

Joe Berry Award 2025

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Topic # Evolving Retailer Formats – Changing Direction

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Retailer Format Changes – Is the Juice Worth the Squeeze?

Executive Summary

The future of retail isn't just about changing store layouts—it's about transforming brick-and-mortar supermarkets into AI-powered ecosystems.

With rising labour costs within a global competitive landscape, can Australian supermarkets afford to operate without artificial intelligence (AI) at the core of their store operations? This essay discusses whether the strategic *investment in AI is truly worth the initial squeeze* or will retailers *risk drowning in data with little juice to show for it* over the next decade.

Drawing on insights from industry players and using real-world examples, this essay aims to showcase how retailers need to be planning stores powered by edge computing which leverages AI to improve productivity, optimise online hybrid fulfillment channels and re-define the customer experience.

The essay then evaluates how retailers need to find a balance integrating AI into store formats of the future to ensure *the juice — greater efficiency and redefined customer experience — outweighs the squeeze of costs, privacy and ethics*. Success hinges on a cohesive data strategy orchestrated by an AI Excellence Team who have lean testing and rapid prototyping principles front of mind. The outcome? The complete harmonisation of institutional logics unlocking shared value in existing and new market ecosystems.

Ultimately, the conclusion is clear: you can't do retail without **ai**. Retailers that strategically integrate AI into their operations will improve top and bottom-line margins, future proof business models and excitingly redefine supermarket economics over the next decade. In this case, *the juice is undoubtedly worth the squeeze*.

Introduction: Are Retailers at an Inflection Point?

At the 2025 National Retail Federation (NRF) Big Show in New York, a strong consensus emerged; retailers that fail to embrace AI tools and technology into their core operations risk being left behind in an increasingly global competitive and technology-driven market.

Microsoft CEO Satya Nadella reinforced this, stating, "*Microsoft have moved from talking about AI, to now helping our customers translate and implement AI into real tangible solutions*"¹. AI is no longer an emerging trend; it has become a fundamental requirement for staying competitive.

Azita Martin, VP & GM of Retail at NVIDIA, reinforced this shift at NRF 2025, stating, "*AI initiatives need to be top-driven; executives and the board must believe in it. To get started you need to focus on solving the biggest business challenges—store operations, e-commerce, and supply chain through AI that leverages vision, analytics, and data simulation technologies.*"

However, AI's rapid evolution comes with inherent risks. Ironically, just a week after Azita's comments, the launch of Deep Seek on January 27, 2025, wiped out \$600 billion of NVIDIA's market cap. This highlights how AI investments can become redundant overnight, *leaving organizations with little juice to show for the squeeze.*

This raises concerns about whether retailers AI strategies are being dictated by large foreign tech conglomerates, through meta-organizations like the NRF, which facilitate environments that push untested and uncharted AI solutions. This presents a critical decision point for Australian supermarkets—is AI just another hype cycle, or is it a non-negotiable imperative?

¹ S. Bransten, AI Built for the Future, Ready Now, Microsoft, 2024, <https://vimeo.com/showcase/11522530/video/1046198966>

Infrastructure Underpinning Store Formats

Retailers must design stores of the future as mini data centres which have advanced edge computing capabilities. Edge computing, powered by NVIDIA graphic processing units (GPUs) enables real-time, localised data processing which reduces latency, lowering bandwidth usage, and can improve operational efficiency ².

As shown in Figure 1, edge computing ecosystems encompass sensors, cameras and chips which are used to create new data streams. This data is relayed back to edge devices which can process and analyse data using AI vision analytics. Key insights are sent back to the cloud for storage. This is known as hybrid computing, blending the cloud and edge capabilities. All this data enables organisations to learn about their store operations like never before!

