



CASE STUDY

*Cleaning and housekeeping in the Brazilian hospitality sector*

**1. Background information**

Hotels use an array of chemicals and cleansing products for cleaning and housekeeping purposes. These differ from those used in households, as they must meet sanitation standards to keep large areas both clean and safe. Chemicals used in hotel laundry rooms, for example, must keep the quality of bedding, towels and other linens as well as comply with whiteness standards. All in all, the cost of chemicals and cleansing agents can represent between five and 15 per cent of the total operational cost of a hotel.

**2. Introduction**

The Windsor Atlantica Hotel is a five star hotel with 545 rooms and 32 meeting rooms located in Copacabana, Rio de Janeiro, Brazil that opened in 2010 with a holistic concept of sustainability and in 2012 received a Travelife Gold award for sustainability in tourism. In order to minimize its chemical usage, the Windsor Atlantica Hotel introduced a new model for obtaining its chemical supply: Chemical Leasing.

**3. Key changes and results**

Due to the Chemical Leasing model, the economic and environmental outputs of the Windsor Atlantica Hotel are much more favourable than those of other hotels in the chain, as Chemical Leasing incorporates efficient environmental management practices and promotes changes in water consumption, chemical handling and management, and capacity building.

**3.1 Unit of payment applied**

<b>Before Chemical Leasing:</b>	Reais (R\$) per gallon or kg of products
<b>After Chemical Leasing:</b>	Reais (R\$) per occupied room per day

**3.2 Technical measures tested and implemented**

Together with Ecolab, the supplier of chemicals for cleaning to the Windsor Hotels chain as well as of a number of other hotels, laundry services and restaurants in Rio de Janeiro, the Windsor Atlantica Hotel has established cleaning standards and defined chemical kits for various purposes. It has also introduced new technologies in its dishwashing machines to allow them to use industrial solid detergent and incorporated industrial washing machines equipped with automatic chemical dosage, which avoids worker exposure to highly concentrated chemicals. Recyclable containers have also been introduced to reduce the costs of disposing of packaging.



Figure 1: Room of the hotel

### 3.3 Results achieved

Situation in other hotels in the Windsor Hotels chain	Situation in the Windsor Atlantica Hotel under Chemical Leasing
<ul style="list-style-type: none"> <li>The purchase of chemicals in other hotels in the Windsor chain is conventional (per litre, kg or gallon). Despite training workers, chemical consumption is higher and more waste (wastewater, packaging) is being produced.</li> <li>Ecolab's average chemical consumption is 0,46 kg of chemicals per occupied room per day.</li> <li>The cost of chemicals per occupied room per day is R\$ 4,16.</li> </ul>	<p><b>Environmental benefits:</b></p> <ul style="list-style-type: none"> <li>The consumption of Ecolab cleaning is 0,28 kg per occupied room per day (40 per cent less).</li> <li>Less water is used than in other hotels of the same chain.</li> <li>Greywater is being totally recycled in the hotel's toilets and garden.</li> <li>Packaging waste has been eliminated.</li> </ul> <p><b>Economic benefits:</b></p> <ul style="list-style-type: none"> <li>Windsor Atlantica Hotel pays R\$ 2,00 per occupied room per day for chemicals.</li> <li>New machines with an automatic dosage system help reduce water and energy consumption.</li> </ul> <p><b>Social benefits:</b></p> <ul style="list-style-type: none"> <li>Employees are not in direct contact with chemicals due to the introduction of an automatic dosage system.</li> <li>Employees are trained by Ecolab on hazard analysis and critical control point cleaning, health protection, environmental and economic issues.</li> <li>Long-term partnerships between users and suppliers have been established.</li> </ul>

### 3.4 Photos from the Windsor Atlantica Hotel



Figure 2: Laundry



Figure 3: Dishwashing