



1. Innovative Use of Technology in Various Industries

The creative use of technology is reshaping customer experiences across multiple industries, offering insights that hospitality organisations can adopt. In the retail sector, augmented reality (AR) tools such as IKEA Place allow customers to visualise furniture in real space before purchasing, reducing uncertainty and improving satisfaction (Gretzel et al., 2015). Similarly, beauty brands like Sephora use AR to provide virtual makeup try-ons, enhancing convenience and personalisation.

In the aviation industry, biometric identification has become a major innovation. Airports such as Atlanta and Dubai have implemented facial-recognition boarding, which significantly reduces queue times and enhances security. This operational improvement mirrors the hospitality industry's desire to streamline check-in and identity verification processes (Ivanov and Webster, 2019).

The food and beverage industry is increasingly adopting robotics. Chains such as CaliBurger use robots for routine tasks like frying or flipping burgers. Robotics help maintain consistent product quality while addressing labour shortages (Ivanov and Webster, 2019). These examples show how automation supports both efficiency and standardisation—key concerns for hotels and restaurants.

In the finance sector, AI-driven personalised service has become common. Banks use algorithms to analyse customer data, predict needs, detect fraud and automate customer support. This demonstrates the power of data-led personalisation, a concept increasingly mirrored in hotels through tailored service suggestions and dynamic pricing (Bharwani and Jauhari, 2017).

Within hospitality itself, technology is already advancing rapidly. Hilton's Connected Room allows guests to control lighting and temperature through a mobile app, while Marriott's mobile key and mobile check-in systems provide contactless convenience (Marriott International, 2019). Hotels like YOTEL further integrate robotics, such as the "YOBOT" luggage-handling robot, which enhances novelty and operational speed.

Collectively, these innovations show that technology can improve service speed, enhance personalisation and reduce human error—features that align closely with contemporary guest expectations (Gretzel et al., 2015).

2. Drawbacks of Over-Reliance on Technology in Hospitality

Despite the benefits, excessive dependence on technology can create new challenges. One major drawback is the loss of human touch, a key component of the hospitality experience. Overuse of automated kiosks, chatbots and robotic concierges may make service feel impersonal, reducing emotional engagement and genuine hospitableness (Bharwani and Jauhari, 2017). Many guests still value empathy, personalised greetings and human warmth—qualities machines cannot replicate.

Another issue is operational vulnerability. System failures, software glitches or cyberattacks can severely disrupt hotel operations. A significant example is the Marriott data breach in 2018, which exposed the personal information of over 300 million guests (Marriott International, 2019). Such incidents highlight the risks of storing and managing large volumes of guest data, particularly with increasing digitalisation.

Over-reliance on technology can also create a digital divide, excluding guests who are not tech-savvy or those who prefer traditional interactions. Elderly travellers or guests from low-technology backgrounds may find automated systems confusing or frustrating. Hotels risk alienating an important market segment if digital options lack human alternatives (Gretzel et al., 2015).

Additionally, there are cost implications. Advanced systems such as IoT-enabled rooms, biometric scanners and robots require high installation costs, ongoing maintenance and specialised training for staff. Smaller hospitality businesses may not be able to adopt these technologies, widening the competitive gap between large chains and independent hotels (Ivanov and Webster, 2019).

Finally, technology can lead to over-standardisation. When processes become highly automated, staff may have limited ability to personalise service. This can undermine creativity and spontaneity—two elements that contribute significantly to memorable hospitality experiences (Bharwani and Jauhari, 2017).

Conclusion

Across industries, technology is transforming the customer journey through personalisation, speed and convenience. These innovations—ranging from AR retail tools to biometric aviation systems and robotics in food service—provide valuable opportunities for the hospitality sector. However, over-reliance on technology introduces substantial risks, including loss of human warmth, system dependency, cybersecurity threats, and exclusion of less tech-skilled guests. Hospitality organisations must therefore balance innovation with authentic human interaction, ensuring that technology enhances rather than replaces the essence of hospitableness.

References (Harvard Style)

Bharwani, S. and Jauhari, V. (2017) 'An exploratory study of competencies required to co-create memorable customer experiences in the hospitality industry', *International Journal of Contemporary Hospitality Management*, 29(10), pp. 2751–2769.

Gretzel, U., Sigala, M., Xiang, Z. and Koo, C. (2015) 'Smart tourism: foundations and developments', *Electronic Markets*, 25(3), pp. 179–188.

Ivanov, S. and Webster, C. (2019) *Robots, Artificial Intelligence and Service Automation in Travel, Tourism and Hospitality*. Bingley: Emerald Publishing.

Marriott International (2019) 'Marriott Announces Starwood Guest Reservation Database Security Incident'.