The edge computing ecosystem is comprised of four primary areas

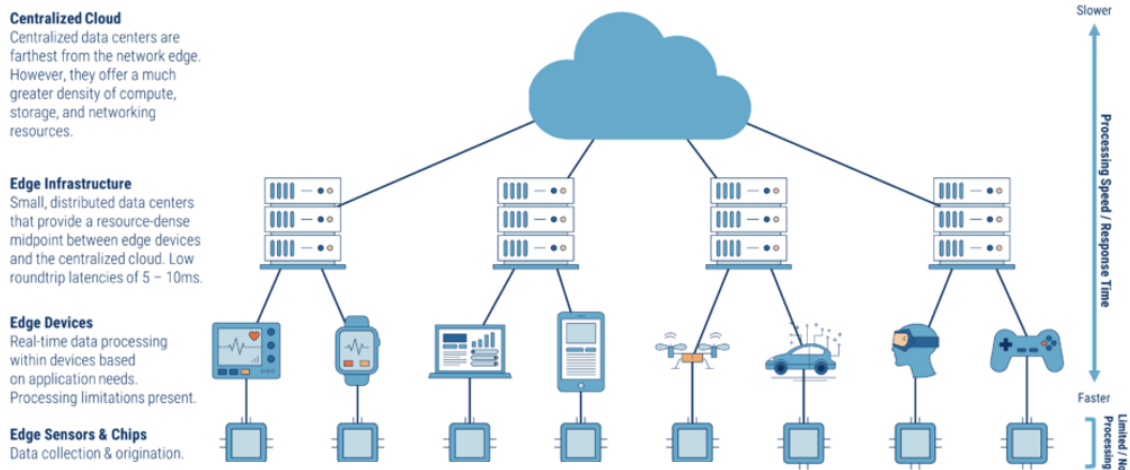


Figure 1: The Hybrid Computing Ecosystem

With the cost of hardware, implementation, and software dropping significantly due to breakthroughs such as Deep Seek, stores can be set up with market-leading edge computing ecosystems for approximately \$50K-\$100k per store³. *This investment is the initial squeeze* required to transform supermarkets into intelligent AI-driven ecosystems to improve productivity, maximising the role of stores in online fulfillment and re-define the customer experience.

² CB Insights Research, The Edge Computing Ecosystem: From Sensors to the Centralized Cloud, <https://www.cbinsights.com/research/edge-computing-ecosystem-sensors-to-cloud/>.

³ Informa TechTarget, The Future of Hybrid Cloud: What to Expect in 2025 and beyond, <https://www.techtarget.com/searchcloudcomputing/feature/The-future-of-hybrid-cloud-What-to-expect-in-2025-and-beyond/>.

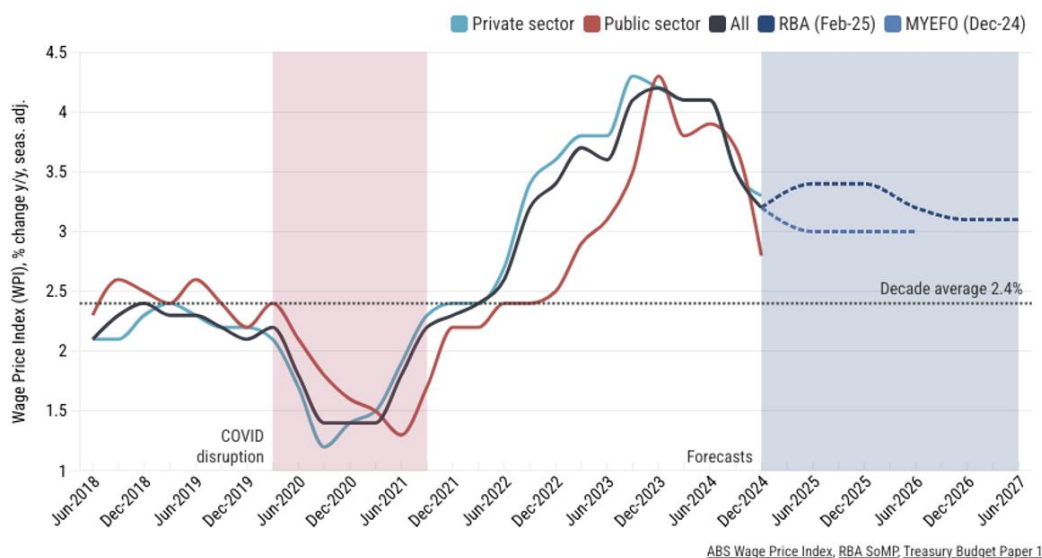
Stores of the Future: Improving Productivity

Australian supermarkets are at a historic inflection point. As forecasted in Graph 1, the compound annual growth rate for supermarket revenue is expected to be only 0.3% over the next five years⁴.



