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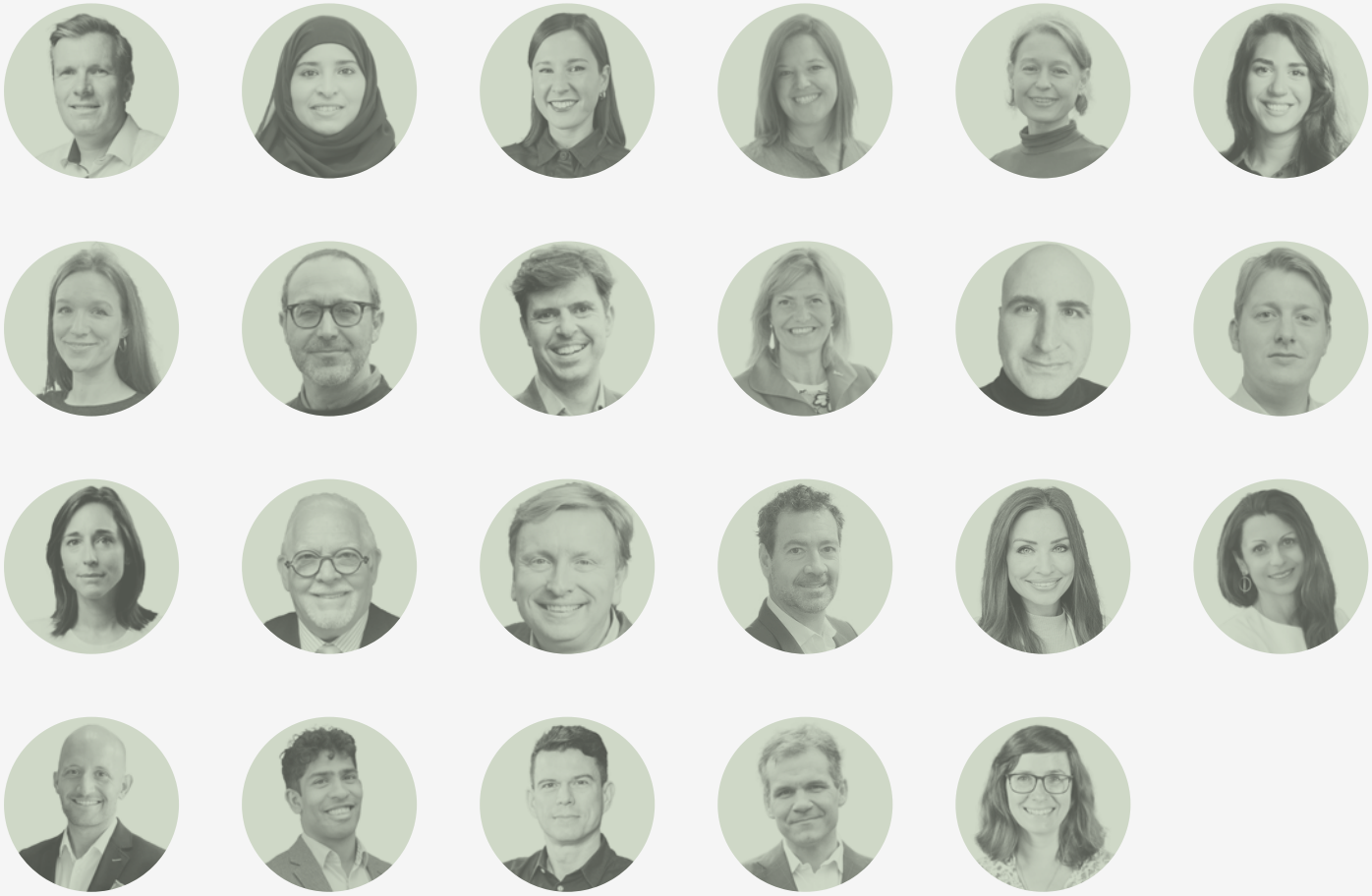
Sustainability Tech Edition

