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# CURRENT TRENDS AND OPPORTUNITIES IN HOTEL SUSTAINABILITY

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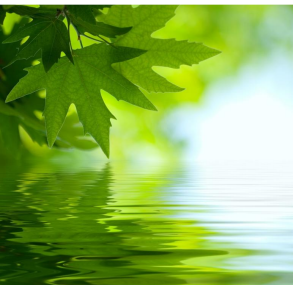
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Dear Readers,

We are pleased to announce HVS' forthcoming series of articles on the environment and sustainability with the release of this publication – *Current Trends and Opportunities in Hotel Sustainability*. This first article is intended to provide a general overview of the evolution and current state of 'green thought' in the hotel and lodging community. Throughout the course of the year, we will be publishing additional articles that focus more deeply on the financial and technical aspects of the design, construction, and operation of sustainable hospitality assets.

As we outline in this publication, the roots of environmentalism and sustainability in the hospitality sector became evident over half a century ago, when a few enterprising hoteliers realized they could provide an enhanced guest experience by integrating natural elements into the resort experience. In the years that followed, factors such as increasing regulation and rising utility costs encouraged hotel owners and managers to adopt a number of environmental best practices. We have observed a remarkable shift in investor sentiment in recent times, as evidenced by the establishment of numerous corporate social responsibility (CSR) programs, as well as the prevalence of green building programs for new development projects.

HVS recognized the relevance of environmental issues in the early 1990s, when we collaborated with the Rocky Mountain Institute to launch one of the first environmental certification programs for hospitality - Ecotel. Through this pioneering effort, we evaluated the environmental and social performance of numerous hotels and provided simple, user-friendly recommendations for owners to reduce environmental impact and decrease operational costs.

Acknowledging the growing importance of sustainability amongst hoteliers, guests and investors, we have recently relaunched HVS' environmental division as *Sustainability Services*. This division will maintain a strong focus on assisting hospitality owners in the business evaluation of environmental and social investments. Specifically, we will be providing benchmarking, auditing, training, and certification services, as well as assisting hoteliers throughout all aspects of the plant and equipment retrofit process. With joint regional headquarters in the United States and India, our goal is to catalyze the implementation of financially-viable environmental retrofit and efficiency projects at hospitality facilities on a global basis.

HVS has always advocated a forward-thinking, cutting edge approach to hospitality and we believe that issues surrounding hotel sustainability will become critical over the next decade. We hope that the hospitality community will be able to utilize this publication and our future articles as resources in your sustainability initiatives, and we look forward to continued collaboration in times to come.



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*The concept of sustainability has gained momentum in recent years within the global investment community – resulting in significant financial implications for new and existing hospitality assets.*

## Introduction

The past several decades have seen a growing awareness amongst hoteliers and investors regarding the environmental and social impacts of hotel development and operations – to the extent where sustainability issues have permeated nearly every aspect of the hospitality industry. This has been driven by multiple factors including owners’ and operators’ desires to reduce operational costs, changing investor attitudes toward the environment (and the coinciding emergence of corporate social responsibility programs), increased regulatory focus on facility operations and development, and a general shift towards the paradigm of ‘sustainability.’

While other aspects of the hospitality sector are relatively straightforward to record and interpret (e.g. occupancy percentages, capitalization rates, RevPAR, etc.), sustainability has remained intrinsically difficult to quantify. Sustainability issues touch on nearly all

**Sustainability attempts to balance financial, social, and environmental factors to facilitate responsible business decision making over the immediate and long term**

aspects of hotel ownership and management, necessitating the alignment of environmental, social, and financial factors to promote responsible business operations over time. Despite the lack of clear, universally accepted metrics, there is a noticeable shift toward sustainability that is well underway, with momentum demonstrated by a growing number of sustainability programs and initiatives which have arisen both internally in the hospitality industry (via hotel owners, managers and operators) and externally in the environmental community.

This article briefly reviews some of the history of environmentalism and sustainability in the hospitality sector, and provides commentary on the current drivers and constraints toward realization of a sustainable hospitality operation.

## The Origins of Hotel Sustainability

The roots of environmental thought in the hospitality sector became evident over half a century ago, when a few enterprising hoteliers realized they could provide an enhanced guest experience by integrating natural elements into the resort experience. This concept, which evolved from earlier land conservation efforts, was pioneered in such locations as Caneel Bay and the Maho Bay Camps in the U.S. Virgin Islands. Key events in the decades that followed are briefly outlined below.<sup>1</sup>

**1960s and 1970s.** The inception of the modern environmental movement was driven by growing human awareness of the impact of pollution on human health, as well as environmental disasters including the January 1969 oil spill offshore of Santa Barbara, California. The energy crisis of 1973-74 prompted significant concern from the hospitality sector regarding both utility costs and energy supply, resulting in focused energy conservation strategies from hoteliers, the A&E design community, and hospitality associations.

