



CONNECT
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EDITORIAL TEAM MESSAGE

Dear Readers,

We present to you the March 2026 edition of Connect, the research newsletter from Jaipuria Institute of Management, on the theme “Embedding Technology and Sustainability: Creating Circular Supply Chains for Greener Future”. In this, we explore the shift towards resilient circular economies powered by technology and collaboration. The business landscape in India is pivoting from generic linear models to sustainable loops that prioritize resilience, resource efficiency, and innovation across sectors like pharma, education, textiles, and beyond. In this edition, we invite you to dive deep with us into the evolving sustainability paradigm, driven by digital transformation, blockchain, and forward-thinking practices. We have included four insightful research contributions in this edition.

The first article, From Linear to Resilient Circular Economy Pathways for Flexible Public Pharma Supply Chains, tackles the vulnerabilities in India’s public pharma sector—from COVID disruptions and raw material

shortages to waste generation. Employing a multi-method TOE framework with Delphi, BWM, and Bayesian networks, it uncovers technology innovation and digital tools like AI and blockchain as top enablers for flexibility, far outpacing regulations. Pharma executives can now picture supply chains that adapt in real-time to shortages while slashing waste. It prompts reflection: could prioritizing internal digital skills be your next strategic edge?

The second article, Integrating Education, Technology, and Sustainable Living: Advancing the Circular Economy for Future Generations, charts a holistic path blending pedagogy, IoT, AI, and green finance amid India’s solar surge and green bond boom. It addresses info overload by advocating systems thinking over linear approaches, fostering resilient communities through EV battery recycling and agroforestry. For educators and policymakers, it offers insights: how might retooling curricula with these tech catalysts prepare tomorrow’s workforce for circular growth—without the overwhelm?

The following article, Blockchain-Powered Circular Loops: Revolutionizing Sustainability in India’s Textile Industry, spotlights the sector’s 2% GDP heft against 87% landfill waste and dyeing pollution. Surveying 176 managers, it demonstrates circular practices plus blockchain yielding 35-45% carbon cuts and up to 50% eco-gains via traceable threads from farm to fabric. For textile industry leaders, it offers fresh perspective: how might blockchain-enabled circular loops convert waste into new revenue streams while advancing national sustainability goals?

The final article, The Future Is Circular—and Powered by Tech, from a practitioner’s view, champions AI for demand prediction, IoT for longevity, and chemical recycling to extend product life, drawing from H&M garment returns and Tesla battery recovery. It flags mindset shifts as the real hurdle beyond costs or regs. For industry trailblazers, it offers

perspective: could embedding these technologies minimize landfills and boost efficiency, making circularity not just green but profitable?

Together, these articles sketch a roadmap for circular transformation, but success hinges on industry-academia partnerships to scale these ideas. The question isn’t if circular models will dominate, but how quickly we can collaborate to make them resilient realities.

We sincerely hope this edition sparks your curiosity and action. Please share your thoughts—what circular challenge are you facing, and how might these insights help? Please feel free to connect if you have feedback, collaboration ideas, or queries.

Best regards
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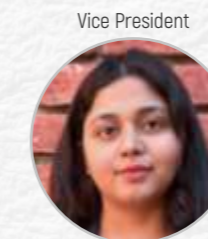


