

Operations Management in Hospitality

Assignment 4

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Technology & innovative industries — examples and how they help customers

In the last few years many industries have started using technology in more creative ways to change how they work and how customers feel their service. The travel and hospitality industry is one of the most noticeable ones. Many smart hotels now use AI to change room prices depending on demand, let guests check-in on their phones, control room lights and temperature with IoT devices, and even use robots to bring items or answer basic questions. These new tools help cut waiting time, make the stay more personal, and also reduce some daily labour costs (McKinsey, 2023; HBR, 2023). McKinsey (2023) also showed that AI and predictive analytics can help hotels manage occupancy better and choose the right guests to target.

Healthcare is another industry moving really fast. Telemedicine apps, remote patient monitoring through wearables, and AI systems that support doctors in decision making are now very common. These technologies help hospitals reduce crowding, spot health problems earlier, and allow patients to get care from home. This solves many operational issues like avoidable admissions, and it also makes things more comfortable for patients.

Retail has changed very fastly and has become more data-based and connected across many channels. Things like advanced analytics, RFID tags in the supply chain, cashier-less shops, and personalised recommendations help stores avoid running out of stock, make checkout quicker, and give customers offers they actually like. Fintech tools such as mobile payments, open banking and even blockchain help reduce payment problems. Money moves faster, international payments cost less, and new types of customers can be served in a cheaper way.

Energy and utility companies are also using new tech. Smart grids, small distributed energy sources, and digital-twin models help operators balance supply and demand in real time. This means fewer power cuts and better use of renewable energy. In agriculture, new agritech tools like drones, sensors, and satellite images help farmers manage irrigation and improve crop yields. This cuts waste and makes the final products better for consumers too.

How technology solves both operational problems and assists customers

At an operational level technology automates repetitive tasks (robotic deliveries, chatbots for FAQs), improves decision making (predictive analytics for demand or maintenance), and increases transparency (real-time tracking in supply chains). For customers, the benefits are tangible: shorter waits, personalised recommendations, frictionless payments, and services offered where and when customers want them (McKinsey, 2023; WEF, 2025).

Importantly hospitality orgs can combine digital efficiency with “hospitalableness” — eg using AI to surface guest preferences so staff can deliver warmer, human interactions at critical moments, or using contactless tools to speed routine tasks while reserving human staff for emotionally rich interactions (HBR, 2023). The best practice is hybrid: let machines do the heavy lifting, and let humans do what machines cant — empathy, judgement and hospitality.

Drawbacks of over-reliance on technology

However, over-reliance on technology has clear drawbacks. Below I list the main risks and explain why they matter.

- 1. Depersonalisation of Services**

When companies replace too many human interaction with machines or automated systems then the customers can start feeling ignored or kind of de-humanised. In hotels this often means that the guest get less happy when there's a problem that needs human judgement or empathy — things that AI still can't really do properly. Many studies says guests still want real humans for emotional or more complicated issues. (HBR, 2023).

- 2. Cybersecurity & Data Privacy Risk**

When businesses collect more data and connects more devices then the risk of cyber attacks gets bigger and higher. Hotels, restaurants and travel apps are the easy targets because they store payments info and ID details. If a data breach happens then the brand's reputation can get damaged and they might face fines (Karadayi-Usta, 2024). Also if a cyberattack shuts systems down then the service stops until its fixed which hurts both customers and operations.

- 3. Job Displacement, Stress and Lower Staff Morale**

Automation doesn't always remove jobs but it often changes frontline roles also. Sometimes it creates stressful scheduling, too much monitoring and “algorithmic” management. Research shows heavy tech use and constant tracking can cause burnout, unfair treatment feelings and Higher turnover in hospitality workers (OECD, academic studies). When staff feel replaced or watched all the time then their mood drops and service quality goes down as well.

- 4. Fragility & Single-point Failures**

Too much automation can make systems less stable and If one main system like booking, payment or IOT controls, stops working then a lot of other services will also stop

working. Some hotels that used too many robots had problems when the tech broke down and they had to bring back human staff or deal with angry guests (Wired; HBR, 2023).

5. **Inequality & Accessibility Issue**

Not everyone is comfortable with technology and If everything is only available digitally, older people, guests who don't have smartphones or people who would rather talk to a person may feel left out. This makes it less welcoming and also cuts down on the number of potential customers.

6. **Loss of Authentic Hospitality**

When every interaction is based on data or automated rules, hospitality can feel strange or intrusive. It should feel warm and personal also Facial recognition and emotion AI are examples of tools that may violate privacy and make guests less likely to trust the place (research literature).

7. **Ethical and Legal Risks**

Sometimes, automated systems that set prices, give refunds, or assign rooms can be unclear or unfair. Regulators are keeping a closer eye on these kinds of systems now. If companies don't follow the rules they could get in trouble with the law or pay fines as well as hurt their reputation.

References

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