Graph 1: IBISWorld Revenue for Supermarket & Grocery Stores in Australia: Total value (\$) & YoY change (%) from 2012 to 2030- and five-year outlook.

While supermarket revenue flatlines, the Reserve Bank of Australia (RBA) are forecasting wage growth to ease to 3.4% in 2025 and to 3.1% by the end of 2026 as shown in Graph 2. Specifically, private sector enterprise bargaining agreements (EBAs) are negotiating wage increases of 3.9%⁵.



Graph 2: Ai Group: Australian wage growth rates and forecast 2025

⁴IBISWorld, Revenue for Supermarket and Grocery Stores in Australia – Total Value (\$) and Annual Change from 2012–2030 with Five-Year Outlook, IBISWorld.

⁵Ai Group, Factsheet – Wage Dynamics in Australia, <https://www.aigroup.com.au/resourcecentre/research-economics/factsheets/factsheet-wage-dynamics-in-australia/>.

The risk of wage growth outstripping revenue growth is compounded by hostile unions disrupting customer perception in times of record profits and constant government scrutiny. These inputs, along with increases in electricity prices, mean retailers will need to absorb costs related to rising wages.

To address these rising wage costs, store formats of the future need to improve productivity. *Productivity is defined as the ability to maximise sales and operational efficiency per labour hour while minimizing waste and inefficiencies.*

Stores designed with AI-powered vision analytics can use heat mapping technology to start learning about individual store layouts, product placements and insights into inventory management by staff as shown in Figure 4⁶. By learning and analysing real-time customer and staff behaviours, AI can identify high-traffic areas, offering advice for high-potential product placements, new ways to use underutilised spaces, and identify bottlenecks in labour and inventory management⁷.

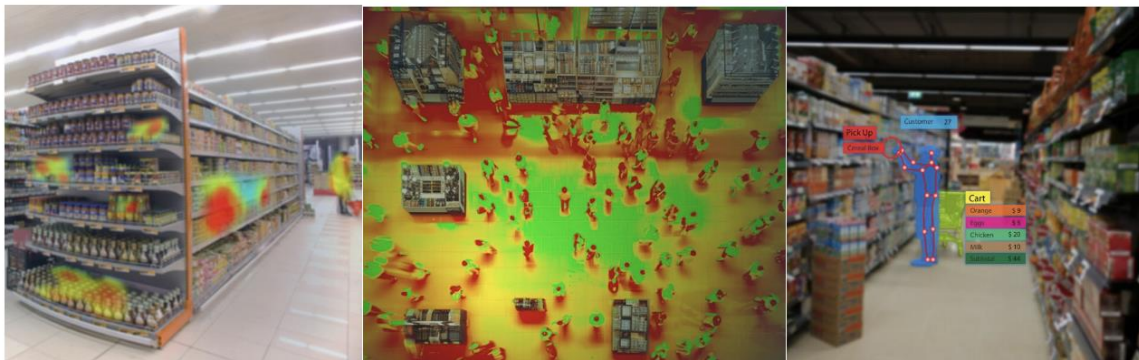


Figure 2: Three examples of AI vision analytics in retail showcasing heatmap and customer movement tracking technology

Using a practical example with real tangible benefits, one of the most time-consuming and labor-intensive tasks in retail is inventory scanning and stock take. The integration of edge computing with autonomous robots can automate this process⁸.

Backed by real-time edge processing supermarkets can unlock substantial labour cost savings while improving overall efficiency. Figure 5 showcases how AI directed robots can scan inventory to check planogram compliance and inventory differences, which is currently in use across Walmart stores in the US.

⁶ V7 Labs, AI in Retail: How Artificial Intelligence Is Transforming the Industry, <https://www.v7labs.com/blog/ai-in-retail>.