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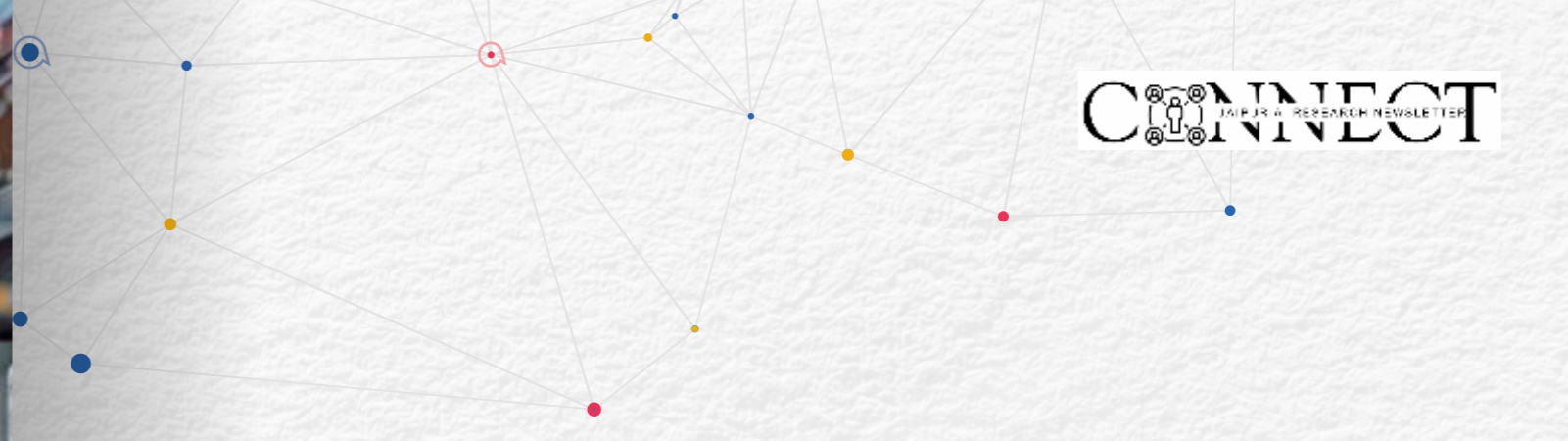
ARTICLES

Insights from Academia

FROM LINEAR TO RESILIENT: CIRCULAR ECONOMY PATHWAYS FOR FLEXIBLE PUBLIC PHARMA SUPPLY CHAINS

This study based on enhancing the efficacy and resilience of pharmaceutical supply chains in India's public sector. The context of the study lies in the increasing difficulty of pharmaceutical supply chains, which includes multiple stakeholders, strict regulations, and serious public health responsibilities. These supply chains have faced major disturbance due to concerns such as COVID-19, shortage of raw materials, Infrastructure constraints, and lack of digital adoption. The industry also generates a lot of garbage, which emphasizes the necessity of sustainable procedures. Two major gaps give rise to the study's justification. First, there is still less adoption of digital transformation and circular economy ideas in pharmaceutical supply chains, despite their growing significance. Second, the important factors that can improve supply chain flexibility are not given priority. Policy makers and practitioners must identify and prioritize these enablers as flexibility is critical for managing uncertainties promising timely

supply of medicines. The study uses a multi method approach based on The Technology Organization Framework Environment framework to address this. Key enablers are identified and validated using the Delphi approach with five domain experts. After ranking the significance of these enablers using the Best Worst Method (BWM), a Bayesian Network Model is used to examine probabilistic linkages and identify the most important aspects, because this study's primary focus is the Indian public pharmaceutical industry, its conclusion is extremely pertinent and context specific. The primary conclusion includes a significant number of insights. The fact that both digital transformation and the adoption of the circular economy are dominated by technology related reasons is a major revelation. Technology innovation was the most important factor for CE, while digital technology (such as blockchain and AI) was given the highest priority among DT enablers.



While government laws had very little impact, while financial resources and digital skills also emerged as important contributors. Another discovery is, despite of being regarded as essential in public sector system, laws have a relatively small direct impact on flexibility. Furthermore, the presence of strong digital and circular enablers leads to improvement in supply chain flexibility. (Over 60% probability in higher state) The study emphasizes that investing in cutting edge technology and digital capabilities has a greater impact on corporate and industries than merely depending on government support. Internal capabilities like staff competencies, technology infrastructure and financial planning should be given top priority by businesses. Achieving circularity and operational efficiency also requires cooperation with supply chain partners and system operations. There are important

implications for both industry and society. The study offers policymakers a methodical framework for creating focused initiatives and efficiently allocating resources. It provides companies a roadmap for improving service delivery, sustainability and resilience. A more flexible, sustainable and citizen focused pharmaceutical supply chain system in the public sector may result from the integration of digital transformation and circular economy concepts.