**1980s and 1990s.** The concept of sustainable development was introduced by a United Nations commission as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” This publication and the 1992 Earth Summit in Rio de Janeiro encouraged numerous environmental initiatives during the 1990s, including green building initiatives and the first hospitality-specific environmental certification programs. Hotel operating companies and brands also initiated a number of in-house environmental programs.

**2000 to Present.** Hoteliers widened the scope of their sustainability efforts by incorporating environmental objectives into a broader corporate social responsibility (CSR) approach, which included the establishment of partnerships with a variety of public and private environmental organizations. The LEED green building program gained significant global momentum amongst institutional investors for newbuild projects. The financial crisis of 2008 – 2009 resulted in an increased emphasis on cost control measures, which has prompted hoteliers to reevaluate their plant equipment and operational practices to reduce utility costs.

## Current Trends in Facility Management

Current thought in facility management, and specifically hospitality operations, is largely focused on optimizing operational efficiency (and the resultant cost savings) in primarily three areas: energy, water, and waste.

**Energy.** Hotels consume energy for HVAC operations, lighting, cooking fuel, and other miscellaneous power requirements. From a facility management perspective, the majority of focus is placed on reducing energy intensity, which can be accomplished using a technical, engineering-based approach known as commissioning.

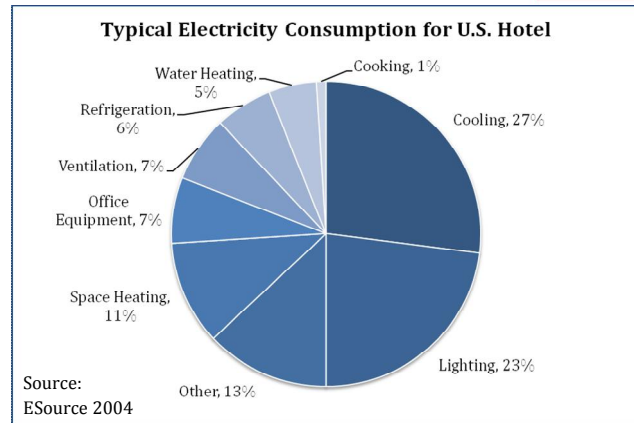
**Energy savings of 10 - 20% (or greater) can be achievable through a technical review of plant equipment and operations and resulting implementation of energy conservation measures (ECMs)**

Front of the house energy efficiency measures include lighting retrofits, minimization of plug loads, and sealing of the building envelope. Back of the house energy efficiency measures include

improved equipment and equipment scheduling, proper sensor calibration, elimination of simultaneous heating and cooling, and maintenance of proper building ventilation. Recent advances in technology relating to renewable sources of energy (solar, geothermal, wind, etc.) have improved the economics of using these alternative energy sources at the individual facility level.

**Water.** Hotels consume water on a domestic basis (bathrooms, F&B, laundry), as well as 'process' water for facility operations (HVAC, irrigation, cleaning and maintenance). Hotels also collect and in some cases treat greywater (i.e. water generated from domestic activities) and blackwater (i.e. sewage) generated by guests and back of the house operations. Typical water conservation measures employed by hoteliers include fixture retrofits, towel and linen reuse programs, HVAC and plumbing system improvements, and use of recycled / rain water for process and irrigation use.

**Wastes.** Waste streams generated by hotels include wastes from construction and refurbishment, consumables (e.g. paper, toner, batteries), durable goods (e.g., furniture, office equipment, appliances), F&B



wastes, hazardous materials (e.g. cleaning solutions, fluorescent bulbs), and recyclable oil. Hoteliers employ a variety of strategies to reduce, reuse, and recycle wastes to minimize processing and hauling costs. Vendors are increasingly providing 'waste-to-energy' processing services, whereby wastes are processed into alternative energy sources such as natural gas or biodiesel fuel and sold back to hoteliers at reduced prices.

In addition to the three core areas of facility development and operations, other emerging areas of focus include sustainable procurement, indoor environmental quality (focusing on air quality and chemical/cleaning product use), and staff training programs (which can facilitate improved performance and higher levels of employee satisfaction/retention).

The number of resources to assist hotel owners and operators in understanding and implementing sustainability measures is vast. These resources are provided by international organizations, public agencies (national and local governments), environmental firms, architectural & engineering consultancies, energy firms, utilities, trade organizations, and other entities.

