Sant Pau Hospital's research institute in Barcelona

The new Research Institute of *Hospital de Sant Pau* is a building conceived as a **technological infrastructure** with parameters of global sustainability. This gives a high **comfort and functionality**, an optimal **environmental behavior**, the **reduction of costs and consumptions** -both of **materials and energy**- and an optimal **functionality** considering the entire **life cycle**, both of the materials and of the building itself.
The building is organized with clear geometry volumes that act as mediators between the **city's road layout** and the hospital, becoming one of its main accesses.

The facade is simple and efficient, based on sandwich panels with good insulation. These panels are protected by a **technological ceramic skin as a latticework**, with the same chromatic range as the historic pavilions of the modernist hospital. This skin produces a drastic **reduction in energy demand** (in a building with very significant thermal internal loads). In turn, it allows the entry of natural light and views and guarantees privacy to researchers.

Each floor consists in a rectangle of 80m x 11m without pillars or vertical downspouts, providing **great flexibility**, flanking an axis of 3m that houses all the fixed elements (stairs, patios, elevators, facilities, bathrooms). These spaces are divided only with screens and partitions, which can be modified with great ease and can berth every 1.25m to the façade without affecting it. These elements allow the building to be easily adapted even to substantial changes in use.
Flows relating the different uses have been carefully studied, in order to place them in the most advantageous situations. The most frequent routes are as short as possible. The incompatible routes are segregated, and it is provided wide interrelation spaces, well lit, allowing group meetings. These measures have allowed us to **reduce the planned area** by increasing flexibility and maintaining the functional program requested.

The **construction systems** are **dry mounting**, both the façade ceramics (Flexbrick), the fiber cement partitions, which allow to avoid supplementary railings and where the installations can be fixed (Euronit), the photocatalytic concrete base to the street that cleans the air of the city (Breinco), the vegetal cover water tank that allows to collect rainwater and use it for irrigation and toilets (Danosa).

The building has obtained the **LEED Gold** environmental certificate.

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Technical information

- **Project name**: Research Institute of the Hospital de Sant Pau in Barcelona
- **Architect**: Picharchitects/Pich-Aguilera
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Building information

- **Location:** Carrer de Sant Quintí, 75, 08041 Barcelona
- **Year:** 2018
- **Surface (m^2):** 9.700m2
- **Photographer:** Aldo Amoretti

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- **Safety:** Albira Altadill
- **Installations:** JG Ingenieros

Promoteur: FUNDACIÓ PRIVADA HOSPITAL DE LA SANTA CREU I SANT PAU

Industrial systems

Some industrial systems applied in the project:
• Ceramic lattice on the FLEXBRICK façade
• BREINCO photocatalytic base
• DANOSA cistern cover
• EQUITONE high resistance interior partitions

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