The full research paper can be accessed here Singh, A., Ramtiyal, B., Jain, V., Vijayvargy, L., & Khan, S. B. (2026). Examining circular economy principles to transform public sector pharmaceutical supply chains for flexibility: A multi-method approach. *Technological Forecasting and Social Change*, 223, 124410. <https://doi.org/10.1016/j.techfore.2025.124410>



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INTEGRATING EDUCATION, TECHNOLOGY, AND SUSTAINABLE LIVING ADVANCING THE CIRCULAR ECONOMY FOR FUTURE GENERATIONS

The transition toward a sustainable circular economy requires a multidimensional paradigm that integrates education, technology, and economic structural shifts. In developing nations like India, sustainable living has evolved from simple individual energy-saving habits into a necessary systemic transformation supported by green finance and infrastructure. The core philosophy of the circular economy—moving away from the traditional "take-make-dispose" model toward "closing the loop" through reuse and regeneration—is essential to decouple economic growth from environmental degradation. Data from 2020 to 2024 reflects this momentum; for instance, India's green bond issuances rose from 6,000 INR Cr to an estimated 14,200 INR Cr, while solar energy capacity surged from 37 GW to approximately 70 GW. These statistics underscore a clear trend where financial mechanisms, such as ESG-based investments and sovereign green bonds, are actively

scaling circular practices across industries. However, a significant paradox exists within this transition: while increased access to information is meant to empower, it often creates cognitive overload and complexity for both learners and decision-makers. To address this, creative solutions must include a shift in educational pedagogy from linear problem-solving to holistic systems thinking, ensuring that individuals are equipped with actionable knowledge rather than being overwhelmed by data. Simultaneously, advanced technologies such as the Internet of Things (IoT), AI, and blockchain serve as vital catalysts by optimizing resource management and enabling preventive environmental conservation. From the industrial recycling of electric vehicle batteries to agroforestry practices for soil conservation, these innovations provide practical pathways for resource efficiency. Ultimately, the practical relevance of this integrated approach lies in its ability to foster

resilient communities. By harmonizing education and green technology with robust policy and financial alignment, society can meet present needs without compromising the ability of future generations to thrive.

The full research paper can be accessed here Singh, S., Anand, S., Anandi, & Yadav, S. (2025). Integrating education, technology, and sustainable living: Advancing the circular economy for future generations. *Circular Economy and Sustainable Innovation* (pp. 231–240). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-032-00437-6_11



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BLOCKCHAIN-POWERED CIRCULAR LOOPS: REVOLUTIONIZING SUSTAINABILITY IN INDIA'S TEXTILE INDUSTRY

India's textile and apparel sector powers 2% of the nation's GDP, yet it grapples with massive waste, pollution, and resource depletion—think 20% of global wastewater from dyeing and nearly 87% of fibers ending up in landfills. Their research unveils how circular economy practices—reusing materials, cutting waste, and redesigning products—paired with blockchain technology, deliver wins across economic profits, social equity, and environmental health. Imagine tracking every thread from cotton farm to recycled fabric with unbreakable digital ledgers. The study, based on surveys from 176 managers across key textile hubs like Surat, Kanpur, and Jaipur, proves circular strategies directly boost sustainability: slashing costs, enhancing worker safety, and shrinking carbon footprints by 35-45%. But the real game-changer? Blockchain adoption, driven by these practices, amplifies results—up to 50% gains in eco-performance through transparent supply

chains that build trust among suppliers, buyers, and regulators. No more "take-make-waste"—blockchain ensures every recycled loop is verifiable, cutting fraud and enabling real-time waste monitoring. For industry leaders in textiles—from exporters to fast-fashion brands—this means actionable steps. Invest in blockchain pilots for traceability, starting with high-waste areas like dyeing. Partner with recyclers for closed-loop systems, turning garbage into garments and unlocking new revenue from upcycled products. Firms adopting this saw moderate-to-large efficiency jumps, aligning with India's National Textile Mission for digital-green transformation. Policymakers should incentivize such tech via subsidies and mandates, fostering ecosystems where SMEs thrive on sustainable exports. The research concludes by advocating—blend circular smarts with blockchain for a resilient industry that profits people and planet.



