

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 CO₂ 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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Keywords

- Hotel
- Sustainability
- Food and Beverage
- Food Waste
- Kitchen operations
- Artificial Intelligence (AI)

Winnow AI 减少食物浪费：以英国、爱尔兰及北欧地区万豪为例



Source: Pexels (2020)

背景

为了迈向更绿色的未来，英国、爱尔兰及北欧地区万豪已与 Winnow 合作，在其 53 家酒店中应用其 AI 食物浪费减少技术(Sustainable Hotel News,2024)。这项新技术帮助万豪在前六个月内实现了 25%的食物浪费减少，相当于阻止了 486 吨二氧化碳排放到大气中，或为超过 3200 万部手机充电(C&IT,2024)。

Winnow 的 AI 系统由摄像头和称重秤组成，它使用计算机视觉技术——与自动驾驶汽车所用技术相同——来拍摄快照并自动检测被丢弃到垃圾桶中的是什么废弃物(Winnow, n.d.)。根据废弃物的类型和丢弃量，系统会基于云端存储的定价数据为每次丢弃分配成本(ESG News,2024)。该系统能识别来自全球超过 1,000 种食材，机器未注册的食材也可以在设置过程中由员工手动输入(Business Traveller,2024)。

该机器能够生成实时数据，厨房员工可以在每次丢弃后立即查看，还能在次日编译一份全面的食物浪费报告(Business Traveller,2024)。万豪国际区域副总裁 Joanna Chugh 表示，这些报告提供了宝贵的见解，例如哪些区域或特定菜品造成了最多的食物浪费(ESG News,2024)。这些见解为管理者和厨师提供了可操作的数据，以通过菜单调整或改变份量来减少浪费，这可以帮助餐厅节省高达 8%的食品采购成本(C&IT,2024)。

此外，通过 Winnow 提供的厨房培训课程，酒店员工学会了如何最大限度地利用食材并推广“零浪费”理念(Business Traveller, 2024)。数据显示，厨师们切下并扔掉的边角料中，超过 40%是完全可食用的，并且通常是食材中最营养、风味最佳的部分(C&IT, 2024)。万豪希思罗机场酒店的行政总厨 Anna Pazdera 表示：“(Winnow) 不仅

帮助我们减少浪费，还让我们有机会创造性地利用剩余食材，比如将香蕉皮制成我们招牌素食汉堡中的手撕猪肉” (ESG News, 2024) 。

挑战

尽管带来了诸多好处，Winnow 的 AI 食物浪费减少技术仍在发展完善中。正如 Winnow 市场总监 David Jackson 所言，该设备无法同时处理不同类型的食物——例如一整盘英式早餐(Business Traveller,2024) 。因此，在开发者找到解决此限制的方法之前，厨房员工仍须在丢弃前继续按类型手动分离废弃物(ESG News, 2024) 。

讨论问题

1. 万豪通过实施 Winnow 的 AI 技术获得了哪些主要益处？
2. 该技术应如何改进以处理混合食物废弃物？
3. 在食物浪费管理中使用 AI 如何有助于实现可持续性目标？
4. 采用该技术可能如何影响消费者对酒店的认知？
5. 酒店应如何就菜单调整或份量变化与顾客沟通？
6. AI 技术的哪些未来发展可以进一步提升酒店业的食物浪费减少工作？

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关键词

- 酒店
- 可持续性
- 餐饮
- 食物浪费
- 厨房运营
- 人工智能

Winnow AI 減少食物浪費：以英國、愛爾蘭及北歐地區萬豪為例



Source: Pexels (2020)

背景

為了邁向更綠色的未來，英國、愛爾蘭及北歐地區萬豪已與 Winnow 合作，在其 53 家酒店中應用其 AI 食物浪費減少技術 (Sustainable Hotel News, 2024)。這項新技術幫助萬豪在前六個月內實現了 25% 的食物浪費減少，相當於阻止了 486 噸二氧化碳排放到大氣中，或為超過 3200 萬部手機充電 (C&IT, 2024)。

Winnow 的 AI 系統由攝影機和稱重秤組成，它使用電腦視覺技術——與自動駕駛汽車所用技術相同——來拍攝快照並自動偵測被丟棄到垃圾桶中的是什麼廢棄物 (Winnow, n.d.)。根據廢棄物的類型和丟棄量，系統會基於雲端儲存的定價數據為每次丟棄分配成本 (ESG News, 2024)。該系統能識別來自全球超過 1,000 種食材，機器未註冊的食材也可以在設置過程中由員工手動輸入 (Business Traveller, 2024)。

該機器能夠生成即時數據，廚房員工可以在每次丟棄後立即查看，還能在次日編譯一份全面的食物浪費報告 (Business Traveller, 2024)。萬豪國際區域副總裁 Joanna Chugh 表示，這些報告提供了寶貴的見解，例如哪些區域或特定菜餚造成了最多的食物浪費 (ESG News, 2024)。這些見解為管理者和主廚提供了可操作的數據，以透過菜單調整或改變份量來減少浪費，這可以幫助餐廳節省高達 8% 的食品採購成本 (C&IT, 2024)。

此外，透過 Winnow 提供的廚房培訓課程，酒店員工學會了如何最大限度地利用食材並推廣「零浪費」理念 (Business Traveller, 2024)。數據顯示，主廚們切下並扔掉的邊角料中，超過 40% 是完全可食用的，並且通常是食材中最營養、風味最佳的部分 (C&IT, 2024)。萬豪希斯洛機場酒店的行政主廚 Anna Pazdera 表示：「(Winnow)

不僅幫助我們減少浪費，還讓我們有機會創造性地利用剩餘食材，比如將香蕉皮製成我們招牌素食漢堡中的手撕豬肉」 (ESG News, 2024)。

挑戰

儘管帶來了諸多好處，Winnow 的 AI 食物浪費減少技術仍在發展完善中。正如 Winnow 市場總監 David Jackson 所言，該設備無法同時處理不同類型的食物——例如一整盤英式早餐 (Business Traveller, 2024)。因此，在開發者找到解決此限制的方法之前，廚房員工仍須在丟棄前繼續按類型手動分離廢棄物 (ESG News, 2024)。

討論問題

1. 萬豪透過實施 Winnow 的 AI 技術獲得了哪些主要益處？
2. 該技術應如何改進以處理混合食物廢棄物？
3. 在食物浪費管理中使用 AI 如何有助於實現可持續性目標？
4. 採用該技術可能如何影響消費者對酒店的認知？
5. 酒店應如何就菜單調整或份量變化與顧客溝通？
6. AI 技術的哪些未來發展可以進一步提升酒店業的食物浪費減少工作？

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關鍵詞

- 酒店
- 可持續性
- 餐飲
- 食物浪費
- 廚房營運
- 人工智慧