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Assignment 4

1) Creative use of technology to improve customer experience examples from industries

Technology-driven creativity is changing how customers experience services across many industries — from retail and travel to hospitality and entertainment. Four clear examples illustrate different approaches and benefits:

a. Cashier-less retail (Amazon Go / Just Walk Out)

Amazon's "Just Walk Out" stores use camera-based computer vision, shelf sensors and sensor fusion so customers scan an app to enter, pick items, and leave without a checkout queue. The payoff is speed and frictionless convenience; the technology also generates fine-grained shopper behaviour data that retailers use to optimise assortments and layouts. However, real-world deployments have shown trade-offs in scale and operational complexity (Amazon has shifted some formats and adjusted deployments).

b. AI and robot concierges in hospitality (Hilton + "Connie")

Hilton's pilot of "Connie," a Watson-powered robot concierge developed with IBM, shows how conversational AI and domain knowledge can provide instant local recommendations, freeing staff to handle more complex guest needs. This demonstrates how AI can extend service hours and consistency while still working alongside human teams.

c. Biometric-enabled travel (Delta Sync and facial recognition)

Airlines and airports are deploying biometrics (facial recognition tied to passenger records) to accelerate check-in, bag drop, security and boarding. Programs like Delta Sync show measurable reductions in wait times and fewer boarding frictions, improving the door-to-gate customer journey and enabling more personalised in-flight and pre-trip content.

d. AI-driven personalization across sectors (hotels, finance, entertainment)

Across hospitality and services, generative and predictive AI enables hyper-personalized offers — from dynamic pricing and room recommendations to tailored loyalty messaging and content suggestions. Analysts predict continued growth in AI-driven CX investments (chatbots, recommendation engines, sentiment analytics) because these technologies scale personalization without linear staffing increases.

Why these innovations matter (operational + customer impact)

- They remove common pain points (queues, slow service), creating measurable time savings and higher throughput.
- They capture richer behavioural signals (what customers pick, ask, or watch), enabling continuous improvement of services.
- They help redeploy human labour toward higher-value, empathetic tasks (guest relations, problem solving), when implemented as augmentation rather than replacement.

References (selected): Forbes (CX trends), IBM / Hilton press materials on Connie, Amazon Go case studies/reports, BiometricUpdate/industry coverage of Delta Sync.

2) Drawbacks of over-reliance on technology in hospitality (operational problems + guest experience risks)

Technology can deliver scale, consistency and efficiency — but over-reliance introduces several practical and strategic drawbacks that hospitality organisations must manage.

1. Loss of human warmth and authentic hospitality

Hospitality's core is emotional labour: empathy, spontaneity and small gestures that create memorable stays. Excessive automation risks turning experiences transactional and predictable, eroding “delight” and long-term loyalty. Empirical research and industry analysis warn that technology must be balanced with human service innovation to preserve guest satisfaction and differentiation.

2. Cybersecurity and data-privacy exposure

Digitisation centralises guest data (payments, biometrics, preferences). That concentration makes hospitality systems attractive targets; breaches can cause regulatory penalties, reputational damage and direct customer harm. Recent research and sector reports emphasise that as hotels and travel firms digitise, cybersecurity resilience must become a board-level priority — otherwise technology becomes a liability rather than an asset.

3. Operational fragility and single-point failures

Highly automated processes (biometric gates, cashier-less stores, AI reservation systems) can create single points of failure: outages, faulty sensors, or model errors can grind operations to a halt and frustrate large numbers of guests simultaneously. The Amazon Go experience underlined

that complex AI/vision systems require significant human oversight and fall-backs during ambiguous cases.

4. Workforce impacts and skill mismatches

Automation changes job profiles — reducing some entry-level roles while increasing demand for tech maintenance, data engineers, and CX designers. If organisations substitute technological fixes for workforce investment, engagement and service quality can suffer; poorly managed transitions also create labour tensions and reduce institutional knowledge.

5. Bias, fairness and ethical concerns

AI systems trained on historic data can perpetuate bias (pricing, personalization or biometric misidentification). Additionally, intrusive tech (constant tracking, facial recognition) can provoke guest discomfort and regulatory scrutiny. Firms need governance frameworks for explainability and consent.

Mitigation: design technology as augmentation, not replacement

The recurring recommendation from industry analysts is not to abandon technology but to design it to enhance human hospitality: automate repetitive tasks, protect and use data ethically, build strong cyber defences, and retain human staff for emotionally complex interactions. McKinsey, Deloitte and academic studies all emphasise a hybrid model — “tech for tasks, people for experience.”

References

(selected): Harvard RCTOM and hospitality research on robots; MDPI and academic cybersecurity analyses; Accenture cybersecurity reports; McKinsey/Deloitte industry guidance on balancing tech + people.

