

# **Navigating the Digital-Physical Nexus for Sustainable Snacking using Precision Retailing**

Fares Belkhiria, Mehmet Gumus, Laurette Dube  
Desautels Faculty of Management, McGill University

## **Abstract**

Amidst the tumult brought by the COVID-19 pandemic and concurrent political and environmental disruptions, Canada's food supply chains are wrestling with the pressing need for resilience and adaptability. With traditional mechanisms showing signs of strain, there emerges a critical requirement for innovative solutions that not only secure the economic vitality of companies but also champion human and global health resilience. Our research, anchored at Food Convergence Innovation initiative (FCI Canada), leverages the paradigm of Precision Retailing, aiming to optimize convergence outcomes across individual, enterprise, and societal spectrums.

Integrating the analytical prowess of Precision Retailing with the complexities of today's food systems, we probe into how businesses, exemplified by GreenLeaf Snacks, can design strategies that increase in-store sales, all while forging a digital-physical nexus. Grounded in behavioral economics and decision neuroscience, our research venture tests data-driven in-store and online interventions such as targeted promotions informed by socioeconomic-status, curated bundles, and transparent nutritional packaging with traceable sourcing of ingredients, all curated to resonate with the modern consumer's sustainable aspirations.

The enterprise's commitment to maximizing individual consumer satisfaction, bolstering its own operational outcomes, and contributing positively to societal well-being epitomizes the convergence outcomes achievable through this approach. Our methodology facilitates a holistic view of consumer behavior for convergence outcomes, guiding strategic interventions in-store. We explore collaborations and the transformative potential of online platforms in accelerating the integration of local offerings into wider supply ecosystems. Our findings offer a compass to agrifood startups, guiding them towards strategic decision-making that synergizes digital innovation with tangible, sustainable consumer experiences.

## **Keywords:**

Sustainable Snacking, Precision Retailing, Digital Retail Landscape, Consumer Engagement, Integrated Digital Solutions.