THE ACCOR GROUP’S ENVIRONMENTAL FOOTPRINT: AN APPLICATION OF LIFE-CYCLE APPROACH TO ASSESS AND MONITOR AN ORGANIZATION ENVIRONMENTAL PERFORMANCE

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Abstract

This paper presents the study lead by Accor, with PwC support, on the Accor group’s global environmental footprint. This innovative approach has been the first multi-criteria life-cycle analysis for an international hospitality group.

Indeed, Accor’s need to quantified metrics on its global environmental impacts led PwC to build a specific method to provide accurate information about the real environmental issues of Accor’s activity, beyond intuitions, and thereby to build the best possible strategy to curb its impacts and generate value for the Group.

A customized approach to the assessment of the group’s environmental impact that can be defined as “a multi-criteria measure of the environmental performance of an organization from a life-cycle perspective” has been developed. The methodological steps have been largely inspired by the phases described in ISO 14040, with the challenge to adapt it to the level of an organization. A peer review has also been performed.

The study shows the key-findings for the group and how they were used to shape the new sustainable strategy "Planet 21" that has been launched in April 2012.

The study also underlines the challenges faced to apply a LCA approach to an organization such as: complexity of scope definition amongst the supply chain, adaptation of data collection to a group level and selection of relevant environmental impact indicators and the need for a common agreed methodological framework.

Key words: organization, environmental footprint, LCA approach, life-cycle thinking, sustainable strategy

1. INTRODUCTION

1.1 Accor’s background and ambition

Accor is a French international hotel group (world’s leading hotel operator and market leader in Europe), present in 90 countries with more than 4 000 hotels and a large brand portfolio (from Etap Hotel to Sofitel). The group is a pure-player in hotels and boasts a unique and universal business model as an owner, operator and franchisor of budget to luxury hotels on all five continents.

Accor has been concerned with sustainable development for several decades, leading actions promoting the well being of the earth’s population and preserving the planet’s resources mainly through the monitoring of direct impacts such as direct energy and water consumption in the hotels. By the end of 2010, to reinforce its CSR leadership in the hospitality industry and beyond, and generate value through CSR, Accor decided to renovate its sustainability global approach. In order to identify the main environmental issues and support the strategy definition, Accor needed to better understand the current global environmental footprint of its activities.

Accor’s need to quantified metrics on its global environmental impacts led PwC to build a specific method to provide accurate information about the real environmental issues of Accor’s activity, beyond intuitions (not just CO2, not focus on on-site activities), and thereby to build the best possible strategy to curb its impacts and generate value for the Group.

1.2 An innovative approach of an organization’s environmental footprint

At the time the study was initiated (end of 2010), the environmental footprint for an organization was an emerging approach and there was no agreed international methodology framework.
Accor has been working with PwC to develop a customized approach to the assessment of the group’s environmental impact that can be defined as “a multi-criteria measure of the environmental performance of an organization from a life-cycle perspective”.

This approach has been largely inspired by the LCA principles and mainly guided by the following principles:

- Life-cycle thinking perspective: impacts were investigated for the upstream suppliers (food suppliers, laundry cleaning contractors, construction, etc), hotels on-site and headquarter activities and downstream suppliers (on-site waste treatment, end-of-life of buildings),
- Multicriteria approach: the assessment included all relevant environmental indicators associated with Accor’s activities,
- Relevance, completeness: appropriate sources, data and methods have been selected to assess the environmental footprint; the assessment includes as far as possible all relevant life cycle stages of Accor activities,
- Transparency: due to the complexity of the study, all methodological choices have been discussed and results presented with limitations. A peer-review has also been conducted to ensure the accuracy and reliability of the study.

2. AN APPROACH IN ACCORDANCE WITH ON-GOING STANDARDS INITIATIVES

While the study was conducted, several initiatives were developed to address the environmental impacts of an organization. Most relevant initiatives are the following:

- The organization Environmental Footprint Guide (draft version, November 2011) : Guide written by the European Commission / Joint Research Center to define what an "Organisation Environmental Footprint" is and how to conduct it,
- ISO Life-Cycle working group - Writing of a technical specification TS 14072 : “Environmental management – Life cycle assessment – Requirements and guidelines to apply life cycle thinking to organizations”, providing guidance to organizations for an easier and more effective application of ISO 14040:2006 and ISO 14044:2006. It is an on-going project and the technical specification will be published by end of 2013 / beginning 2014.