The full research paper can be accessed here
Tewary, T., & Jain, V. (2026). Circular Economy and Blockchain Technology: Pathways to Economic, Social, and Environmental

Sustainability. *Prabandhan: Indian Journal of Management*, 19(2), 27–44. <https://doi.org/10.17010/pijom/2026/v19i2/175043>



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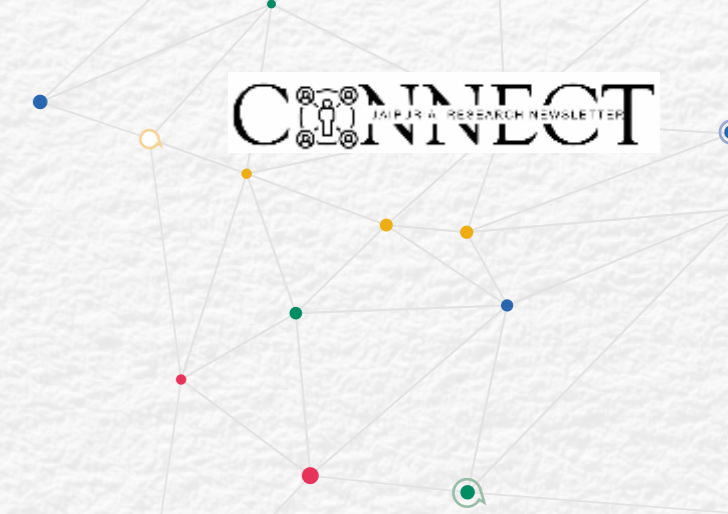


Insights from Practice

THE FUTURE IS CIRCULAR- AND POWERED BY TECH

We currently reside in a society that relies heavily on disposing of once-used products for several reasons. The cost of living (environmentally) in this manner has a great deal of negative impact on our planet. The impacts of this method of living can be seen by the large amounts of waste in our landfills, as well as the depletion of Earth's natural resources. To assist in reducing the impact of this method of living, many people are now beginning to talk about the concept of the "circular economy". Circular Economy refers to how we can utilize resources for as long as possible, and then they can be reused and/or recycled. The driving force behind creating a circular economy is Technology. The focus of a circular economy is not intended on taking all the old products and transforming them into new products. Instead, a circular economy focuses on reusing items that have previously been used; or rather, it focuses on making existing products last longer than current trends allow. It will not be easy to achieve this

goal, but technology will help accomplish this goal. Technology is a key factor in building a circular economy. We will utilize technology to construct an economy (refer to each of the above two statements). A circular economy must be the way to go, and Technology is how we create a circular economy that works with the suicide of the natural state of the planet. AI helps businesses use their resources more efficiently. By utilizing AI technologies, businesses can accurately predict demand and produce only the amount needed while minimizing waste. Furthermore, AI technologies are being developed to assist in waste management, and utilizing smart technologies can aid businesses in sorting their waste streams. The Internet of Things is another technology that is becoming increasingly important. Using IoT devices, users are able to monitor how various items are being utilized and when they require service or maintenance. This results in items having longer strength and users being able



