

Smart solutions for tough times: How AI is transforming New Zealand's food and beverage industry

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Aotearoa New Zealand's food and beverage (F&B) industry is facing significant challenges, including rising operational costs, workforce shortages, and increasing consumer demand for personalised and sustainable dining experiences. The impacts of inflation, supply chain disruptions, and changing market dynamics have placed substantial pressure on businesses to adapt quickly while maintaining profitability and customer satisfaction. In this complex environment, artificial intelligence (AI) may emerge as a valuable tool, offering practical solutions to enhance efficiency, optimise resource management, and improve customer experiences. By automating routine tasks, refining revenue management strategies, and supporting sustainability initiatives, AI may help businesses build resilience and maintain a competitive edge in a dynamic market. This study presents a discussion of the current opportunities and challenges associated with AI adoption in New Zealand's F&B sector, drawing on secondary research sources to synthesise insights from recent literature and industry examples. Four key areas are explored where AI may add value to the sector: inventory management, operational efficiency in food production, customer service enhancement, and revenue maximisation.

One critical area where AI is poised to add value to New Zealand's F&B sector is inventory management. Through advanced predictive analytics, AI platforms can forecast consumer demand more accurately, enabling businesses to optimise inventory levels and minimise waste [1]. This targeted approach reduces costs associated with both overstocking or understocking, enhancing economic sustainability and improving service availability. Operational efficiency in food production has been significantly enhanced by AI-driven technologies that streamline processes from raw material preparation to final dish presentation. For example, IBM's AI-powered Chef Watson utilises extensive culinary databases and algorithms to generate novel ingredient combinations, supporting restaurants in offering distinctive and personalised menus [2]. In the kitchen, AI can automate order management, prioritise tasks, and maintain hygiene by using computer vision systems that assess



ingredient freshness [3]. SkyCity Auckland’s adoption of water-cutting technologies and automated chocolate tempering machines illustrates how AI driven automation can boost production efficiency by performing tasks that previously required multiple staff members [4].

In addition to enhancing back-of-house operations, AI-powered technologies are increasingly supporting customer service delivery in the F&B sector. Self-service kiosks, chatbots, and QR code ordering systems can increase service efficiency and personalisation [5], although experiences can vary based on customers’ technological familiarity and preferences. For example, BellaBot from PUDU Robotics (deployed at Sudima Auckland Airport) supports waitstaff by delivering food to tables, thereby reducing physical workload and allowing staff to focus on complex interactions [6]. At Christchurch International Airport, the humanoid robot ‘Pepper’ interacts with guests by answering basic queries about airport facilities, providing directions, and promoting contactless engagement through verbal and touch free communication. Designed to offer a friendly and accessible service experience, Pepper helps manage guest flow in public spaces, particularly during peak travel times, and reduces the need for close human contact, which remains important in a post pandemic environment [7]. However, reliance on AI driven service delivery may risk diminishing the personalised, empathetic interactions traditionally valued in hospitality settings, particularly where human warmth and emotional intelligence are expected as part of the guest experience [8].

Dynamic pricing and revenue management are further enhanced by AI’s ability to effectively utilise real time data. New Zealand’s tourism businesses are increasingly adopting AI driven revenue management systems to adjust pricing dynamically, maximising profitability and responsiveness to market conditions [9]. AI systems continuously analyse variables, such as seasonal fluctuations, competitor pricing strategies, consumer preferences, and booking trends, enabling precise and flexible pricing decisions [10]. For example, online booking platforms operating across New Zealand (e.g., Book Me [11]) leverage AI to provide dynamic pricing based on real-time demand analytics, significantly increasing both competitiveness and customer engagement [12].

While AI adoption offers significant opportunities in New Zealand’s F&B sector—including inventory management, operational efficiency, customer service, and revenue optimisation—it requires a strategic and critical approach. Although AI can enhance operational accuracy and personalise service, concerns remain about the potential loss of human touch, uneven technological acceptance among guests, data privacy risks, and frontline staff displacement [5,

8, 13]. Moreover, the increased reliance on automated interactions may conflict with New Zealand's cultural emphasis on manaakitanga—the value placed on care, warmth, and human connection within hospitality experiences [8]. Businesses should adopt AI technologies thoughtfully, ensuring that operational efficiencies are balanced with the personalised service ethos valued by customers. A reliance on AI-driven data analysis will necessitate comprehensive governance frameworks to avoid biases and maintain ethical practices, while the successful integration of AI will depend on continuous training and upskilling of staff to work effectively alongside these systems. By maintaining a strategic perspective, the F&B industry can harness AI's transformative potential while preserving the core values that underpin sustainable and resilient hospitality businesses.

The research can be found here:

Santoso, C., & Wang, Q. (2025). AI-powered transformation: Revolutionising New Zealand's F&B industry. In *CAUTHE 2025 Conference Handbook Abstracts* (pp. 280). Meanjin (Brisbane). <https://airdrive.eventsair.com/eventsairseasiaproduct/production-leishman-public/5a476b7f16d448e1975f6...>

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