

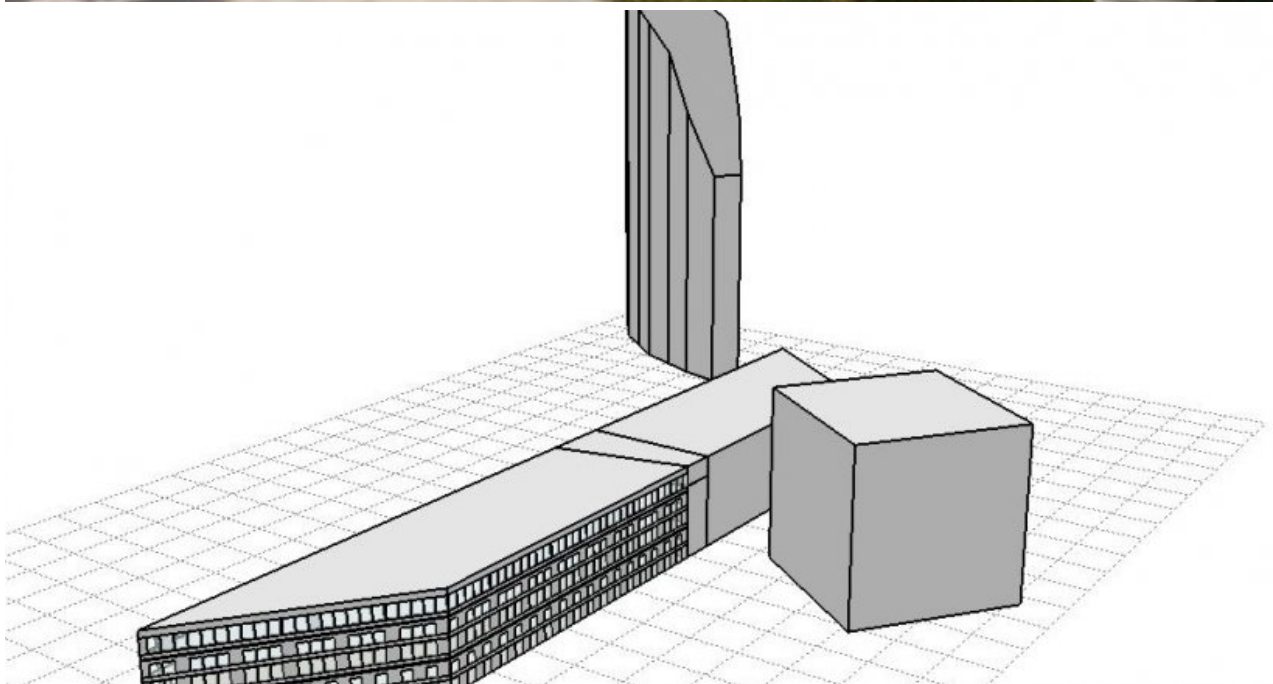


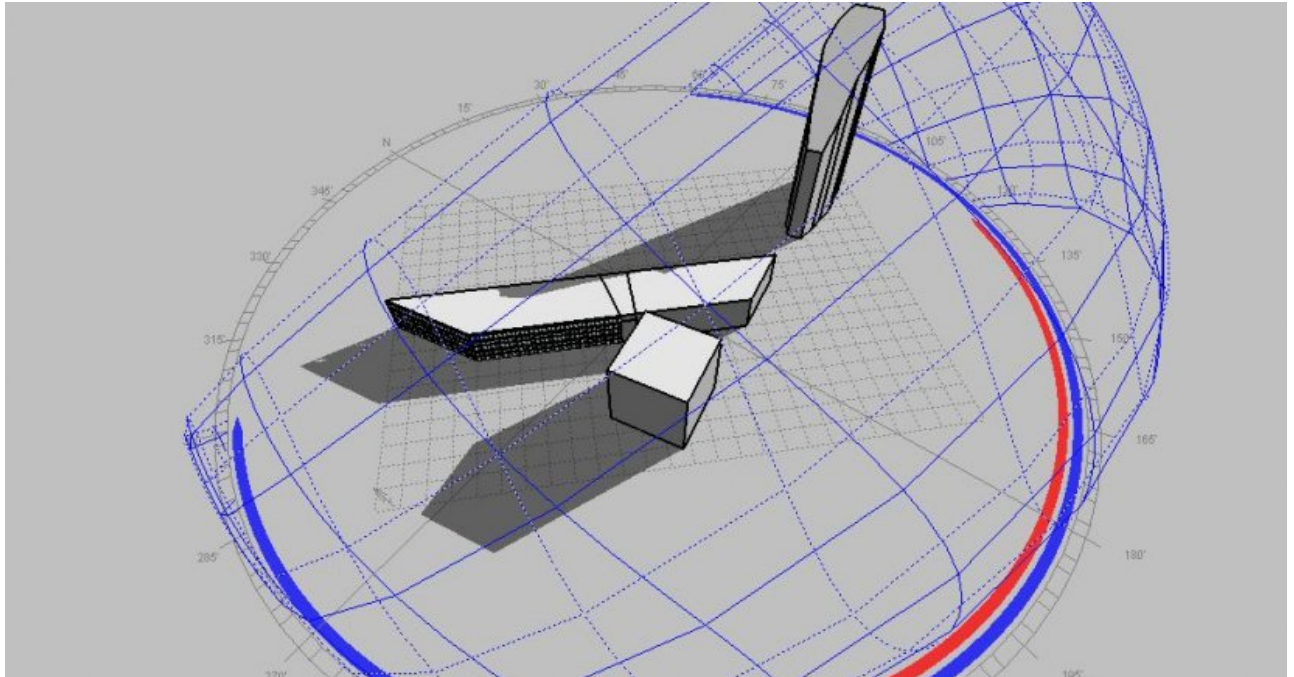
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## Environmental adaptation of Desigual's corporate headquarters in Barcelona

Improving comfort, reducing consumption and ensuring low environmental impact





**Category:**

[Enginyeria d'eficiència energètica](#) [1]

**Client**

Desigual

**Period**

2010-2011

## Motivation

The new headquarters of the Desigual company are found [\[EL1\]](#) [2] the site known as the Nova Bocana or “new entrance” in the Port of Barcelona. The 20,600 m<sup>2</sup> building has 5 storeys with fronts facing mainly northeast and northwest. The interior of the building has an open plan design in order to create a comfortable, cooperative working atmosphere.

## Results

Based on an exhaustive study of the basic and executive projects, fourteen improvements were proposed. Taken together, these modifications had the potential to reduce primary energy consumption by 50% compared to the base building. The main tasks that ERF performed in planning these proposals were:

- Study of sunlight and shade.
- Study of natural light use.
