Making Ecotechnology Worth It For Hotels

From smart room key systems to robot concierges, advanced technologies are now the norm in many hotels. In a world on the brink of climate crisis, environmental technologies should be no exception. Curiously, however, the hospitality industry is lagging behind in its adoption of eco-friendly technologies. In the first empirical study of its kind, the SHTM's Eric Chan and two co-researchers asked what exactly is holding hoteliers back in their quest to "go green". Their findings will prove invaluable as the industry takes its next steps towards a smarter and more sustainable future.

Saving the Planet

Hotels are 24/7 operations that offer personalised services geared towards comfort and pleasure. Inevitably, this comes at a cost. Every time a guest orders room service, takes a bath, or turns on the television, more energy and water are consumed and more waste is generated. No guest wants to find a half-used bar of soap or unwashed linen upon arrival – and these days many customers demand and expect the very latest amenities, from ultrafast WiFi to power showers.

How can hotels reduce their consumption and waste without compromising customers' experience? On the surface, the answer seems clear. Hotels are no stranger to using technology to improve the efficiency of their operations and attract customers, and green technologies offer a multitude of benefits. "Installing environmental technologies not only helps to protect our planet", say the researchers, "but also improves a company's environmental performance and reduces utilities expenses".

Price-conscious hoteliers can save money by installing energy-saving technologies such as low-flow shower-heads, solar hot water collector systems, and decomposers that liquefy leftover food. Adopting such technologies could also align hotels with the green image that customers are increasingly willing to support. Some travellers even actively seek out environmentally responsible hotels. In a 2012 survey, TripAdvisor found that 71% of the respondents were keen to make eco-friendly choices when travelling.

Why, then, are hoteliers so slow to adopt environmental technologies? In Hong Kong, a few upscale hotels have seen their reputations improve and profits rise since installing occupancy sensors, headboard coolers, and air conditioning control, amongst other innovative solutions. However, uptake is still surprisingly low. Despite the advantages of environmental technologies, the researchers tell us, "many hotels remain hesitant". To understand why so many hoteliers avoid or delay adopting environmental technologies, the researchers' first task was to investigate the biggest barriers to implementation.

Obstacles to Progress

For hotels, the decision to adopt environmental technologies can hinge on both external and internal factors. External barriers to installation include resistance from local governments and weather conditions that hinder the use of renewable energy. Hotels may also face internal barriers, such as physical constraints on technology installation, budget limitations, and a lack of manpower. "These barriers", warn the researchers, "are likely to reduce the motivation of

senior hotel management to adopt the technologies unless they are essential to survival".

Although survival is the core concern of any business, hotels differ in their definition of "essential". A chain hotel with 400 rooms might benefit more in the long run from investing in environmental technologies than will a smaller, independent hotel that cannot afford the initial outlay. As underlined by the researchers, "higher initial capital costs negatively affect views on green construction and environmental management".

Finally, a lack of technical knowledge can make hotels reluctant to adopt any new technologies – especially environmental ones. "Despite increasing demand for environmentally friendly products", the researchers explain, "hotel managers may encounter difficulties in balancing good service provision with environmental performance". For instance, installing water restrictors in shower-heads may reduce water flow and pressure.

Due to the striking lack of empirical research on hotels' adoption of environmental technologies, the importance of these potential barriers has remained elusive – until now. "Do different types of hotels encounter the same barriers?" the researchers wondered. "Will hotels that are currently implementing a formal environmental management system encounter fewer barriers?"

Surveying Hotel Employees

The next step was to learn first hand about the most important barriers to ecotechnology

adoption. The researchers sent a questionnaire to Hong Kong hotel employees likely to be involved in purchasing environmental technologies and planning their installation. The respondents ranged from general managers and finance directors to staff responsible for environmental management systems. Although many of the hotels boasted green awards, employed specialists responsible for environmental programmes, or had green committees, fewer than 30% of them planned to obtain green certification within the next year.

The questionnaire contained 22 statements describing potential barriers to the adoption of environmental technologies (e.g., "Usually, new environmental technologies are very expensive"). The hotel employees were asked to rate each of these statements from 1 (strongly disagree) to 5 (strongly agree). The researchers analysed the responses of 102 employees from 74 hotels to find out which barriers to adopting environmental technologies were the most off-putting.

Top Three Barriers

At the top of the list were unfavourable environmental conditions. "Before specific environmental technologies can be adopted, implemented and maintained," the researchers explain, "the surrounding environment, weather and orientation must be considered". Physical environmental constraints discourage managers from adopting such technologies, especially those designed to harvest renewable energy. "For example, a lack of direct sunshine means insufficient solar energy, making solar technology unfeasible," the authors note.

The answer may be to start with small-scale projects that yield swift and palpable benefits. "Once an environmental technology positively contributes to the company's financial statement", say the researchers, "senior managers/owners can be encouraged to support the adoption of larger scale environmental technologies that require additional manpower, time and money".

The second major barrier was a lack of green knowledge and experience. As this barrier most strongly affected hotels with no green incentives or programmes, a logical solution is to create a formal structure to promote environmental management. As the researchers note, "an audited, well-developed environmental programme can improve hotel employees' knowledge of environmental technologies and access to network support".

The hotel employees surveyed were also concerned that a single contractor would monopolise after-sales service for each new environmental technology. This was the third major barrier to ecotechnology adoption. "It is risky for a hotel to rely on one service provider when the service may influence hotel guests' experiences", the researchers tell us. Consulting with multiple dealers on after-sales service and maintenance options would put hotels "in a better position to negotiate with dealers to achieve a win–win situation", they suggest.

Finally, the researchers found that different types of hotels experienced these barriers differently. For example, employees at internationally branded chain hotels, which pride themselves on globally consistent service quality, were particularly concerned that adopting environmental technologies would damage guests' experience. In such cases, the researchers note, "hotel managers could educate their customers by developing an effective green marketing plan that promotes the hotel's green facilities, services and other green activities".

In Hoteliers' Hands

This study, the first of its kind, sheds light on why hotels are lagging behind in their adoption of environmental technologies. It also suggests comprehensive solutions. In reality, external barriers such as a lack of government support are largely out of hoteliers' hands. Happily, however, internal barriers – which are the major hindrances to environmental technology adoption, according to the researchers – can be addressed head on. Starting small and gradually developing their green knowledge, for example, will help hotels to reduce their environmental footprint while also saving money. Overcoming each of the barriers identified by the researchers will enable hotels to contribute more meaningfully to environmental protection – saving the world one sensor-controlled lightbulb at a time.

POINTS TO NOTE

- "Green" technologies help to protect the environment and save businesses money, but hoteliers are often reluctant to adopt them.

- The main barriers to hotels' adoption of ecotechnologies include environmental constraints and a lack of green knowledge.

- International/chain hotels and small independent hotels perceive different barriers to environmental technology adoption.

- To overcome barriers to ecotechnology adoption, hotels should start small, develop their green knowledge, and consult multiple after-service providers.

Eric S.W. Chan, Fevzi Okumus and Wilco Chan (2020). What Hinders Hotels' Adoption of Environmental Technologies: A Quantitative Study. *International Journal of Hospitality Management*, Vol. 84, 102324.