

Food Waste Reduction in the Hotel and Hospitality Sector

Operational Efficiency, Sustainability and
Strategic Implications

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Contemporary Themes in the Hotel and
Hospitality Sector (BMIH6001)

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Contemporary Theme & Industry Context

- **Sustainability** has become a defining contemporary theme within the hotel and hospitality sector.
- Hospitality operations are resource-intensive and must balance guest expectations with cost control and environmental pressures.
- Food waste sits at the critical intersection of sustainability and operational efficiency.



Defining the Problem

- Within hospitality, food waste is often structurally embedded in service design,
- Buffet formats, banqueting and all-inclusive services require overproduction to ensure perceived abundance and guest satisfaction.
- Research indicates that breakfast buffets are particularly significant waste hotspots.
- Food waste is not purely accidental — it is frequently a systemic outcome of operational models and guest-facing service expectations.



Drivers of Food Waste

- From a **guest** perspective, value perception and buffet psychology encourage over-serving.
- Operationally, overproduction is often used as a risk management strategy to avoid running out of food.
- Organisational culture and employee engagement also influence waste levels.
- These drivers show that food waste results from behavioural, structural and managerial factors combined.



Behavioural



Operational



Drivers of Food Waste

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Behavioural



Operational



Methodological Approach

- Qualitative secondary research
- Peer-reviewed journals and industry reports
- Contemporary sustainability literature (2020–2025)
- PESTLE framework as analytical structure



PESTLE Overview

- Multiple interconnected factors collectively shape responses to food waste management.
- Political, Economic, Social, Technological, Legal, Environmental



Political & Legal Impact

- SDG 12.3 increases strategic attention to food waste (FAO, 2019)
- Predominantly voluntary compliance frameworks
- Uneven implementation across hotel types
- Food safety regulations limit redistribution initiatives



Economic Impact

- Food waste leads to direct financial losses in the hospitality sector (Filimonau & De Coteau, 2019; Pirani & Arafat, 2016).
- Substantial investment required for infrastructure, training, and monitoring
- Economic impact differs significantly between large chains and SMEs.
- Financial implications are critical for profitability, especially for smaller operators



Social & Technological Impact

- Guest expectations of abundance influence overproduction
- Staff engagement critical but high turnover limits continuity
- Digital inventory and waste-tracking systems improve visibility
- Technology effective only when integrated with managerial commitment



Industry Responses & Critical Evaluation

- Large chains leverage resources to implement standardized protocols
- Smaller hotels explore creative but inconsistent solutions
- Green initiatives vary widely in ambition and effectiveness
- Voluntary policies raise concerns regarding accountability



Managerial Implications

So What for Hotel Operators?

-  **Operational Control**
Integrate **waste tracking** into daily management
-  **Cost & Portion Management**
Behavioural changes **reduce waste** without affecting satisfaction
-  **Staff Engagement**
Training programs embed **sustainability** in culture
-  **Strategic Alignment**
Link sustainability metrics to **financial KPIs**
-  **Policy & Accountability**
Strengthen compliance, reporting and cross-sector collaboration



Conclusion & Strategic Recommendations

Conclusion

- Food waste is both a sustainability and operational performance issue
- External pressures and internal practices jointly shape organisational response
- Effective reduction requires **strategic integration**, not isolated initiatives

