International Journal of Science, Strategic Management and Technology
Volume **02** Issue **11** November-2026 | ISSN: **3108-1762 (Online)** | Impact Factor: 3.8
An International, Peer-Reviewed, Open Access Scholarly Journal Indexed in recognized academic databases

Rising Consumer Demand for Multi-Ingredient, Functional, and Experiential Beverages: Operational Challenges and Strategic Trade-offs for Hotels

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https://doi.org/10.55041/ijsmt.v2i11.042

Cite this Article: M, V., H.M.Moyeenudin, , PS, M. & M, K. (2026). Rising Consumer Demand for Multi-Ingredient, Functional, and Experiential Beverages: Operational Challenges and Strategic Trade-offs for Hotels. International Journal of Science, Strategic Management and Technology, *02*(11), 1-9. https://doi.org/10.55041/ijsmt.v2i11.042

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Abstract: The hospitality industry is witnessing a significant transformation in beverage consumption patterns as consumers increasingly seek drinks that offer more than basic refreshment. Growing interest in health and wellness, unique flavour combinations, personalisation, and memorable consumption experiences has encouraged hotels to diversify their beverage offerings. Multi-ingredient beverages, functional drinks, botanical infusions, fermented beverages, wellness shots, and innovative non-alcoholic cocktails are gaining importance in contemporary hotel food and beverage operations. These developments provide hotels with opportunities to enhance guest satisfaction, differentiate their brands, increase beverage revenue, and respond to changing consumer preferences. However, introducing such beverages also creates operational challenges related to ingredient procurement, inventory management, preparation time, employee training, product consistency, food safety, and cost control. Hotels must therefore balance consumer expectations for innovation with the practical requirements of efficient service delivery and profitability. This article examines the growing demand for multi-ingredient, functional, and experiential beverages and explores the operational challenges and strategic trade-offs hotels encounter when incorporating these trends into their beverage programmes.

Keywords: Multi-ingredient drinks, menu innovation, hospitality industry.

Introduction: The hospitality industry is experiencing a considerable shift in consumer expectations regarding food and beverage consumption. Traditionally, hotel beverage menus focused on conventional offerings such as tea, coffee, juices, soft drinks, alcoholic beverages, and standard cocktails. However, contemporary consumers increasingly expect beverages to provide additional value through health-oriented ingredients, distinctive flavours, attractive presentation, and personalised experiences. The growing emphasis on wellness, lifestyle choices, and experiential consumption has encouraged hotels to reconsider their traditional beverage offerings. Consumers are showing greater interest in drinks containing combinations of fruits, herbs, spices, botanical extracts, probiotics, vitamins, minerals, and other functional ingredients. At the same time, visually appealing beverages, interactive preparation techniques, locally inspired ingredients, and customised drink options are becoming important elements of the overall hospitality experience. The growing popularity of these beverages presents hotels with an opportunity to strengthen their food and beverage operations and create distinctive guest experiences. Beverage innovation can contribute to brand differentiation, customer engagement, and additional revenue generation. However, introducing innovative beverages involves more

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than developing new recipes. It requires changes in procurement practices, inventory management, preparation procedures, employee capabilities, and service delivery systems. Consequently, hotel management must carefully evaluate the balance between consumer demand, operational efficiency, product quality, and financial performance.