Additionally, a growing number of environmental certification programs have arisen that are targeted toward the hospitality sector. These programs can be divided into several broad categories, including: 1) Environmental programs targeted toward the hospitality industry; 2) Programs targeted toward green building design and operation; and 3) Green product certifications and standards. Table 1 on the following page lists some of the more prevalent certification programs that are relevant to the hospitality sector.

**TABLE 1, SELECTED ENVIRONMENTAL PROGRAMS RELEVANT TO THE HOSPITALITY SECTOR\***

Type of Program	Name	Organization	Brief Description	Website
<b>Environmental Certification Programs Specific to Hospitality</b>	Green Key Global	Green Key Global, Hotel Association of Canada, LRA Worldwide, Inc.	Environmental certification program for hotels. Provides technical guidance. Participating facilities are awarded between 1 and 5 Green Keys depending on adherence to criteria.	www.greenkeyglobal.com
	Sustainable Tourism Eco-Certification Program (STEP)	Sustainable Travel International	Environmental certification program for tour operators, hotels, attractions, transportation, and the cruise industry. Provides guidance, self-assessment tool, and 2 to 5 star eco-logo rating system. Separate certification offered for luxury accommodations.	www.sustainabletravelinternational.org
	Green Globe Certification Standards	Green Globe International	Environmental certification program for all aspects of hospitality and travel industry. Membership required for access to standards. Standards include 337 compliance indicators applied to 41 individual sustainability criteria. Adherence to >51% standards required for certification. Third-party verification required prior to certification.	www.greenglobe.com
	Earthcheck Assessed and Earthcheck Certified	Earthcheck	Consultancy with clients in the travel and tourism sector. Provides benchmarking, reporting, technical guidance, and environmental certification services.	www.earthcheck.org
	Ecotel	HVS	Environmental certification program developed specifically for hotels. Provides benchmarking, auditing, technical guidance, and staff training. Recommendations are classified according to financial viability. Onsite inspection required prior to certification.	www.ecotelhotels.com
	Global Sustainable Tourism Criteria	Global Sustainable Tourism Council	Global coalition of organizations working to develop increased understanding of sustainable tourism principles. Provides certification of tourism certification programs against global sustainable tourism standards.	www.gstcouncil.org
<b>Green Building Certification Programs</b>	Leadership in Energy and Environmental Design (LEED)	U.S. Green Building Council	Internationally-recognized green building certification system. Provides third-party verification that a building was designed and built using strategies aimed at achieving high performance in human and environmental health.	www.usgbc.org
	BRE Environmental Assessment Method	Building Research Establishment (BRE)	BRE is an independent research-based consultancy, testing and training organization. Provides certification (environmental and safety), R&D, and consultancy services for the built environment.	www.bre.co.uk
	Green Globes	Green Buildings Initiative (U.S.) and BOMA BEST / ECD Jones Lang Lasalle ( Canada)	Building environmental design and management tool. Provides online assessment protocol, rating system and guidance for green building design, operation and management	www.greenglobes.com
<b>Product-Specific Standards and Certification Programs</b>	Energy Star	U.S. Environmental Protection Agency	Voluntary governmental program that provides free benchmarking services to a variety of building types. Also rates appliances and provides resources for owners/operators.	www.energystar.gov
	Green Seal	Green Seal	Develops life-cycle based certification of products and services. Provides green building guidance for public housing facilities and environmental certification for hotels and lodging properties.	www.greenseal.org
	Green Tag	Ecospecifier	Database of vetted products in infrastructure, residential, commercial, industrial, and other construction. Subscription based service.	www.ecospecifier.com.au
	Greenguard	Greenguard Environmental Institute	Evaluates emissions from interior products and building materials.	www.greenguard.org

\* Please note that there are over 300 certification programs targeted towards all aspects of the hospitality and tourism sector on a global basis. The above programs represent only a small fraction of all existing certification programs.



## Drivers Toward Sustainability

In today's economic climate, there are multiple factors that encourage business owners and managers to adopt sustainability measures into standard operational procedures. While the more obvious drivers include cost savings and demonstration of corporate social responsibility to investors, a number of more subtle reasons – such as employee retention and enhancing the guest experience – are also coming increasingly into play. These motivations are explored below.

