Winnow AI Food Waste Reduction: A Case of Marriott UK, Ireland and Nordics

Source: Pexels (2020)

Background

Working towards a greener future, Marriott UK, Ireland, and Nordics has partnered with Winnow to incorporate its AI food waste reduction technology across 53 hotels (Sustainable Hotel News, 2024). This new technology has helped Marriott achieve a 25% reduction in food waste within the first six months, the equivalent of preventing 486 tonnes of CO_2 from being released into the atmosphere or charging over 32 million mobile phones (C&IT, 2024).

Comprising a camera and a weighing scale, Winnow's AI uses computer vision—the same technology used in self-driving cars—to take snapshots and automatically detect what waste has been discarded into the bin (Winnow, n.d.). According to the type of waste and volume discarded, a cost is assigned for each disposal based on cloud-stored pricing data (ESG News, 2024). The system recognizes over 1,000 ingredients from around the world, and those not registered by the machine can also be input manually by staff during set-up (Business Traveller, 2024).

The machine is capable of generating real-time data that can be viewed by kitchen staff immediately after each disposal, as well as compiling a comprehensive food waste report the next day (Business Traveller, 2024). Joanna Chugh, area vice president at Marriott International, says the reports have provided valuable insights, such as which areas or specific dishes are causing the most food waste (ESG News, 2024). These insights empower managers and chefs with actionable data to reduce waste through menu changes or adjusting portion sizes, which can help a restaurant save up to 8% on food purchasing (C&IT, 2024).

Additionally, through kitchen coaching sessions from Winnow, hotel staff have been taught to maximize the use of ingredients and promote 'zero waste' (Business Traveller, 2024). Data reveals that over 40% of trimmings cut off and thrown away by chefs are perfectly edible and often the most nutritious and flavourful parts of an ingredient (C&IT, 2024). "(Winnow) not only helps us reduce waste but also gives us the opportunity to get creative with surplus

ingredients, like turning banana peel into pulled pork for our signature vegetarian burgers," says Anna Pazdera, executive chef at Marriott Heathrow (ESG News, 2024).

Challenges

Despite all the benefits it brings, the Winnow AI food waste reduction technology is still a work in progress. As Winnow's marketing director David Jackson says, the device cannot process different types of food at once—a plate of full English breakfast, for example (Business Traveller, 2024). Hence, until developers find a way to resolve this limitation, kitchen staff will have to continue manually separating waste by type before disposal (ESG News, 2024).

Discussion Questions

1. What are the main benefits Marriott has experienced by implementing Winnow's AI technology?

2. How could the technology be improved to handle mixed food waste?
3. How does the use of AI in food waste management contribute to sustainability goals?

4. How may adoption of the technology influence consumer perceptions of a hotel?

5. How should the hotel communicate with customers about menu changes or portion adjustments?

6. What future advancements in AI technology could further enhance food waste reduction efforts in the hospitality sector?

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