⁷ Vision.ai, Computer Vision for Retail Shelf Monitoring: Optimizing On-Shelf Availability, <https://imagevision.ai/blog/computer-vision-for-retail-shelf-monitoring-optimizing-on-shelf-availability>.

⁸ Voxel51, Using Computer Vision to Enhance Customer Experience in Retail, <https://voxel51.com/resources/learn/using-customer-experience-in-retail/>. computer-vision-to-enhance-c

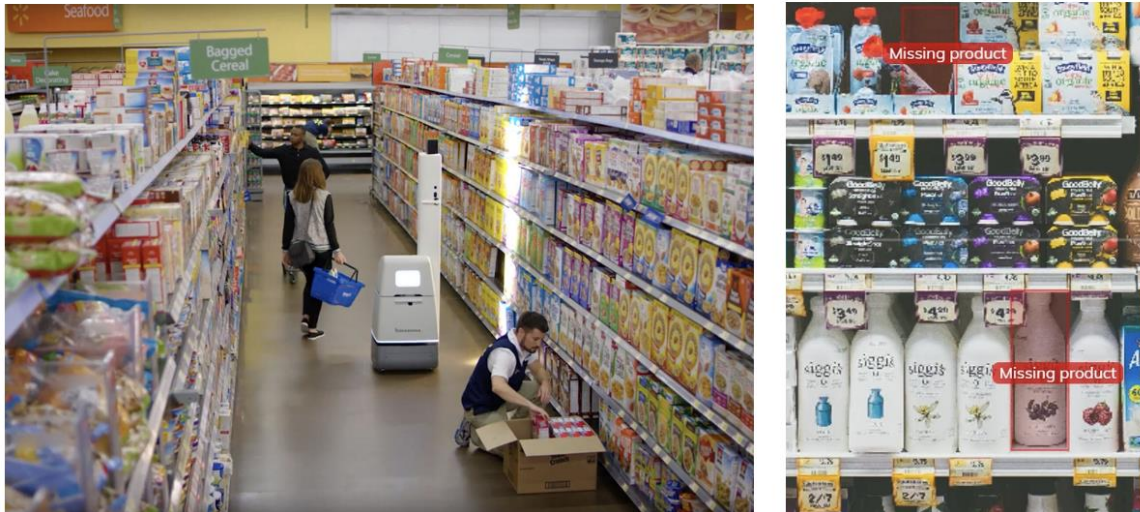


Figure 3: An AI autonomous robot powered by edge computing scanning inventory levels and planogram compliance while customers shop and Team Members work.

AI-driven store operations are no longer a futuristic vision, they are a necessity as supermarkets navigate rising labour costs and shifting consumer expectations. These tools and technology can unlock productivity savings up to \$50,000 per store as modelled below using the inventory robot example.

Cost Factor	Amount (AUD)
Human labour cost (per shift on-costed)	\$ 205.48
Robot operating cost (per day)	\$ 70.25
Daily savings	\$ 135.22
Annual human labour cost (on-costed)	\$ 75,000
Annual robot cost	\$ 25,000
Annual savings per store	\$ 50,000

10 stores EBIT saving	\$ 500,000
100 stores EBIT saving	\$ 5,000,000
1000 stores EBIT saving	\$ 25,000,000

Table 1: Approximate EBIT savings on implementing AI robot to support with manual tasks in stores.

This is one of many examples which will enable organizations to make data driven decisions about each store individually and adapt the format to maximise sales and improve the customer experience based on specific demographics⁹. The opportunity for a true cost to serve model.

However, the rise of AI in retail comes with challenges, including conflicting institutional logics of regulation, privacy and consumer trust due to excessive surveillance. BCG cautions that constant monitoring could undermine employee independence and erode customer trust, making it essential for retailers to strike the right balance between efficiency and ethical risks *before squeezing the juice*¹⁰.

⁹ Netguru, Computer Vision in Retail: Use Cases, Benefits, and More, <https://www.netguru.com/blog/computer-vision-retail>

¹⁰ Boston Consulting Group, Australian Consumer Sentiment Snapshot #7, 2023, <https://www.bcg.com/publications/2023/australian-consumer-sentiment-snapshot-7>.