Emerging Consumer Demand for Innovative Beverages

One of the major developments influencing beverage consumption is the increasing interest in functional beverages. Functional beverages are drinks formulated to offer benefits beyond basic hydration and refreshment. They may contain ingredients associated with particular nutritional or lifestyle needs, such as energy, hydration, digestive health, and relaxation. Examples include probiotic beverages, kombucha, electrolyte-enriched drinks, protein-based smoothies, herbal infusions, vitamin-enriched juices, and botanical beverages. The increasing popularity of these products reflects consumers' interest in incorporating wellness-oriented choices into their everyday routines. Hotels can respond to this trend by introducing functional beverage selections across restaurants, bars, cafés, spas, fitness centres, and room-service menus. However, it is important for hotels to ensure that ingredient selection, product descriptions, and health-related claims are accurate and appropriate. Another emerging development is the growing demand for multi-ingredient beverages. Modern consumers are increasingly interested in drinks that combine different ingredients to create distinctive flavour profiles, attractive appearances, and perceived nutritional value. For example, a beverage may combine green tea, citrus, ginger, mint, and honey to create a refreshing flavour experience. Similarly, smoothies may incorporate fruits, vegetables, seeds, plant-based milk, protein, and other nutritional ingredients. These combinations allow hotels to introduce creative beverage options that appeal to consumers seeking novelty, variety, and personalisation. However, increasing the number of ingredients can also create challenges related to recipe standardisation, ingredient sourcing, preparation time, storage requirements, and inventory management. In addition to functional and multi-ingredient beverages, experiential beverage consumption is becoming increasingly important in the hospitality industry. Contemporary consumers may value the visual presentation, preparation process, aroma, storytelling, and uniqueness of a beverage as much as its taste. Hotels can create memorable beverage experiences through live mocktail and cocktail preparation, tableside presentations, interactive customisation stations, seasonal beverage menus, tasting sessions, and creative garnishing techniques. Such initiatives can enhance guest engagement and contribute to a hotel's overall brand identity. Experiential beverages can also provide opportunities for premium pricing when the perceived value of the experience justifies the additional cost.

Operational Challenges Faced by Hotels

Although innovative beverage offerings provide commercial opportunities, their implementation can create several operational challenges for hotels. One of the major concerns is ingredient procurement and supply chain management. Multi-ingredient beverages require hotels to source a wider variety of products, including fresh fruits, herbs, spices, dairy alternatives, nutritional additives, and specialised ingredients. Maintaining consistent availability and quality can be difficult, particularly when ingredients are seasonal, imported, perishable, or supplied by multiple vendors. Hotels must therefore establish reliable supplier relationships and ensure that purchasing decisions are aligned with anticipated customer demand. Inventory management and food waste are also important concerns. An expanded beverage menu increases the number of ingredients that need to be purchased, stored, monitored, and replenished. Fresh ingredients such as berries, citrus fruits, herbs, and vegetables have limited shelf lives, making them particularly vulnerable to spoilage. If demand is not accurately forecast, hotels may experience excess inventory, wastage, and financial losses. Effective stock rotation, standardised recipes, suitable storage practices, and demand forecasting are therefore essential to maintaining inventory efficiency. Preparation time and labour requirements represent another significant operational challenge. Complex beverage recipes often involve several preparation stages, including washing, cutting, blending, infusing, measuring, mixing, and garnishing. During peak service periods, these additional activities may increase guest waiting times and create pressure on bartenders, baristas, and food and beverage service employees. Hotels must assess whether their existing staffing levels, equipment, and preparation facilities can accommodate these additional requirements without affecting service quality. Employee training and skill development are equally important when introducing innovative beverage programmes. Employees need to understand different ingredients, preparation

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techniques, flavour combinations, portion control, presentation standards, and customer preferences. They may also require knowledge of allergens, dietary requirements, hygiene practices, and appropriate communication of functional beverage characteristics. Without adequate training, hotels may experience inconsistent product quality, preparation errors, increased wastage, and reduced guest satisfaction. Maintaining quality consistency and food safety is another important responsibility. In hotels where beverages are prepared by different employees across multiple shifts and outlets, variations in ingredient quantities, preparation methods, storage conditions, and presentation can affect the final product. The introduction of unfamiliar ingredients also requires careful attention to food safety, allergen management, traceability, and appropriate storage procedures. Standardised recipes and clearly documented operating procedures can help hotels maintain consistency and minimise these risks.

