

# Using AIoT & Data Analytics for Sustainable Retail Operations



India's retail industry is evolving rapidly. It is projected to reach USD 2 trillion by 2032<sup>1</sup>, and the number of stores is expected to surpass 12 million nationwide<sup>2</sup>. With the built environment expanding at an annual rate of 8 – 10%, energy consumption is estimated to hit 320 TWh by 2032<sup>3</sup>. This will put a major strain on natural resources for energy generation in addition to contributing to emissions. Thus, there is growing pressure on retailers to adopt more sustainable ways of working. Many are now looking beyond traditional methods and exploring how technologies like Artificial Intelligence (AI), Internet of Things (IoT), and data analytics can help support long-term growth while being sustainable.

To explore this shift, the Retailers Association of India hosted a focused roundtable at the Retail Leadership Summit 2025. It brought together C-suite leaders – including Chief Information Officers (CIOs), Chief Technology Officers (CTOs), Chief Executive Officers (CEOs), and Sustainability Heads – who are leading digital transformation efforts across Quick Service Restaurants (QSR), fashion, pharma and other retail formats. These leaders shared real-world insights on how Artificial Intelligence of Things (AIoT) and data-driven solutions are helping them meet their sustainability goals while improving business performance. The discussion was moderated by **Urmi Bhattacharjee, Head – Sales & GTM, India at Carrier Aboard**. It highlighted three key themes shaping the future of sustainable retail operations.



## 1) Greater Visibility and Transparency in Operations Drive Business Efficiency

Across the board, leaders agreed that the first step towards improving sustainability is seeing the problem clearly. In multi-site operations, lack of granular visibility into energy consumption, equipment performance, or indoor conditions often results in blind spots. AIoT offers the promise of real-time transparency — across every retail site, asset, and process.

As **Vikram Bothra, CEO, Chandan Retail** quoted, "To offer a great customer experience, you need optimal temperatures, functioning equipment, and efficient staff and processes. But to ensure all of that, you need visibility. We need data to not only address current challenges but to plan for where our business will be in 10 years. The key lies in customized, insight-driven solutions."

True visibility and transparency in multi-site operations come not just from collecting data, but by transforming disparate device data into precise, equipment-level insights. AIoT platforms enable this by seamlessly integrating and contextualizing information from sensors and meters, offering a clear and actionable view of asset performance across multiple sites. This enhanced clarity allows organizations to accurately track equipment health, anticipate maintenance needs, and optimize energy consumption. By unlocking such granular visibility, AIoT empowers businesses to shift from reactive responses to strategic, data-driven decision-making, fueling operational excellence and sustainable growth.

***We need data not only to address current challenges but to plan for where our business will be in 10 years. The key is customized, insight-driven solutions.***

**Vikram Bothra,  
CEO, Chandan Retail**



## 2) Quality Data Enables Enforcing Policy Compliance, Detecting Issues and Streamlining Reporting

India's evolving Environmental, Social, and Governance (ESG) reporting mandates and global supply chain scrutiny have pushed compliance higher up the priority ladder. But compliance is only as good as the data behind it — and this is where many organizations stumble. Fragmented systems, legacy infrastructure, and lack of standardization make it difficult to ensure the integrity of operational data.

AIoT platforms that integrate data capture, validation, and analysis at scale are proving to be game changers. **As a Sustainability Lead of an Electronic Retailer, mentioned,** "AIoT helps not only with tracking energy usage but also with identifying hidden emission sources

— like refrigerant leaks in HVAC systems. While one store may have minimal impact, across 600+ locations, the footprint becomes significant. Reliable, quality data is critical — not just for compliance, but for certifications, internal benchmarking, and investor trust.”

AIoT platforms that unify data capture, validation, and analytics offer a game-changing advantage by enabling businesses to meet compliance goals and improve operational efficiency. By bringing data from multiple systems into a unified platform, they offer a comprehensive view — from detecting hidden emission sources to monitoring equipment performance. This level of detail allows organizations to track technician visits, correlate them with equipment issues and first-time fixes, and make informed decisions to enhance maintenance effectiveness and to even select preferred vendor partners. With these insights, businesses can reduce carbon emissions, optimize maintenance processes, and build greater trust with regulators and investors. Adopting AIoT isn’t just about keeping up — it’s about leading with reliable and actionable data.

### 3) Bridging the Skill Gap is key to scaling the use of AIoT for improving customer experience

While much of the AIoT conversation revolves around cost and compliance, the end goal remains clear: a better, more consistent customer experience. From temperature-controlled pharma stores to comfortable dining environments in QSRs, the customer experience is intimately tied to operational excellence. AIoT helps ensure consistency at scale — but only if teams are equipped to harness it.

***Technology should be built for people. Unless our teams are trained to use it well, it will not be effective. Investing in upskilling is just as important as investing in the technology.***

**Jasvinder Arora,  
AVP – Retail, Siyaram**



Several participants pointed to the need for upskilling on-ground teams, facility managers, and even store staff. As **Jasvinder Arora, AVP – Retail, Siyaram**, rightly pointed out: “Technology should be built for people. Unless our teams are trained to use it well, it will not be effective. Investing in upskilling is just as important as investing in the technology. With better usage, we get better data, and thus get clearer insights into customer preferences, which can guide us in offering more sustainable products.”

As digital adoption accelerates, the human element cannot be overlooked. Creating a culture that values data and prioritizes sustainability is just as important as investing in technology. Training programs — such as those focused on energy measurement and verification, or offering a complete overview of AIoT systems from frontend to backend — help retail employees understand how the entire system works. This equips them to adapt to any new changes in operations, deploy the solutions as they were designed to be used, and perform their roles more effectively. In turn, this operational readiness directly contributes to delivering a more consistent and enhanced customer experience.

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## Conclusion: Move from Pilot to Scalable Impact

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The roundtable reinforced a strong message: AIoT is not a buzzword — it is a business enabler. It is helping retailers cut energy costs, reduce carbon emissions, ensure compliance, and deliver consistent customer experiences.

But to truly make a difference, pilot projects need to evolve into long-term, scalable programs. The retail sector is well-positioned to lead the application of cutting-edge technology to improving operational efficiency and achieving sustainability goals.

Retailers who invest today in smart, connected, and data-driven operations will be the ones shaping a more customer centric and environmentally friendly future.

### References:

1. <https://www.ibef.org/industry/retail-india>
2. <https://www.mckinsey.com/industries/retail/our-insights/the-state-of-grocery-retail-in-india>
3. Based on data from the Alliance for an Energy Efficient Economy (2021), commercial building energy consumption in India is projected to grow steadily, and, using extrapolation from the AEEE dataset (available up to 2047), the figure for 2032 is estimated at approximately 320 TWh.

## About RAI:

Retailers Association of India (RAI) serves as the unified voice of Indian retailers, working collaboratively with stakeholders to foster the growth of the modern retail industry. RAI actively engages with all levels of government to support employment, promote retail investments, enhance consumer choice, and strengthen industry competitiveness nationwide.

Visit: [www.rai.net.in](http://www.rai.net.in) to know more.

## About Carrier Abound

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