



# PRESS RELEASE

Thursday 9 March 2023



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## THE NEW BOUYGUES CONSTRUCTION BUILDING CONCEPT WILL REDUCE THE CARBON FOOTPRINT OF OFFICE CONSTRUCTION BY A FACTOR OF THREE

*At MIPIM, the international meeting place for property industry professionals, Bouygues Construction is unveiling a building concept that will reduce the carbon footprint of office construction by a factor of three. The feasibility and performance of this project have been validated by Franck Boutté Consultants, winner of the Grand Prix de l'Urbanisme 2022, and it illustrates Bouygues Construction's strategy of moving towards very low-carbon construction.*

### **An innovative approach to accelerate the transition of the commercial property market**

The building sector has a major role to play in the fight against greenhouse gas emissions. In France, it accounted for 43% of energy consumption and 23% of CO<sub>2</sub> emissions in 2020. Bouygues Construction is committed to an approach that aims to respond to the market by providing solutions to environmental issues. Our focus on making cities and regions more sustainable takes account of the need for a new approach that will significantly reduce the construction industry's carbon footprint.

### **An inspiring concept for the offices of the future**

With the aim of developing a building concept that has the lowest possible carbon footprint, Bouygues Construction had its teams of experts working for several months, freeing themselves from the limitations of a set of specifications and basing their work on projected climate forecasts for 2040.

The aim of this approach was to transform the vision of office construction by focusing on the essentials: designing a building with the lowest possible carbon footprint by striking the right balance between economic energy consumption, comfort, connectivity and scalability.

During the whole iterative phase, the work was guided by Franck Boutté Consultants, a specialised environmental design and engineering consultancy. Following this exploratory process, the building concept has been adapted and enriched by three renowned firms of architects: NeM / Niney et Marca Architects, Coldefy, Martin Duplantier Architects.

This building concept pushes the limits and favours savings in materials through an in-depth analysis of the shape of the building, a design that is as lean as possible in terms of technological sobriety, the structural use of wood, the circular economy and the use of bio-sourced materials, such as raw earth.

It cuts the average carbon footprint of offices actually under construction by a factor of three and is 40% below the targets of the RE2031 regulations.

This approach is also intended to be extended to be applied to the renovation and refurbishment market.

## Several architectural interpretations illustrate the possibilities offered by the building concept

To implement the innovative approach proposed by Bouygues Construction's engineering teams, three firms of architects have worked on interpreting the building concept solutions on three different sites, in three different climates:



© Martin Duplantier Architectes

### In Northern France, with Duplantier Architectes:

The project puts the emphasis on raw earth. The east and west facades are composed of adobe walls, which are designed to generate strong inertia. Large south-facing terraces create quality outdoor spaces while offering just the right amount of radiant heat, controlled by sunshades. Finally, inside the building, Nubian vaults form the centre of the floors, providing warm spaces while regulating the humidity.

### In the Paris region, with NeM:

This project focuses on the reuse of materials and local sourcing. On the basis of a deconstruction project in the Paris region, reusable elements were identified, and these structured the whole project. It was possible to give many reused materials a second life. Examples include the facade, 75% of which is made up of reused window frames that act as cladding and sunshades, and the walls made of recycled concrete that act as thermal regulators by releasing their heat or coolness.



© NeM / Ninety et Marca Architectes

### In South-eastern France, with Coldefy:

Thanks to the coolness available at the heart of the project and the installation of wind towers on the roof, cool air from the patio is supplied to the offices in order to cool them. Elegant, planted walkways on the east, west and south facades create spaces for well-being, while acting as sunbreakers.



© Coldefy

This project illustrates the strong capacity of Bouygues Construction's teams to innovate in order to offer customers practical low-carbon solutions that meet the challenges facing society. In September 2020, Bouygues Construction delivered the ABC building concept in Grenoble, a residential building concept designed to be as self-sufficient as possible.





### **About Bouygues Construction**

With 32,400 employees working in 60 countries, Bouygues Construction designs, builds and rehabilitates the infrastructures and buildings that are essential for a sustainable society. All over the world, the Group's teams support the development of low-carbon energy production and public transport infrastructures and provide their expertise in the design, construction and renovation of buildings and neighbourhoods essential to life (health, education, work, tourism, leisure, public services, defence, etc.). The teams' commitment is based on three top priorities: safety culture, respect for human rights and ethics.

In 2022, Bouygues Construction generated sales of €9.3 billion (excluding Energies & Services businesses, divested to Equans on January 1, 2023).

### **Press contacts**

**Hubert Engelmann** +33 6 9905 4666 – [h.engelmann@bouygues-construction.com](mailto:h.engelmann@bouygues-construction.com)

**Marisol Pinot** +33 7 6164 2281 – [m.pinot@bouygues-construction.com](mailto:m.pinot@bouygues-construction.com)

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