- Dynamic simulation of the building’s energy performance, and energy audits of more than 20 proposed improvements: changing the type of window panes; proportion of windows; control of natural lighting throughout the floor; adjusting set temperatures; use of a heat exchanger to generate part of the heating required; night-time ventilation in summer; use of CO<sub>2</sub> sensors to regulate ventilation; etc.
- Proposals to improve air conditioning systems
- Use of renewable energies
- Proposals to improve water saving and reuse
- Proposals to promote sustainable mobility

- Use of low-impact materials
- Cost-benefit analysis of improvement solutions with estimate of environmental and economic impact.

[\[EL1\]](#) [3]??

## **Categoria**

[Eficiència energètica a edificis nous](#) [4]

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[2] [https:///C:/Users/USER/Downloads/Fitxes%20WEB%20ERF%20per%20modificar%20angles%20o%20fer-v1.docx#\\_mso\\_com\\_1](https:///C:/Users/USER/Downloads/Fitxes%20WEB%20ERF%20per%20modificar%20angles%20o%20fer-v1.docx#_mso_com_1)

[3] [https:///C:/Users/USER/Downloads/Fitxes%20WEB%20ERF%20per%20modificar%20angles%20o%20fer-v1.docx#\\_mso\\_anchor\\_1](https:///C:/Users/USER/Downloads/Fitxes%20WEB%20ERF%20per%20modificar%20angles%20o%20fer-v1.docx#_mso_anchor_1)

[4] <https://www.erf.cat/en/categoria/edificaci%C3%B3-sostenible>

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