

# Embedding circularity in the procurement of linen and towels in France



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## Quick facts



Type of procurement:  
**linen and towels**



Year of inception: **2014**



Type of business: **Sustainable tourism consulting firm, in partnership with a hotel**



Organisation name:  
**Betterfly Tourism & Amiral Hotel**



Number of staff: **16**



Country/region: **France**



Procurement value: **4,500 USD**

## Background information

Betterfly Tourism<sup>1</sup> estimates that the production and treatment of bed linens and towels for the hospitality industry in France generates 470,000 tons of CO<sub>2</sub> each year, representing over 10 million m<sup>3</sup> of water consumption and requiring 15,000 tons of detergents.

## The challenge

Procurement and treatment of linen and towels not only represent a challenge for hotels due to the high operating costs (laundry, transport, logistics), but also the environmental impacts of the use of linen and towels (water & energy consumption, use of chemicals). Household maintenance of linen and towels have other side effects such as nuisance to the neighbourhood (air and noise pollution) generated during the daily delivery of clean linen and towels.

Moreover, cleanliness and quality of linen and towels are of utmost importance for the guests, as they represent two of the top criteria in the overall evaluation of an accommodation.

## The strategy

A group of key stakeholders in the textile value chain from the hospitality industry convened in order to identify and collectively implement an innovative sourcing solution to reduce negative lifecycle impacts and costs of linen and towels, while being mindful of guests' health and comfort. The group includes a hotel federation (Groupement National des Indépendants de l'Hôtellerie & de la Restauration); five hotels (Amiral, Château Belmont, Charme Hôtel, hotel La Pérouse and Bhô Hotel); seven laundries members of 'Cercle du Propre'; a linen producer (Tissus Gisèle), a detergent producer (Ecolab), and Betterfly Tourism.

The group decided to focus on the procurement of bed linen (bed sheets, pillowcases and duvet covers) and bath linen (terry towels, bath sheets and bath mats), which add up to an average of 1.95 kg of linen washed per overnight stay (1.7 kg if bedcovers are used, 2.1kg if duvets are used).

Discussions touched upon the lifecycle assessment of the environmental and financial impacts of linen and towels – from extraction of raw materials like oil and cotton to the end of life of textiles. The two-day seminar enabled all actors of the value chain to engage in order to identify a sustainable and efficient solution for all parties.

In this context, the Amiral Hotel (48 rooms, in Nantes, France) piloted the procurement of unbleached bed linen and microfiber towels.

<sup>1</sup> Source: Betterfly Tourism, 2013, experimental project on the environmental footprint of tourism actors

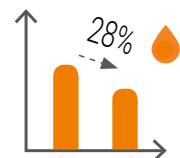
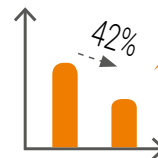
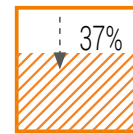
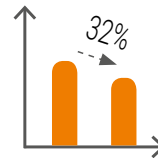
# Impacts



In 2014, Betterfly Tourism measured the impacts of procuring unbleached bed linen and microfiber towels for the Amiral Hotel (48 rooms):

➔ As fibres are preserved when manufacturing unbleached linen, **less cotton is required in production**. Hence, and according to Betterfly Tourism calculations:

- **GHG emissions during the lifecycle of bed linen is reduced by 32%;**
- **production of unbleached bed linen requires 37% less non-renewable resources**, in comparison with importing bleached linen;
- **Unbleached bed linen enables a reduction in energy consumption of 42% and water consumption of 28% during its lifecycle**, including the manufacturing process (for example, irrigation water and transport of cotton);



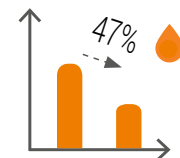
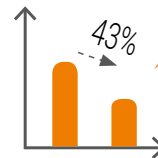
➔ As the bleach step is removed, **fewer chemicals are used during production**;



➔ **Fibres of unbleached linen have a longer life span**, reducing the overall costs and needs to procure new items for hotels. Procuring unbleached linen is therefore less resource-intensive, and helps reducing cotton, water and energy consumption;



➔ During its entire lifecycle, and compared with 100% cotton towels, **microfiber towels allowed 43% savings in energy consumption** (for example, microfiber towels require a shorter drying cycle), **and 47% in water consumption**;



➔ **Life span of microfiber towels is extended, up to 200 potential machine washing**;



x 200

Hotel Amiral conducted a satisfaction survey with the guests. Results demonstrated a strong acceptance of the unbleached bed linen from the guests: 81% responded that they are very satisfied with the overall quality, and 19% satisfied. 85% of the respondents are very satisfied with the visual aspect of the linen. 76% of the respondents are very satisfied by the softness. **However, the satisfaction rate dropped if the guests were not informed of the rationale behind the choice of unbleached fibres and its potential impacts.** Indeed, unbleached linen have a natural, off-white colour, as opposed to conventional bright white bleached linen. Perception of cleanliness can therefore be altered.

As per the satisfaction survey results for Hotel Amiral, unbleached bed linen appears to be a concrete and actionable solution to reduce negative impacts of linen in the hospitality sector. However, results on the microfiber towels indicate that – despite their potential positive impacts on the environment – more research and innovation are required to offer products with a perception of higher quality.



## Tender specifications

- ✓ Unbleached bed linens are composed of 50% cotton and 50% PET;
- ✓ Bed linens are made in France, by a manufacturer (Tissus Gisèle) using 100% hydraulic electricity which is produced on site;
- ✓ Microfiber towels are composed of a mix of polyester and polyamide;



Unbleached bed linen at Amiral Hotel.

*"Our decision to prefer environmentally friendly linen and towels is part of our continuing efforts to engage in more sustainable business practices, as per our certification EU Ecolabel. Laundry services represent a significant part of our expenses; it is important to control its financial burden. Choosing unbleached linen, made in France, and the know-how of Tissus Gisèle allow us to procure more resistant linen, using less chemicals during production; and washing cycles require less resources."*

- Nadine Witczak, Director, Amiral Hotel



## Lessons learned

- ✓ **Communicating to the guests** is critical to accompany a behavioural change, and acceptance of a product which would otherwise be perceived as being of low quality;
- ✓ **Engaging with all actors of the value chain** (from the linen and detergent producers, the laundry service provider, to the hotels) is critical to find common interests, and therefore identify an innovative solution which is economically viable for all stakeholders.
- ✓ Technical issues may be difficult to address; however rethinking business models remains the most challenging task – especially if such an initiative involves an even larger number of lifecycle stakeholders.

### For further information



<https://www.betterfly-tourism.com/en/our-projects/laundry>



Contact person: Hubert Vendeville, Betterfly Tourism



[contact@betterfly-tourism.com](mailto:contact@betterfly-tourism.com)



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