovative technologies: Leveraging waste-to-energy and material recovery systems.
- Circular Economy: Based on three Principles

Best Practices

Our Key Strength lies in assuring our clients get their Due Credits for achieving 100 % sustainability

Sustainability and impact are created through various initiatives that involve cleaner and efficient processes and involving all stakeholders, thereby turning waste into value; and leading innovation through latest techniques and technologies in waste management

- Sustainable practices: WMS committed to reducing waste and promoting sustainable practices.
- Regulatory compliance: WMS ensure that all waste is managed in accordance with applicable regulations.
- Expertise: WMS team has extensive experience in waste management, ensuring that their clients receive the best possible service.

Future Plans

Sustainability and circular economy

- Continued focus: WMS will continue its emphasis on promoting a circular economy, viewing waste as a resource to be reused and recycled.

Extended Producer Responsibility (EPR) compliance

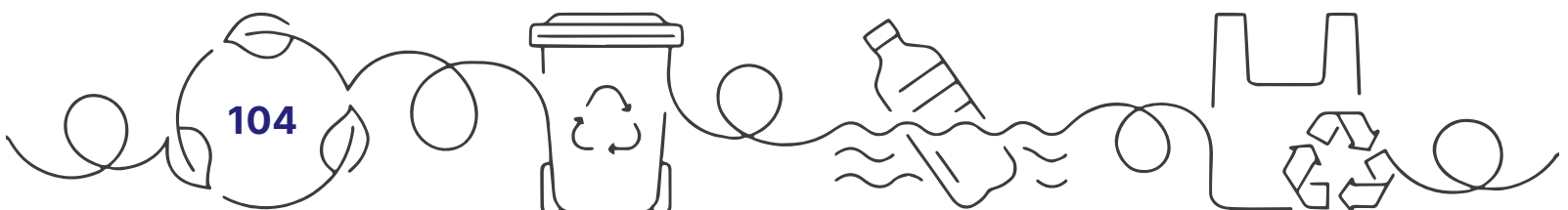
- Expanding compliance: WMS is preparing for upcoming EPR compliance regulations for paper, glass, metal, and sanitary packaging, which are due in the 2026–2027 financial year.

Ecosystem awareness campaigns

- Waste management sessions: WMS will conduct awareness sessions on waste management in more than four cities in northern India.

Partner and vendor engagement

- Channelizing partners: WMS intends to better align and empower its partners to enhance the recycling infrastructure.



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Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organisation, with around 9,700 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 365,000 enterprises from 318 national and regional sectoral industry bodies.

For 130 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with the Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness, and business opportunities for industry through a range of specialised services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Through its dedicated Centres of Excellence and Industry competitiveness initiatives, promotion of innovation and technology adoption, and partnerships for sustainability, CII plays a transformative part in shaping the future of the nation. Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes across diverse domains, including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

For 2025-26, CII has identified "Accelerating Competitiveness: Globalisation, Inclusivity, Sustainability, Trust" as its theme, prioritising five key pillars. During the year, CII will align its initiatives to drive strategic action aimed at enhancing India's competitiveness by promoting global engagement, inclusive growth, sustainable practices, and a foundation of trust.

With 70 offices, including 12 Centres of Excellence, in India, and 9 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with about 250 counterpart organisations in almost 100 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

The Mantosh Sondhi Centre

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