Unlocking Smart & Sustainable Tech Solutions for Hospitality



The Hotel Yearbook

Foresight and innovation in the global hotel industry

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Building a Seamless Guest Experience: Tech's Role in Sustainable Hospitality

Smart Sustainable Hotels

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The hospitality industry is undergoing a transformation. Today's travellers, particularly the influential millennial and Gen Z demographics, are seeking more than just a comfortable stay; they expect experiences that align with their values, including a growing emphasis on sustainability. Hotels that proactively address environmental concerns are contributing to a more sustainable future, reducing waste and saving costs, and also positioning themselves for long-term success in a market where sustainability is becoming a hygiene factor – not just a nice-to-have. Let's look at how technology, within the next five years, will become indispensable in creating a seamless and sustainable guest experience, offering innovative solutions that minimise environmental impact while enhancing the overall stay and driving business value.

SEAMLESS SUSTAINABILITY: FROM BOOKING TO CHECK-OUT

The sustainable guest journey begins long before arrival. Booking platforms will increasingly feature hotels' sustainability credentials, including certifications (e.g., LEED, Green Key, Travalyst-compliant certifications) and specific sustainability attributes and initiatives. Hotel chains like Six Senses are already highlighting their commitment to sustainability on their websites and booking platforms, showcasing their efforts in areas like water conservation and renewable energy. We'll likely see increased transparency on the environmental impact of a stay, at guest-level.

In fact, the new EU-wide Product Environmental Footprint Category Rules (PEFCR) for hotel accommodation will come into play in this time frame. This initiative aims to create a harmonised methodology for measuring and communicating the environmental footprint of a stay at a hotel. The intended outcome is greater transparency and comparability, empowering consumers to make informed choices and driving hotels to improve their environmental performance. Public consultation on the draft PEFCR has just closed. This is a positive step towards measuring the environmental impact of hotel stays. However, some challenges have been identified. For example, the current scope is limited to the hotel room and doesn't include other facilities like restaurants, swimming pools and conference facilities. This limited scope may not fully address the issue of greenwashing in the EU.

Pre-arrival communication will leverage AI-powered chatbots to provide personalised recommendations for sustainable travel choices, such as public transport options and community-led tours, further incentivising responsible travel. Imagine a chatbot suggesting train routes instead of flights for shorter distances or highlighting vegetarian or sustainable restaurants near the hotel.

Mobile check-in, already gaining traction, will become ubiquitous within the next five years, further reducing paper waste and streamlining the arrival process. Digital room keys, accessed via smartphone, will become the norm, minimising plastic consumption and offering a contactless, hygienic experience – a trend accelerated by health and safety concerns during the pandemic.

Hotels will increasingly integrate their Property Management Systems (PMS) with guest apps, offering personalised welcome messages highlighting the hotel's sustainability commitments and inviting guests to participate, or in some cases, opt out as the default will be the lower impact option.

IN-ROOM EFFICIENCY AND PERSONALISATION

Smart room technology is becoming increasingly sophisticated. Beyond basic energy management systems, systems such as AI-powered thermostats are learning guest preferences and automatically optimising room temperature for comfort and energy efficiency. For example, hotels like the Cosmopolitan of Las Vegas are using smart room technology to adjust lighting and temperature based on guest occupancy. Occupancy sensors will not only control lighting and temperature but also manage other energy-consuming devices, such as appliances and entertainment systems, minimising waste when rooms are unoccupied. Interactive in-room tablets will provide real-time feedback on guest energy and water consumption, encouraging mindful resource usage through gamification and personalised tips. These systems will integrate with hotel loyalty programmes, rewarding guests for sustainable choices. Imagine a system that tracks water usage during showers and suggests ways to conserve water, offering loyalty points for guests who opt for shorter showers.

