



# Case study

# Tour Sequana

Location  
PhilipsLighting

Issy Les Moulineaux, France  
Light Balancing Solution - Philips/Somfy

Light Balancing

**PHILIPS**

**somfy**



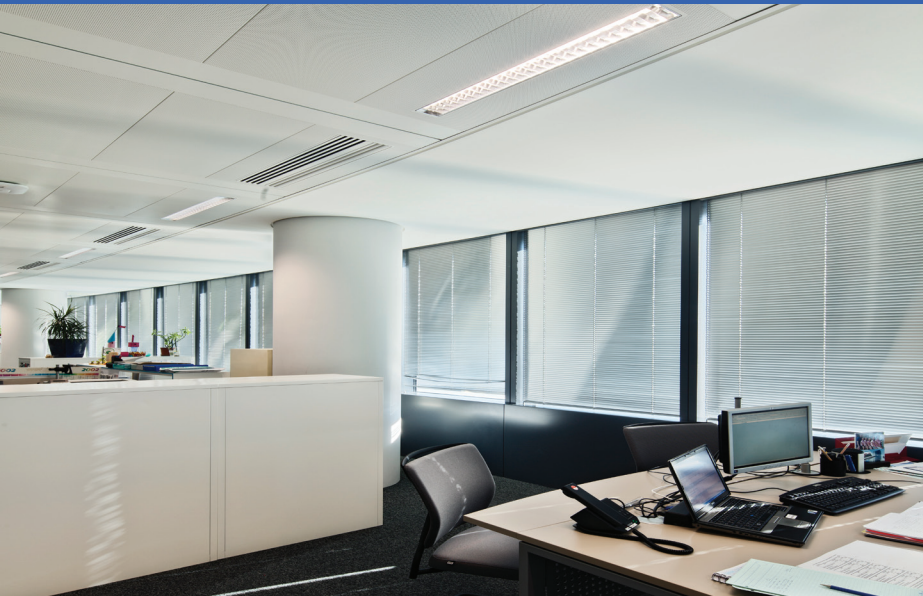
“We were looking to construct a building supporting the image of the Bouygues Télécom, a building with a distinctive visual profile. Obviously, comfort and efficiency were key elements together with environmental considerations.”

François Delatouche, Working Environment Director of Bouygues Télécom



“It has been shown that we work better with natural light.” - Bernardo Fort-Brescia, Architect

# Tour Sequana: Maximising energy savings and indoor comfort through balancing natural and artificial lighting



## Project info

### Customer:

Bouygues Télécom

### Location:

Issy Les Moulineaux, France

### Blinds:

Automated venetian blinds with Somfy LW motors

### Blind/Lighting Control:

Philips Somfy Light Balancing

### Lighting:

Various T5 ETO & LED Luminaire

**Architect:** Bernardo Fort-Brescia, Arquitectonia

**Design team:** Bridot & Willerval, Jean-Michel Wilmotte

**Green Certifications & Awards:** HQE

## Background

The development objective was to complete an ensemble of offices covering 100,000m<sup>2</sup> with HQE environmental certification in an area straddling two cities in close proximity to the heliport and the 'periferique'; two significant sources of noise, located in the vicinity of Paris. It is part of a massive urban regeneration programme for the Issy Les Moulineaux commune, specifically targeting companies associated with IT and new technologies.

## The Challenge

The new 100m high Tour Sequana was designed and laid out to accommodate the 2,400 employees of Bouygues Telecom covering 45,400 m<sup>2</sup> over 23 floors. The challenge was to reduce the average energy consumption to 90kWh/m<sup>2</sup>/year, which is 3 to 4 times less than a tower building in the La Défense area of Paris. One of the other key aspects of the design was to prioritise the use of natural light in the space where possible - "Everyone should have the same quality of space: wonderful light and a beautiful view for all," explains the architect Bernardo Fort-Brescia.

To achieve the energy reduction figure as well as comfort levels, the developers invested in high-performance glass facade which represented a solar factor of less than 25%, while having a light transmission figure of at least 50%. Whilst glass facades look fantastic, they also are more challenging in managing light, glare and heat to ensure comfort for all those inhabiting the building.

## The Solution

The design team searched for the perfect solution to balance the optimisation of natural and artificial light with the comfort of the inhabitants. The lighting consists of T5 high-performance luminaires and LED solutions. However, the unique solution of comfort and light balancing is in the combination of lighting and solar protection management systems - the Philips Somfy Light Balancing solution. A total of 3500 automated venetian blinds were installed, all motorised with Somfy LW motors. The blinds are activated to manage thermal heating, to reduce visual glare discomfort and to take advantage of the sun's position for natural light as required. When the blinds are closed, the artificial light levels are boosted and when the blinds are opened the artificial lighting is dimmed down, all the while assuring optimal contrast values for working at a computer screen or on a document.

## Benefits

With the Philips Somfy Light Balancing solution, the Tour Sequana targeted energy consumption levels have been met. In addition, incorporation of this solution in the HQE environmental rating procedure, helped obtain the target of 10 on the performance level for visual comfort. The management of artificial light and natural light ensures the best level of indoor comfort in terms of light levels and glare. Maximising the use of natural light has a positive effect on wellbeing and the fact that this can be prioritised thanks to the quality of the glass and the automated blinds and lighting is fantastic.



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