It is worth noting that Accor methodological approach is perfectly in line with EC and ISO recommendations on this topic and constitutes a very interesting case study for one of the first environmental footprint performed at a company level.

3. METHODOLOGY

The methodological steps have been largely inspired by the phases described in ISO 14040, with the challenge to adapt it to the level of an organization.

3.1 Goal and scope definition

As for a product LCA, the “functional unit” notion was kept so as to precise the assessment, defined as: “Hosting all Accor’s clients during one year, over the world, considering all the basic services including restoration”.

Defining the boundaries of the evaluation, major parts of the scope covered by Accor hospitality activities (including franchised hotels) were assessed.

The system studied has been selected through a hotel life cycle perspective (raw materials, manufacturing, distribution, use and end of life) and split into 11 activities, covering Accor’s responsibility scope. Some exclusion had to be made if there was not enough information or the contribution was negligible. The following scheme presents the 11 activities selected:
All the inputs and outputs compiled at the organization boundaries have an impact on the environment. Environmental impact indicators studied for this environmental footprint have been selected according to:

- their relevance to the hospitality sector environmental impacts and Accor’s environmental program priorities and their understandability, to raise Accor’s stakeholders awareness on main results,
- the availability of reliable assessment methods.

Therefore, energy consumption (as primary resource), water consumption (understood as water footprint), ultimate waste production, climate change and water eutrophication have been then selected for this study. Accor also have a major concern about the impact it could have on toxicity, eco-toxicity and biodiversity; however these impacts could not be evaluated due to a lack of available indicators.

### 3.2 Data collection

An important task of the study is to collect all the activity data, referring to all the flows involved in Accor’s operation. The activity data are the quantified translations of the operation (such as amount of kWh of energy used). Two types of data were collected:

- **Global data**: Number of hotels, rooms, total area, number of meals & breakfast. These data are useful for extrapolations and allocations and were mostly obtained through corporate departments and Accor reporting system,
- **Specific “activity data”**: these data were mostly obtained from procurement department, Accor environmental reporting system, hotel census, and specific suppliers data collection.

### 3.3 Environmental factors

Environmental factors provide the link that converts the activity data into the resulting environmental impact indicators selected.
For each item of the group’s activities, environmental factors are calculated using adapted data sources based on PwC experience: GhG protocol, Bilan Carbone®, WISARD (Waste Integrated Systems for Assessment of Recovery and Disposal, end-of-life model), IEA (International Energy Agency) data, LCA publications, environmental impacts publications, EPD (Environmental Product Declaration), etc.

3.4 Compilation
Environmental impacts are consolidated at the group level, cross-checking activity data with environmental factors, using some extrapolations or assumptions if needed.

Considering that all the activity data were not available at the hotel level, some assumptions were made to aggregate the results. Especially, there is less accurate data available for franchised hotels. Also, extrapolations and allocations could be made on the basis of the number of rooms, the number of hotels, the area covered, the hotel brand, and the regional zones.

3.5 Peer review
An independent panel (two LCA specialists and one international hospitality industry expert) has been involved to ensure accuracy and transparency before results publication. A peer review report has been established following the guidelines and contents of product LCA peer review reports.

4. THE RESULTS AND KEY-LEARNINGS
The environmental footprint has been presented as a test bench, using a color code for assessing the reliability of the results.

Some of the key findings for the group were:

- Carbon and energy are the first points for progress for the group: On-site hotels energy consumption account for the ¾ of Accor’s energy footprint and affects the Group’s carbon balance.
- Food purchases account for most of the water consumed and contaminated. Food services are where Accor consumes most indirect water and accounts for the bulk of the water eutrophication released (fertilizing and crop-protection products used in farms).
- Building sites are a critical link in the waste production chain: Accor generates more than a million tons of waste a year, 70% comes from the demolition of the hotel at its end-of-life and the disposal of the inert waste.

The complete findings of this environmental footprint enabled to shape the new sustainable development strategy, “Planet 21”, and the related action plan, which Accor has announced at the beginning of April, 2012.

5. THE CHALLENGE OF APPLYING LCA APPROACH TO AN ORGANIZATION
Accor & PwC have faced number of challenges in order to apply a LCA approach to an organization such as: complexity of scope definition amongst the supply chain, adaptation of data collection to a group level and selection of relevant environmental impact indicators. In the near future, the emergence of a common agreed methodological framework will contribute to help organizations in the implementation of global environmental multi criteria footprint approach.