ENHANCING THE DINING EXPERIENCE

Digital menus, already prevalent in many establishments, will become even more dynamic. They will not only reduce paper waste but also provide detailed information on the origin and sustainability certifications of ingredients, empowering guests to make informed choices. For example, restaurants are increasingly using QR codes to provide detailed information about the sourcing of their ingredients, highlighting local farms and sustainable practices. AI-powered menu planning tools will help hotels optimise food purchasing and minimise waste by predicting demand and adjusting portion sizes. Winnow, for example, offers technology that helps chefs track and reduce food waste in their kitchens. Vertical farming and on-site hydroponics, facilitated by technology, will become more common, allowing hotels to source fresh, local produce while reducing transportation emissions. Some hotels are already experimenting with on-site gardens and hydroponic systems to grow their own herbs and vegetables.

BEYOND THE ROOM: SMART HOTEL OPERATIONS

Smart building management systems will optimise energy and water usage across the entire hotel. Predictive maintenance, enabled by IoT sensors and AI, will identify potential equipment failures before they occur, preventing costly downtime and resource waste. For example, hotels are using sensors to monitor water leaks and energy consumption in real-time, allowing them to address issues proactively. Waste management systems will leverage data analytics to optimise recycling and composting programmes, minimising landfill waste. For instance, some hotels are using smart bins that track the amount of waste generated and provide data on recycling rates.

Hotels are likely to increasingly adopt blockchain technology to ensure transparency and traceability in their supply chains, verifying the sustainability claims of their suppliers and building trust with their guests. This could involve tracking the journey of ingredients from farm to table or verifying the sustainable sourcing of linens and amenities.

ENGAGING GUESTS; AN ONGOING REVOLUTION

Gamification will evolve beyond simple rewards programmes. Augmented reality (AR) experiences could be integrated into hotel apps, allowing guests to explore the hotel's sustainability initiatives in an engaging way, such as visualising the water savings achieved through towel reuse programmes. Social media integration will allow guests to easily share their sustainable travel experiences, amplifying the hotel's message and building brand advocacy. Hotels can use social media platforms to showcase their sustainability efforts and encourage guests to share their own eco-friendly travel tips.

THE FUTURE OF SUSTAINABLE HOSPITALITY

The convergence of AI, IoT, and big data will enable hyper-personalisation of the sustainable guest experience. Hotels should increasingly be able to anticipate guest needs and proactively offer sustainable options, creating a seamless and effortless eco-conscious stay. For example, AI could analyse guest preferences and suggest personalised itineraries that include sustainable activities and dining options. Virtual reality (VR) could be used to showcase the hotel's sustainability efforts and educate guests about environmental issues in an immersive and impactful way, such as a VR experience that transports guests to a local nature reserve that the hotel is supporting through its conservation efforts.

ETHICAL CONSIDERATIONS AND RESPONSIBLE REPORTING

As hotels increasingly rely on technology to drive sustainability, it's crucial to address potential ethical concerns. Data privacy and security must be prioritised, ensuring that guest data is collected and used responsibly. The environmental impact of technology itself, including increased pressure on data centres due to AI use, as well as the manufacturing and disposal of electronic devices, must also be considered. Hotels should strive to adopt circular economy principles, prioritising repair, reuse, and recycling of electronic equipment.

In short, technology is not just a tool for improving efficiency; it's a key enabler of more sustainable hospitality. Within the next five years, we expect to see a significant acceleration in the adoption of smart and sustainable technologies across the hospitality sector. Hotels that embrace these innovations will not only minimise their environmental footprint but also enhance the guest experience, attract environmentally conscious travellers, and build a more resilient and sustainable business. By embracing a holistic approach to sustainability, hotels can create a positive impact on both the planet and their bottom line.

Looking to find out more?

Visit the Hospitality Net World Panel

In the **Sustainability in Hospitality** World Panel, over 90 industry experts share their insights, solutions, and strategies to help the industry navigate growing environmental and societal challenges.

Sustainability Gives Hotels An Edge In The War For Talent. Or Does It?

How can sustainability be communicated beyond clichés and greenwashing?

Hotel Sustainability: Top 3 Technologies to Implement in 2020

Who makes hospitality sustainability happen: Governments, Industry, Consumers?

Climate Emergency And The Hospitality Industry: Are We On Track?

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