Stores of the Future: Online Fulfillment

Edge computing can also be used to enable AI-driven real-time inventory management to bridge digital orders with physical stock. Coles and Woolworths use a hybrid model, fulfilling orders through click-and-collect, home delivery via dark stores and automated centres, and same-day services with partners like Milkrun and Uber Eats. Stores of the future need to design with the hybrid model in mind.

Consumer demand supports this approach, with 39% preferring click-and-collect, 35% opting for immediate delivery, and 26% choosing scheduled delivery¹¹. As CEO Alexandre Bompard states, “*Online isn’t an add-on—it’s the battlefield*,” emphasizing the need for an attractive and reliable service, particularly for the key 35–65+ demographic, the largest market opportunity as highlighted in Figure 5.

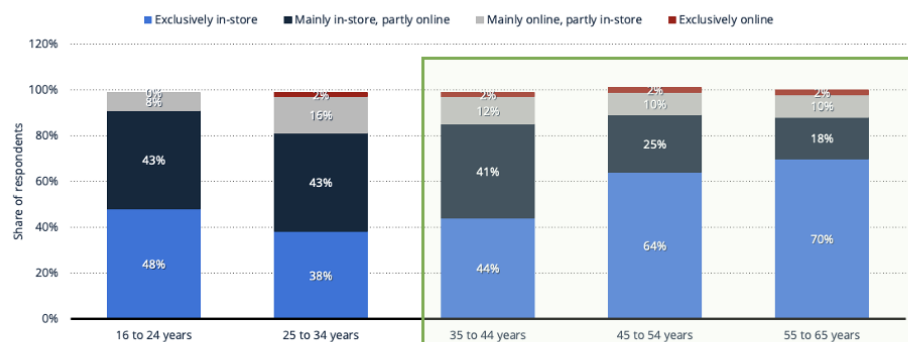


Figure 5: Statista: Distribution of grocery shopping channels used in Australia in 2022, by age group

Edge AI computing applications and devices can address the key reasons why consumers shop online vs offline; product selection, availability, value, customer service, and food quality as shown in Figure 6.

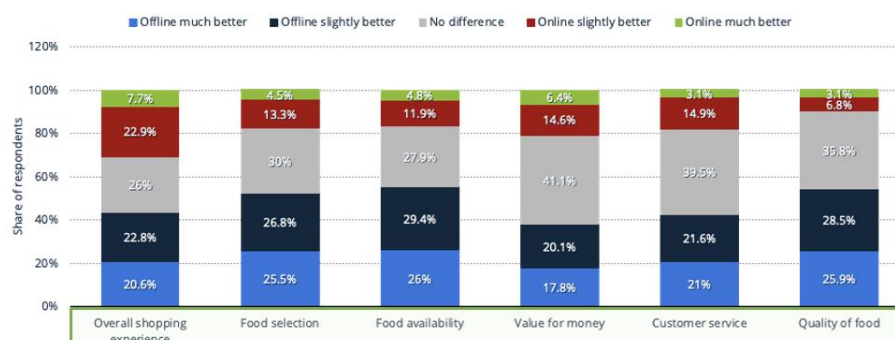


Figure 6: Statista: Reasons for grocery shopping online versus offline in Australia in 2022

¹¹ Statista, Online Grocery Shopping in Australia (Statista, April 2024), 36 pages, PDF, <https://www.statista.com/study/123456/online-grocery-shopping-in-australia/>.

Edge computing and AI analytics bolster physical stores' role in online fulfillment by enabling real-time inventory tracking, optimising pick-and-pack routes, and supporting staff with wearables and devices for swift order processing across the three hybrid models.

Stores of the Future: Redefining Customer Experience

The supermarkets of the future are also set to revolutionize customer experience by using edge computing to power AI to deliver hyper-personalisation, seamless convenience, and drive sustainability initiatives, aligning with the evolving demands of shoppers. Research from a 2023 McKinsey & Company report reveals that 71% of consumers expect personalised interactions, with 76% frustrated when these aren't met, a challenge AI is uniquely suited to address¹².