Operational Trade-offs for Hotels

Hotel management must make several strategic decisions when balancing beverage innovation with operational requirements. One of the major trade-offs involves innovation and operational efficiency. Introducing complex beverage options may improve menu differentiation and guest engagement, but excessive menu complexity can slow down service, increase labour requirements, and complicate kitchen and bar operations. Hotels must therefore determine which innovative beverages offer sufficient commercial and experiential value to justify their operational demands. A carefully curated beverage menu may be more effective than offering a large number of complicated products. Another important trade-off concerns premium pricing and consumer affordability. Functional and experiential beverages may involve higher ingredient, labour, equipment, and preparation costs. Hotels may attempt to recover these expenses through premium pricing. However, excessively high prices may discourage purchases, particularly among price-sensitive guests. The challenge is to establish prices that reflect the quality, uniqueness, and presentation of the beverage while maintaining an acceptable value proposition. Hotels must also balance product variety with inventory control. Offering a wide range of beverages can attract different customer segments and encourage experimentation. However, a larger menu increases purchasing requirements, storage demands, and the risk of ingredient wastage. Hotels can address this challenge by selecting versatile ingredients that can be incorporated into multiple beverage recipes. For example, citrus fruits, ginger, mint, and seasonal fruit preparations can be used across mocktails, smoothies, infused waters, and iced teas. This approach can reduce inventory complexity while supporting menu innovation. Personalisation and standardisation represent another important operational trade-off. Customised beverages can enhance guest satisfaction by accommodating individual preferences regarding sweetness, ingredients, flavour combinations, and dietary requirements. However, excessive customisation may complicate preparation and make it difficult to maintain consistent quality. Hotels should therefore establish standard beverage recipes while allowing controlled modifications through clearly defined customisation options. Sustainability and operational convenience must also be considered. The use of fresh, local, and seasonal ingredients can support sustainability objectives and create distinctive beverage experiences. Nevertheless, sourcing these ingredients consistently may be difficult, particularly for hotels operating across multiple locations or maintaining high service volumes. Hotel management must balance local sourcing and sustainability goals with supplier reliability, cost considerations, and operational convenience.

Strategies for Balancing Consumer Demand and Hotel Operations

Hotels can adopt several strategies to incorporate beverage innovation while maintaining operational efficiency. One important approach is developing a carefully curated beverage menu that reflects consumer preferences, brand positioning, and operational capabilities. Instead of introducing numerous complicated beverages, hotels should focus on a selected range of products that provide sufficient customer appeal and commercial value. A balanced menu may include traditional favourites, functional beverages, innovative non-alcoholic options, and selected experiential drinks. The introduction of standardised recipes is another effective strategy. Standardised recipes should specify ingredient quantities, preparation procedures, serving sizes, garnishing methods, and presentation standards. This approach helps maintain consistency across different employees and service periods while supporting portion control and cost management. Hotels can also improve inventory efficiency by selecting ingredients that serve multiple purposes across their beverage menus. For instance, ginger, citrus, mint, and seasonal fruits can be incorporated into mocktails, infused

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waters, teas, and smoothies, reducing the need to maintain large inventories of specialised ingredients. Investment in employee training is equally essential. Regular training programmes should focus on beverage preparation, ingredient knowledge, customer interaction, hygiene, allergen awareness, and portion control. Cross-training employees across beverage stations can also improve staffing flexibility during busy periods. In addition, hotels can introduce digital inventory systems, point-of-sale analytics, recipe management tools, and demand forecasting to improve operational monitoring. These technologies can support more accurate purchasing decisions, improve stock rotation, and identify beverages that generate strong sales and contribution margins. Monitoring guest preferences and financial performance should form an ongoing part of beverage management. Hotels should regularly evaluate customer feedback, beverage sales, preparation time, ingredient costs, wastage, and profitability. This information enables management to identify products that should be retained, modified, promoted, or discontinued. Such an approach ensures that beverage innovation remains commercially sustainable rather than becoming an additional operational burden.

Strategic Opportunities for the Hotel Industry

The increasing demand for functional, multi-ingredient, and experiential beverages offers hotels opportunities beyond traditional beverage sales. Innovative beverage programmes can strengthen brand differentiation by creating distinctive products associated with the hotel's identity and positioning. Functional beverages can complement wellness-related services, particularly in hotels offering spa facilities, fitness centres, health-oriented dining, and wellness experiences. Similarly, experiential beverages can encourage additional guest spending through tasting sessions, signature mocktails, seasonal menus, and interactive service concepts. Locally inspired beverage offerings also provide an opportunity for hotels to communicate regional identity and introduce guests to local ingredients, flavours, and culinary traditions. For example, hotels can incorporate locally available fruits, herbs, spices, and traditional ingredients into contemporary beverage preparations. Such offerings can create a connection between the guest experience and the destination while supporting local suppliers. However, these opportunities should always be evaluated in relation to customer demand, ingredient availability, operational feasibility, and financial returns. Innovation that does not generate sufficient demand or commercial value may increase operational complexity without providing meaningful business benefits.

