

Embedding circularity into business strategy and operations

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The Indian Government, at the recently held COP26 in Glasgow, announced its Net Zero 2070 target along with short-term steps including reduction of carbon intensity by 45% boosting renewable energy capacity to 500 gigawatts (GW) by 2030. With such bold goals, the Government is actively seeking support from stakeholders across the spectrum, including corporates, to implement innovative solutions like the circular economy approach to bend the emissions trajectory.

Since the Industrial Revolution, the linear production model has been a familiar cycle where resources are extracted and transformed into goods and services, sold to consumers, and finally scrapped. What has often been overlooked is the harmful effect such linear consumerism has placed on the environment by rarely considering the cost of handling, scrapping and disposing of used materials, some of which are hazardous to human health.

Diverging from this linear production, circular economy minimizes overall waste generation by utilizing waste from one product as raw material for another. Consequently, such a circular production model reduces the stress on the ever-increasing demand for virgin materials. By leveraging the circular business model, companies have demonstrated significant reduction in material costs, thus reducing unwanted impacts of raw materials price volatility. Moreover, this approach has opened new opportunities like repairing, reverse logistics, remanufacturing, and refurbishment that increase the circularity of products and improve the bottom line.

To deliberate the latest developments, EY organized an engaging roundtable with key players in the Indian waste recycling landscape to uncover the major bottlenecks for businesses to adopt a circular business model and to assess possible solutions.

Chaitanya Kalia (EY Partner & India Leader, Climate Change & Sustainability Services) set the scene by underlining the benefits of adopting a circular business model to reduce waste disposal in landfills and while recognizing the efforts put in by waste producers/recyclers in the last few years. He stressed on the need for resilience at every level – from the village family to the corporate boardroom to the halls of the government – so that developing nations, including India, can leverage circular business growth opportunities.

The business-as-usual state is not sustainable and there is a critical need to identify innovative models to ensure sustainable growth without straining the finite pool of natural resources. International efforts are being stepped up to help developing nations across the world. For example, as of June 2021, the United Nations Development Programme's (UNDP) [Plastic Waste Management Programme](#) in India has helped process 83,900 metric tons of plastic waste. The ambition of the program, operating from 2018 to 2024, is to process or recycle 85,000 metric tons of plastic waste and reach 50 plus cities by the year 2024.

The regulatory landscape has seen a shift in favor of waste management in the last few years. The Extended Producer Responsibility (EPR) obligations laid out in the Plastic Waste Management (PWM) Rules, the E-Waste Management Rules, the Construction and Demolition Waste Management Rules, and the Metals Recycling Policy, have made the intention of the Government very clear. The World Economic Forum's (WEF) Global Risk Report, 2022 has revealed unsettling truths about climate change and its rapid pace of degradation. One thing is clear – What we do in the next decade leading to 2030 will define the quality-of-life future generations will receive.

Scope of Circular Economy

As estimated in a 2018 report by BCG & World Business Council for Sustainable Development, organizations who switch from the “take-make-dispose” industrial model to the resource recycling of the “circular economy”, do so by boosting their innovation processes and have the potential to add of \$4.5 trillion of value by 2030. Breaking down the statistic further, Masood Mallick (Joint MD, Ramky Enviro) noted that we are still scratching the surface of the \$0.5 trillion worth of economic value that can be unlocked through circular economy business models in India alone by 2030.

To realize this scale of opportunity, industries need to ensure that they are making evidence-based contribution to solving global environmental problems and not consider circular business exercises or campaigns as ad-hoc marketing stunts to attract investors. He queried: “When will recycling become mainstream in India?”

Circular Economy at the ground-level

Based on her decade-long experience of designing and executing customized solutions for bulk waste generators, Wilma Rodriguez (Founder & CEO, Saahas Zero Waste) shared how the perception of waste management as a process required detailed systems and teams to work in tandem. . Since 2001, when the Government formulated the first-ever Waste Management Rule (Batteries), the improvements in compliance systems and efficient tracking have made businesses take up the issue of waste reduction more seriously. However, at the ground-level there is still a lack of understanding about what the legislation says – words like ‘reduce’, ‘reuse’, and ‘closed-loop recycling’ do not come without ambiguities. Wilma believes we need further leadership from industries and the government to convert actions into results – the glass is not yet half-full.