**Cost savings.** The realization of a bottom line financial return from implementation of sustainable business practices is arguably the strongest motivating factor to encourage private sector participation. Energy efficiency and conservation measures have been studied in depth over the past several decades, leading to assessments that the *majority* of building stock throughout the world is consuming more energy than necessary. There are also potentially significant opportunities for cost savings in the areas of water consumption and waste handling/recycling. From a financial perspective, many of the cost reduction and efficiency strategies can be achieved with no-cost or low-cost measures focused on optimization of the performance of both equipment and personnel. Given the competitive nature of the lodging industry and the associated difficulty of increasing revenue, the potential for reduction of operating costs provides a compelling incentive for hoteliers to consider investment in environmental technologies, as well as more efficient operational procedures.

**Fiscal and economic incentives.** In an effort to encourage the development of environmental retrofits and the construction of 'green' buildings, a variety of fiscal and economic incentives have been enacted by numerous governments, agencies and organizations around the world. These benefits range from tax write-offs to outright grants, and can also include more novel concepts such as insurance premium discounts, expedited regulatory permitting, and grants to cover development soft costs for sustainable projects. Box 1 provides a list of several of the more widespread incentives used to encourage the design and construction of green buildings across the globe.

### Box 1. Representative Fiscal and Economic Incentives Provided for Development of Green Buildings

- Tax credits
- Waiver of development fees
- Cash incentives for achieving certification
- Public investment in new or improved infrastructure
- Grants to cover the soft costs associated with green design
- Low interest loans
- Expedited plan review by building departments
- Permissions for additional density

**Regulatory affairs.** Existing environmental regulations targeted toward the hotel sector are largely focused on various aspect of facility operations such as stormwater management, hazardous materials handling, and environmental health and safety. However, a wide range of present and future legislative activities will impact hotel design, construction and operations. This legislation ranges from the broad and long-term (e.g. cap and trade legislation regarding emissions) to the specific (e.g. U.S. Energy Independence and Security Act of 2007, which applies phased efficiency standards to incandescent light bulbs). The concept of Life Cycle Assessment for products (i.e. the "Cradle to Cradle" review of environmental impacts from raw material extraction through disposal) has gained significant acceptance as a policy instrument and basis for evolving regulatory mechanisms – most notably in the European Union. Hoteliers will need to monitor legislation at the national and local levels to properly plan for operational practices and associated capital expenditures that may be required in the future.

**Stabilized utility prices and availability.** Going beyond simple cost savings and regulatory regimes, hoteliers can deploy more efficient equipment and alternative forms of utility generation to hedge against future price increases in utility costs. This approach is especially important in geographic locations with developing or unreliable infrastructure, to prevent a compromised guest experience in the form of power cuts or sub-standard water quality.

**Marketing / Brand image.** Most of the major hotel brands have incorporated some fashion of sustainability platform into their brand definition. Sustainability initiatives are routinely demonstrated in both marketing materials and annual reports (for publicly traded entities). Several brands have been repositioned to cater to a younger generation of more environmentally and socially-conscious customers. The effectiveness of environmental certification programs to impact facility selection at the consumer level has been less successful to date – based on HVS’ recent conversations with hotel executives, most guests still select lodging based on location, amenities, price, and brand reputation. There has been somewhat greater market penetration for certification programs within the corporate travel sector, especially relating to the growing field of green meetings and conventions.

**Guest experience.** Hoteliers are increasingly understanding that investments in environmental technology can have a direct positive impact on guest experience, which can affect both occupancy and ADR. The new generation of ‘intelligent’ HVAC systems and energy management devices, coupled with a properly managed maintenance regime, can result in significant improvements in thermal comfort and indoor air quality – for both guests and employees. Improvements can also be realized in the indoor acoustic environment, where noise from building equipment such as fans, boilers and compressors can negatively impact the guest experience.

**Creation of a positive corporate culture / Employee retention.** The adoption of a sustainable corporate culture can provide a distinct advantage in terms of attracting and retaining talent. A 2007 survey conducted by the U.S. employment website Monster revealed that 80 percent of young professionals are interested in securing a job that has a positive impact on the environment, and 92 percent would be more inclined to work for a company that is perceived as “environmentally friendly” (Source: [www.monster.com](http://www.monster.com), 2007). Anecdotal evidence within the hospitality sector points toward higher employee retention rates amongst corporations where ‘green ethics’ are prominently displayed and adhered to within the workplace.

**Investor requirements.** Investors in both public and private companies are increasingly looking for quantifiable indicators of sustainable performance, which has led large public corporations such as IBM and Walmart to adopt strong sustainability programs with measurable performance indicators. Sustainability has emerged as an investable concept, with the underlying assumption that “corporate sustainability leaders achieve long-term shareholder value by gearing their strategies and management to harness the market’s potential for sustainability products and services while at the same time successfully reducing and avoiding sustainability costs and risks.” (Source: Dow Jones sustainability website, [www.sustainability-index.com](http://www.sustainability-index.com)).