Recommendations

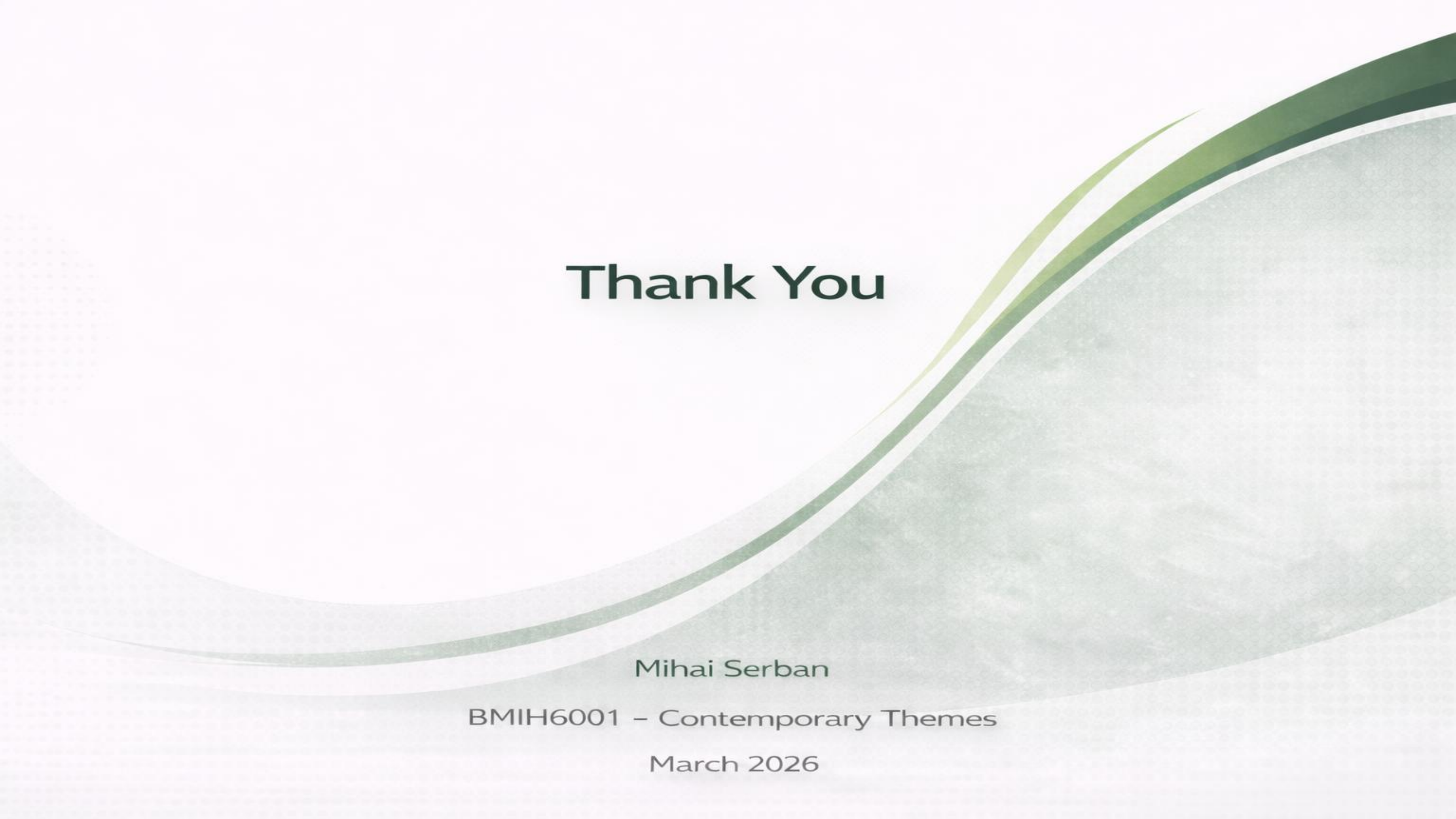
- ✓ Implement systematic waste measurement and monitoring
- ✓ Embed behavioural change within organisational culture
- ✓ Adopt scalable, cost-sensitive technological solutions
- ✓ Strengthen policy collaboration and accountability mechanisms



References

- Filimonau, V. and De Coteau, D.A. (2019) 'Food waste management in hospitality operations: A critical review', *Tourism Management*, 71, pp. 234–245. Available at: <https://doi.org/10.1016/j.tourman.2018.10.009> (Accessed: 1 February 2026).
- Food and Agriculture Organization of the United Nations (FAO) (2019) The state of food loss and waste in the world: Moving forward on food loss and waste reduction. Rome: FAO. Available at: <https://www.fao.org/3/ca6030en/ca6030en.pdf> (Accessed: 2 February 2026).
- Greene, D., Grad, G., Zinn, A.K. and Dolnicar, S. (2024) 'Guiding people to take less food from the buffet: Two survey experiments that introduce a new simulated buffet scenario', *Food Quality and Preference*, 121, article 105273. Available at: <https://doi.org/10.1016/j.foodqual.2024.105273> (Accessed: 30 January 2026).
- Kallbekken, S. and Sælen, H. (2013) "'Nudging" hotel guests to reduce food waste as a win–win environmental measure', *Economics Letters*, 119(3), pp. 325–327. Available at: <https://doi.org/10.1016/j.econlet.2013.03.019> (Accessed: 31 January 2026).
- Papargyropoulou, E., Lozano, R., Steinberger, J.K., Wright, N. and Ujang, Z. (2014) 'The food waste hierarchy as a framework for the management of food surplus and food waste', *Journal of Cleaner Production*, 76, pp. 106–115. Available at: <https://doi.org/10.1016/j.jclepro.2014.04.020> (Accessed: 4 February 2026).
- Pirani, S.I. and Arafat, H.A. (2016) 'Solid waste management in the hospitality industry: A review', *Journal of Environmental Management*, 146, pp. 320–336. Available at: <https://doi.org/10.1016/j.jenvman.2014.07.038> (Accessed: 3 February 2026).
- Puga-Gonzalez, I., Lima, L.L., Antosz, P., Carrella, E., Iori, E., Rettore, C., Rousseau, M.G., Shults, F.L. and Vittuari, M. (2025) 'To eat or not to eat: Modeling food waste behavior at a hotel breakfast buffet', *Cleaner and Responsible Consumption*, 19, article 100333. Available at: <https://doi.org/10.1016/j.clrc.2025.100333> (Accessed: 2 February 2026).
- Skordoulis, M., Stavropoulos, A.-S., Papagrigoriou, A. and Kalantonis, P. (2024) 'The strategic impact of service quality and environmental sustainability on financial performance: A case study of five-star hotels in Athens', *Journal of Risk and Financial Management*, 17(10), article 473. Available at: <https://doi.org/10.3390/jrfm17100473> (Accessed: 1 February 2026).
- Tomaszewska, M., Bilska, B., Tul-Krzyszczuk, A. and Kołożyn-Krajewska, D. (2021) 'Estimation of the scale of food waste in hotel food services—A case study', *Sustainability*, 13(1), 421. Available at: <https://doi.org/10.3390/su13010421> (Accessed: 1 February 2026).
- United Nations Environment Programme (UNEP) (2021) *Food waste index report 2021*. Nairobi: UNEP. Available at: <https://www.unep.org/resources/report/unep-food-waste-index-report-2021> (Accessed: 2 February 2026).





Thank You

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