Realizing the potential - bottlenecks

As per Material Recycling Association (MRAI) India’s recycling rates stands at around 30%. Deciphering this statistic, Masood classified the challenges with getting recycling ‘mainstream’ under four broad categories:

- ▶ **Scale:** To realize positive unit economics, large scale adoption of circular business models by industries is essential in India.
- ▶ **Awareness:** Community participation is essential to ensure efficient waste segregation at the source. One of the major hurdles for waste recyclers is the hidden cost behind educating the mass about the cross-industry symbiotic opportunities for closed-loop waste management.
- ▶ **Technological Adoption:** The cost of business digitization by leveraging technological advancements – hardware, optical sensors, and business intelligence tools – has come down dramatically in the last few years with plenty of innovation pioneered in the country. However, the rate of adoption has been slower than was predicted.
- ▶ **True-cost Realization:** The environmental and social costs of landfilling are shadowed by the traditional product pricing in the Indian waste recycling landscape.

Expanding capability for a Circular Economy

Rahul V Poddar (MD, Shakti Plastic Industries) highlighted that the waste recycling landscape is largely dominated by highly recyclable materials such as ferrous and non-ferrous scrap, paper, rubber, and tyres. Recycling of materials such as plastics is not very well documented despite the Government’s policy updates such as the PWM Rules, 2016 and following amendments. Also, the recycling rate for rigid-plastics and that for multi-layered-plastics (MLPs) shows high



disparity – this gap must be reduced. Further, Rahul was of the opinion that the waste recycling commodities should be expanded in the future to include textiles, which is a polymer of plastic. He ended his speech by applauding Niti Aayog for expanding the list of recyclable commodities to incorporate forward-looking recyclable materials like lithium-ion batteries, solar panels, and agricultural waste.

Another area of improvement for efficient waste management is through partnerships. A visionary in their business approach, Ramky Enviro tested out a Hub & Spoke Model to partner with several ragpickers, mostly transgenders, who otherwise would struggle for employment. The program was a huge success.

Circular Economy and India's net-zero commitment

Energy transitions are gaining momentum worldwide, and India is no exception. The country is shining in energy transition by treading a strong renewable energy path post 2015 Paris Agreement, as it witnesses a step-up in investments in solar energy. Parallely, there has been a significant slowdown in investments in thermal power plants. The transition has witnessed renewed interest with India pledging to a national net-zero target of 2070 Conference of the Parties (COP 26) summit in Glasgow, Scotland. To supplement this approach the Government has also made near-term commitments – promising to ensure that India made commitment of producing 50% of its total electricity from non-fossil fuel sources by 2030 and reduce its projected carbon emissions by 1 billion tons. In addition, by 2030, the country has committed to reduce carbon intensity by 45% in the economy.

The role of circular economy is paramount in India's quest of achieving Net Zero. Switching to a circular economy could reduce greenhouse gas emissions by 39% and ease pressure on virgin materials by 28%, according to the [Circularity Gap Report](#) published in 2021 by Circle Economy, an impact organization dedicated to accelerating the transition to circular economy. This leads to creation of better economic, environmental, and societal outcomes for the nation.

The value created by a circular business model is evident in companies across the globe. For example, in 2019, French-based Schneider Electric, which specializes in energy management and automation, won the Circular Economy Multinational Award presented by The Circulars Accelerator. Employing 142,000 people in more than 100 countries including India, it uses recycled content and recyclable materials in its products, prolongs product lifespan through leasing and pay-per-use, and has introduced take-back schemes into its supply chain. Circular activities accounted for around 12% of its revenues and saved 100,000 metric tons of primary resources between 2018 and 2020. Multiple other leading companies are also following treading on a similar pathway to integrate circular models into their strategy and operations.

Conclusion of the roundtable

The 3rd edition of the roundtable discussion concluded with the panelists underscoring the need for improved waste recycling capabilities in the coming few years. Especially given the steady increase in India's import of commodities like paper, plastics, metals and oils, robust circular business models are the need of the hour which should be driven by regulation and adoption by industry and society.



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