### Needs of the Hospitality Sector

Based on the growing number of factors that will drive sustainability efforts within the hospitality community, a coinciding series of needs will have to be addressed to provide hoteliers with the resources to implement environmental and social initiatives at their facilities. HVS identifies several of the most pressing of these needs as follows:

**Access to financing.** For asset managers and property-level decision-makers, lack of financing is often cited as the main reason many hotels are unable to take advantage of energy-efficiency opportunities. Hoteliers are generally more willing to take on CAPEX projects when third-party funds are available. The use of alternative financing mechanisms such as energy savings agreements (or similar novel investment vehicles) will most likely be pivotal in encouraging a critical mass of environmental improvement projects at the global level.

**Vetting and confirmation of technology.** Within the past decade, a tremendous number of green technologies have been introduced into the marketplace. With numerous vendors and differing technologies (including emerging forms of alternative energies), hospitality owners require vetting and confirmation of these technologies as being cost effective and contextually appropriate for hotel and lodging use.

**Benchmarking and Auditing.** Benchmarking provides a means to evaluate facility performance against similar facilities to preliminarily ascertain the potential for operational performance improvements (and associated OPEX savings). Benchmarking can be utilized to support basic facility management decisions such as whether to invest in a facility audit and/or building commissioning investigation. Detailed, investment grade audits can provide a fundamental tool to assist owners and operators in understanding the technical and financial implications of environmental retrofits and employee training initiatives.

**Financial analysis to facilitate informed CAPEX decision making.** Although significant technical information exists, verifiable information regarding the financial aspects of environmental investments is much more difficult to find. To enable proper decision making, hoteliers require simple life-cycle based analyses of potential investments, ideally classified or ordered according to capital outlay and ROI criteria.

**Simplified procurement and project implementation.** Another complicating factor in the lodging industry is the fact that there is often no central procurement authority for environmental equipment and technology — each project and property is bid out separately by different vendors and consultants. The design/bid process can be tremendously detailed and time consumptive, and is therefore not prioritized by owners. Streamlined procurement and project implementation processes would likely result in a significantly greater number of retrofit projects.

**Operational training.** Even after investment is made into environmental technologies (whether from a newbuild or renovation perspective), efficient design decisions do not always equate into efficient operational practices. It is critical that a transition be made between the design teams and the actual building operators. This can be accomplished via detailed, technical training of relevant staff, which can facilitate improved environmental performance while reducing resource consumption.

## Opportunities

Sustainability issues impact nearly all aspects of hotel ownership, including both development and operations. The numerous drivers toward sustainability that were identified in this article indicate a growing correlation between sustainability and financial performance – we anticipate that this connection will continue to strengthen over the coming years.

The hotel and lodging community is poised to embrace sustainable operation and development as a means not only to preserve our environment, but also to optimize efficiency, realize cost savings, improve employee morale, enhance guest satisfaction, and manage investor expectations.

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<sup>1</sup> For further reading regarding the history of sustainability initiatives in the hospitality sector, A.J. Singh and Hervé Houdré's 2012 publication "Hotel Sustainable Development: Principles & Best Practices" provides a comprehensive informational resource.

*With challenging economic conditions still existing in many markets, hoteliers often lack the time and resources to properly evaluate the business costs and benefits of investment into environmental technologies and sustainability initiatives. HVS contends that these potential investments require the same pragmatic, analytically-based evaluation as any other business decision – focusing on the minimization of risk and optimization of return on investment.*





## About HVS

**HVS** is the world's leading consulting and services organization focused on the hotel, restaurant, shared ownership, gaming, and leisure industries. Established in 1980, the company performs more than 2,000 assignments per year for virtually every major industry participant. HVS principals are regarded as the leading professionals in their respective regions of the globe. Through a worldwide network of 30 offices staffed by 400 seasoned industry professionals, HVS provides an unparalleled range of complementary services for the hospitality industry. For further information regarding our expertise and specifics about our services, please visit [www.hvs.com](http://www.hvs.com).

**HVS SUSTAINABILITY SERVICES** provides a range of business-driven consulting services that enable hospitality firms to identify cost savings opportunities, enhance operational efficiency, and demonstrate a positive commitment to the environment to guests, investors, and other relevant stakeholders. HVS works directly with owners and operators to evaluate the business case for capital investment into environmental technologies. Our core business services include benchmarking, auditing, project implementation support, training, certification, and strategic advisory.

## About the Authors



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