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Application of Quality Function Deployment to Green Hotel Design: Towards Water and Energy Efficiency

MONTEIRO, I.* 1; JULIÃO, J. 1.; GASPAR, M. 2.

1. *Católica Porto Business School, Universidade Católica Portuguesa, Porto, Portugal*
 2. *School of Technology and Management Polytechnic Institute of Leiria, Portugal*
* *resgroup.cpbs@porto.ucp.pt*
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Abstract

Hotels have been experiencing environmentally friendly pressure since customers are increasingly demanding for more hotel green attributes. Hence, hoteliers need to know which green attributes to employ, without jeopardizing the guests' satisfaction and service quality. The purpose of this paper is to study the application of the Quality Function Deployment (QFD) concept to green hotel design. It aims to identify green design features that integrate hotel customer's preferences and technical requirements. Data were collected using a questionnaire survey that included fifteen green hotel attributes and was distributed in Oporto city to both hotel guests and staff. The data from 396 valid responses were statistically analyzed using the software Statistical Package for Social Sciences (SPSS) and disposed on a relationship matrix with the technical requirements. Findings reveal that hotel end-users perceive as more important the attribute "Active system to detect and repair water leakage", followed by the implementation "Good sanitation practices". On the other hand, the "Change of bedsheets only upon request" and the "Use of low-flow toilets and sinks" were the least favorably perceived attributes. The House of Quality construction reveals that hotels should prioritize the implementation of a program of "Waste reuse and recycling" and "Use of energy efficiency techniques and technologies".

Keywords: *Quality Function Deployment (QFD), Statistical Package for Social Sciences (SPSS), Energy Efficiency, Green Hotel Design*