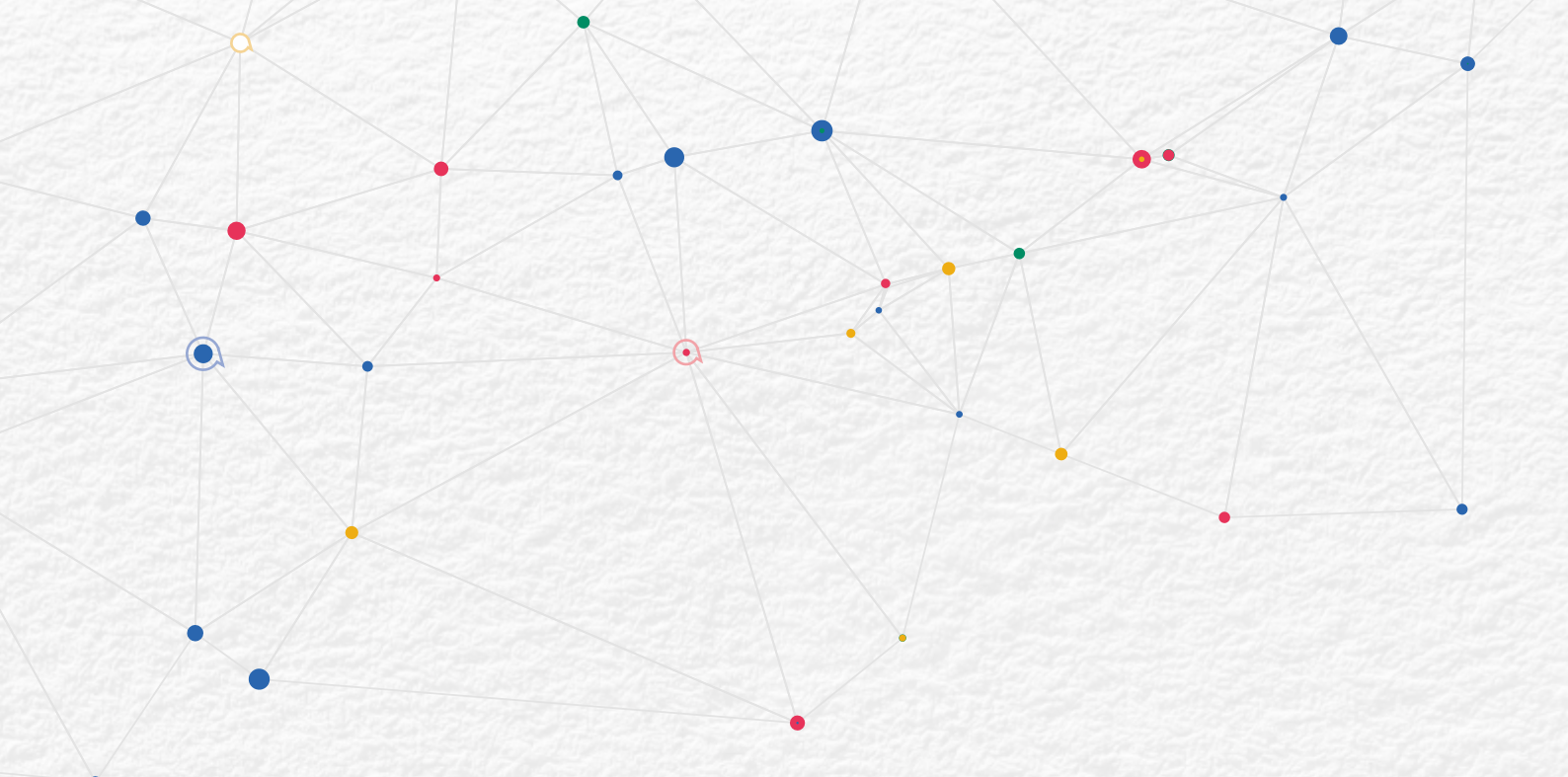
to keep utilizing the same item rather than having to buy a new one. In addition, farmers and energy producers utilize IoT technologies for the responsible utilization of resources, such as electricity and water. The recycling process is also changing. Many different types of materials were historically very difficult to recycle, and large volumes of plastic waste were deposited into landfills. However, with the growth of innovative recycling methods such as chemical recycling, waste can now be converted back into its original components and reused as raw materials for production. As a result, there is a significant reduction in the amount of waste generated in landfills. For example, fashion retailers such as H&M provide programs that allow customers to return clothing that they no longer want or need to recycle or reuse, so that they do not contribute to textile waste and perform responsibly when consuming. Similarly, Tesla focuses on recycling batteries and recovering key materials, including cobalt and lithium, to be reused in new products rather than

disposed of. In addition, advances in technology are enabling companies to improve accountability and visibility into their product line. Technologies used by companies allow them to track a product from the time it is manufactured until it is disposed of, helping to ensure that waste is minimized. In addition, through the analysis of data, companies are better able to locate opportunities for improvement along with their customers' purchasing patterns. With that said, it should be noted that transitioning to a circular economy presents some challenges, including costs associated with implementing a circular business model, a lack of knowledge, and regulatory hurdles. Still, the most significant barrier will be changing people's and businesses' attitudes. In conclusion, the development of a circular economy and the achievement of a green future depend heavily on the adoption of technology. This is because technology promotes sustainability, increases efficiency, and decreases waste. But this is only possible if each of us makes the decision to do so.



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