Conclusion: The growing consumer demand for multi-ingredient, functional, and experiential beverages represents an important development in contemporary hotel food and beverage management. Consumers increasingly expect beverages to combine flavour, perceived wellness value, personalisation, visual appeal, and memorable experiences. These changing expectations create opportunities for hotels to improve guest satisfaction, strengthen brand differentiation, and increase beverage revenue. At the same time, introducing innovative beverages creates operational challenges involving procurement, inventory management, food waste, labour requirements, employee training, product consistency, and cost control.The success of beverage innovation therefore depends on the ability of hotel management to balance consumer expectations with operational capabilities. Rather than adopting every emerging beverage trend, hotels should focus on strategically selected products supported by standardised recipes, efficient inventory systems, employee training, and continuous performance evaluation. Ultimately, the future of hotel beverage management will depend not simply on offering more innovative drinks, but on developing beverage programmes that successfully integrate consumer appeal, operational efficiency, sustainability, and commercial profitability.

References

1. Gupta, Achala, et al. “Trends in Functional Beverages: Functional Ingredients, Processing Technologies, Stability, Health Benefits, and Consumer Perspective.” *Food Research International*, vol. 170, 2023, article 113046. https://doi.org/10.1016/j.foodres.2023.113046.

2. Nazir, Misbah, et al. “Opportunities and Challenges for Functional and Medicinal Beverages: Current and Future Trends.” *Trends in Food Science & Technology*, vol. 88, 2019, pp. 513–526. https://doi.org/10.1016/j.tifs.2019.04.011.

© Author(s). This work is peer-reviewed, openly published, and permanently archived
This article is openly accessible and reusable with proper attribution.

3. Skąpska, Sylwia, et al. "The Development and Consumer Acceptance of Functional Fruit-Herbal Beverages." *Foods*, vol. 9, no. 12, 2020, article 1819. https://doi.org/10.3390/foods9121819.

4. "Development of Synbiotic Vegan Beverages: Probiotic Viability, Sensory Profile, Consumers' Acceptance and Functional Stability." *International Journal of Food Science & Technology*, vol. 58, no. 5, 2023, pp. 2325–2335. https://doi.org/10.1111/ijfs.16361.

5. Kowalska, Aleksandra, Krzysztof Leoniak, and Bartosz Grzegorz Sołowiej. "Consumers' Attitudes and Intentions toward Functional Beverages: A Lesson for Producers and Retailers." *Decision*, vol. 51, no. 3, 2024, pp. 321–337. https://doi.org/10.1007/s40622-024-00395-y.

6. Sahu, R. K., et al. "Assessing Sensory Acceptability of Ginger-Turmeric Based Functional Beverage by Fuzzy Logic Approach." *European Journal of Nutrition & Food Safety*, vol. 17, no. 6, 2025. https://doi.org/10.9734/ejnfs/2025/v17i61747.

7. Gómez-Corona, Carlos, and Dominique Valentin. "An Experiential Culture: A Review on User, Product, Drinking and Eating Experiences in Consumer Research." *Food Research International*, vol. 115, 2019, pp. 328–337. https://doi.org/10.1016/j.foodres.2018.11.035.

8. Gómez-Corona, Carlos, et al. "Measuring the Drinking Experience of Beer in Real Context Situations: The Impact of Affects, Senses, and Cognition." *Food Quality and Preference*, vol. 60, 2017, pp. 113–122. https://doi.org/10.1016/j.foodqual.2017.04.002.

9. Pierguidi, Lapo, et al. "Liking Patterns Moderate the Relationship between Sensory, Emotional and Context Appropriateness Profiles: Evidences from a Global Profile Study on Alcoholic Cocktails." *Food Quality and Preference*, vol. 83, 2020, article 103904. https://doi.org/10.1016/j.foodqual.2020.103904.

10. Haddad, Felipe Furtini, Kelly Carvalho Vieira, and João de Deus Souza Carneiro. "Influence of Consumption Experience on the Behavior of Craft Beer Consumers: Beginner and Experienced Consumers." *British Food Journal*, 2024. https://doi.org/10.1108/BFJ-03-2023-0225.