AI-powered smart carts, equipped with scanners and screens, analyses items as they're added, suggesting recipes tailored to dietary needs or past purchases in real time. Interestingly, these carts use QR codes in the ceiling to track customer movements. Kroger's collaboration with Microsoft exemplifies this, using AI-driven digital shelves to flash personalised promotions via shoppers' loyalty apps, while AI-guided apps pinpoint product locations and provide live tailored markdowns¹³.

Sustainability, too, gets an AI boost in future supermarkets, meeting consumer calls for ethical practices. A 2023 Forrester study found 68% of shoppers prefer eco-friendly retailers, and AI helps deliver¹⁴. Tesco's "zero-waste" stores use AI to track recyclable bin usage, rewarding customers with loyalty points for refilling reusable containers. In-store hydroponic farms, like Carrefour's Paris pilot, rely on AI to optimise water and light for growing fresh herbs in store to reduce wastage.

Collectively, these AI-infused features offer personalisation, interactivity and a focus on sustainability which enables supermarkets to become a vibrant memorable experience. *The juice is worth the squeeze for redefining the customer experience.*

¹² McKinMcKinsey & Company, "Next in Personalization 2023 Report. <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/next-in-personalization>.

¹³ Microsoft News Center, "Kroger and Microsoft Partner to Redefine the Customer Experience and Introduce Digital Solutions for the Retail Industry," January 7, 2019, <https://news.microsoft.com/2019/01/07/kroger-and-microsoft-partner-to-redefine-customer-experience-introduce-digital-solutions-for-retail-industry/>.

¹⁴ Forrester Research, "Forrester's Green Consumer Segmentation, 2023. <https://www.forrester.com/report/forresters-green-consumer-segmentation-2023/RES178745.pany>, "Consumer Expectations and Personalization in Retail," 2023

Future-Proofing Supermarkets Formats

The future of Australian supermarkets depends on strategic AI integration to navigate rising labour costs and evolving consumer expectations. AI is not just a tool for efficiency, it is a value driver that enhances profitability, operational effectiveness, and customer experience. Stores of the future need to be designed to capture as many data points as possible so AI analytics software can learn about trends and unlock insights about store designs and layouts not possible with the human mind.

A centralised AI Excellence Team needs to ensure consistency, governance, and ethical deployment while carefully managing conflicting institutional logics of privacy, ethics and regulation to maintain customer trust. The harmonisation of these institutional logics across the individual, team and organisational levels will be key to unlocking shared value across new markets and ecosystems.

By leveraging scalable vision AI, edge devices, and smart fulfillment, supermarkets can gain real-time insights and personalise customer experiences. As AI deployment costs decline globally by 20–30%, now is an optimal opportunity to invest in these technologies while ensuring that governance frameworks align with institutional expectations and consumer confidence¹⁵.

However, success depends on implementation and execution. The edge computing ecosystem enables a pipeline of growth initiatives to be built out over the next decade. Lean testing and agile prototyping allow supermarkets to start small and scale fast, turning AI-driven insights into top and bottom-line benefits.

Conclusion: *The Juice is Worth the Squeeze*

Meta-organizations like the NRF do play a key role in guiding AI adoption. NRF CIO Steve Randich stresses, “*Meta-organizations are the connective tissue between retailers and technology*,” promoting collaboration and ethical standards¹⁶. These networks help supermarkets navigate complex institutional logics balancing politics, ethics, customer experience, and sustainability, while ensuring AI adoption is strategic, scalable, and aligned with industry goals.

AI is not another hype cycle, it is non-negotiable. You can’t do retail without **ai**. Supermarkets that embrace AI-driven transformation will not only survive but thrive, ensuring their place in the future of retail. *The juice isn’t just worth the squeeze, it’s key to decade long success.*

¹⁵ Gartner - Take This View to Assess ROI for Generative AI 2024 A
Available at: <https://www.gartner.com/en/articles/take-this-view-to-assess-roi-for-generative-ai>

¹⁶ National Retail Federation, “NRF Panel Discussion Retail Principles for Artificial Intelligence,” January 2025