11. Hu, Junxin, Boyu Lin, and Xiaoxiao Fu. "Immersion in Cheers: Experiencescape, Customer Inspiration, and Drink Status in Craft Beer Tourism Using PLS-SEM, IPMA, and ANN." *Journal of Vacation Marketing*, 2026. https://doi.org/10.1177/13567667251409422.

12. "More than 20 Years of Scientific Production on Sensory/Experiential Marketing Scales and Instruments." *British Food Journal*, vol. 127, 2025, pp. 625–648. https://doi.org/10.1108/BFJ-09-2024-0954.

13. Zrnić, M., et al. "Managing Food and Beverage in Hotels: Challenges, Opportunities and Best Practices." *Turističko Poslovanje*, no. 31, 2023, pp. 63–70. https://doi.org/10.5937/turpos0-43369.

14. "Components of the Menu Planning Process: The Case of Five Star Hotels in Antalya." *British Food Journal*, 2017. https://doi.org/10.1108/BFJ-11-2016-0560.

15. Ozdemir, Bahattin. "A Review on Menu Performance Investigation and Some Guiding Propositions." *Journal of Foodservice Business Research*, vol. 15, no. 4, 2012, pp. 378–397. https://doi.org/10.1080/15378020.2012.734217.

16. Tom, Mary, and Katerina Annaraud. "Fuzzy Based Intelligent Decision Support Model for Restaurant Menu Management." *Intelligent Decision Technologies*, vol. 15, no. 3, 2021. https://doi.org/10.3233/IDT-200162.

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This article is openly accessible and reusable with proper attribution.

17. "The Application of Menu Engineering and Design in Asian Restaurants." *International Journal of Hospitality Management*, vol. 24, no. 1, 2005, pp. 91–106. https://doi.org/10.1016/j.ijhm.2004.05.002.

18. Dhir, Amandeep, et al. "Food Waste in Hospitality and Food Services: A Systematic Literature Review and Framework Development Approach." *Journal of Cleaner Production*, vol. 270, 2020, article 122861. https://doi.org/10.1016/j.jclepro.2020.122861.

19. Okumus, Bendegul. "How Do Hotels Manage Food Waste? Evidence from Hotels in Orlando, Florida." *Journal of Hospitality Marketing & Management*, vol. 29, no. 3, 2020, pp. 291–309. https://doi.org/10.1080/19368623.2019.1618775.

20. Filimonau, Viachaslau, and Hugo de Coteau. "Food Waste Management in Hospitality Operations: A Critical Review." *Tourism Management*, vol. 71, 2019, pp. 234–245. https://doi.org/10.1016/j.tourman.2018.10.009.

21. Guerra-Lombardi, Vanessa, Raúl Hernández-Martín, and Noemi Padrón-Fumero. "Drivers, Barriers and Key Practices of Corporate Sustainability Strategy Implementation in Hotels." *International Journal of Hospitality Management*, vol. 120, 2024, article 103791. https://doi.org/10.1016/j.ijhm.2024.103791.

22. Liang, Qiaotong, Eva Buitrago Esquinas, and Miguel Puig-Cabrera. "Material Flow Analysis of Food Waste in Hotel Food Systems: An Empirically Grounded Critical Assessment." *International Journal of Hospitality Management*, vol. 137, 2026, article 104677. https://doi.org/10.1016/j.ijhm.2026.104677.

23. Raju, Jyoti, et al. "Managers, Mindsets and Monitoring: A Phenomenological Exploration of Food Waste Reduction and Technology Adoption in Indian Hotels." *Cogent Business & Management*, vol. 13, 2026. https://doi.org/10.1080/23311975.2026.2674323.

24. Putra, Dolly Jamanda, Lise Asnur, and Hafiz Renaldi. "Application of Engineering Beverage Menu in Driving Guest Drink Purchase Decisions at Hotel Restaurants." *Sinergi: Scientific Journal of Management and Business*, 2026. https://doi.org/10.38035/sjam.v4i2.914.

25. da Silva, Anderson Antonio Neto. "Gender-Based Acceptance of Non-Alcoholic Functional Beer Concepts: A Concept-Test Study." *British Food Journal*, 2026, vol. 128, no. 5, pp. 1943–1957. https://doi.org/10.1108/BFJ-08-2025-0995.

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