

Workspaces created for your success



DIG

Shared innovation



\* Credit © GaudiLab/Shutterstock

# CURRENT AND FUTURE OFFICE CHALLENGES

To meet the increasing requirements of staff demanding more flexibility and well-being, companies are undertaking a cultural revolution. Because of this, companies are not only integrating new working methods to foster more agility and collaborative emulation but are also taking into accounting new ideas around economic models, based on the actual usage of spaces.

In a context of climate change, the necessary environmental transition is leading to a re-evaluation of **construction methods**, as well as the **use of resources**, in order to enhance the **sharing economy**, **recycling and resilience**.

The rapid **evolution of practices and technologies** requires being able to **transform the different use of spaces** and to respond to an ever-increasing need for occupants to **connect**.

Faced with these core trends how can office buildings respond to **individual, societal, environmental and of course economic** ?

Credit © LightField Studios/Shutterstock



#### TO RESPOND TO THESE CHALLENGES,

Bouygues Construction has identified solutions, tools and best practices by engaging all of its innovation and R&D teams as well as its network of start-ups and partners in order to be able to offer you:

# Officity

An approach to office buildings which places human beings back at the heart of a vibrant and reassuring environment.

In this manner, we are demonstrating a strong desire to **support our clients** in order to solidify and enrich their projects, underpinned by an **ethical social dynamic** which contributes towards the development and improvement of tertiary buildings.

### OF EMPLOYEES CONSIDER THE EXISTENCE OF OPEN-PLAN, COLLECTIVE WORKING SPACES TO BE A CRITERIA FOR CHOOSING A NEW JOB

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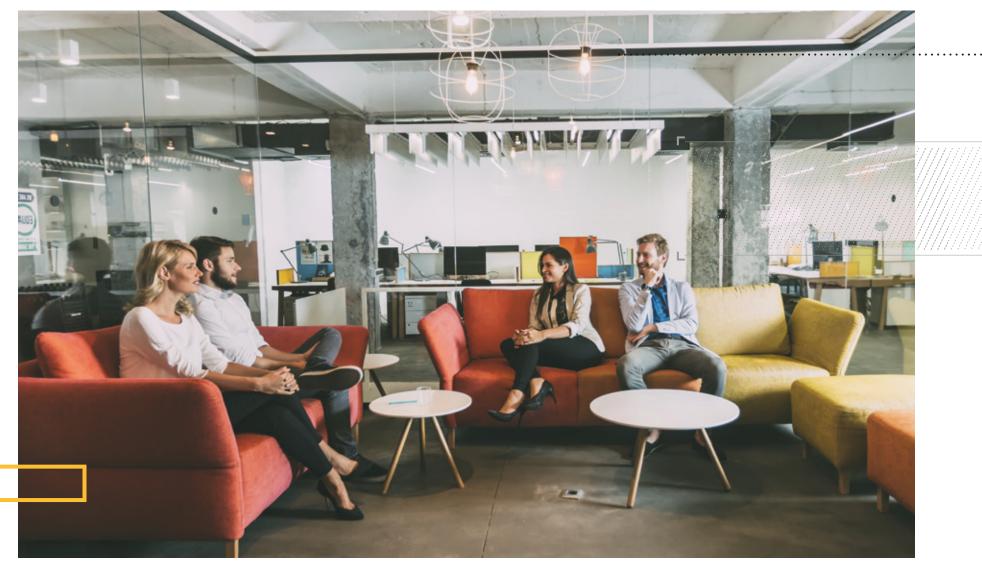
- TNS Sofres "The French and their offices"

**89**% OF FRENCH STAFF BELIEVE THAT THE WORK SPACE HAS A SIGNIFICANT IMPACT UPON THEIR OUTPUT — Actineo / CSA

93% OF "DIGITAL NATIVES" NO LONGER WANT A TRADITIONAL OFFICE

- ESSEC Real Estate & Sustainable Development Chair

**96%** OF YOUNG GENERATIONS EXPECT TO HAVE A CHOICE ABOUT THEIR PLACE OF WORK — Job Teaser for Deloitte



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# An attractive office for flourishing and motivated staff



An office creating value for a building that positively contributes towards its environment



**An evolving office** for a building that adapts to its uses and to technologies

## An attractive office

- <sup>+</sup> Welcoming
- <sup>+</sup> Living
  <sup>+</sup> Efficient



Credit © G-Stock Studio/Shutterstock



### The benefits?

Experimenting with the different levers that impact upon the quality of office life allows for **improving the experience and well-being of the occupants**.

The Officity approach fosters **onboarding** and retaining talent by offering an appropriate setting to develop their output and creativity. The quantified management of the working environment also generates significant savings by optimising the use of spaces.

Enhances the attractiveness of the building for companies who will occupy it and for their staff, contributes to reducing the availability of a property on the market and improves the employer branding.

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🗱 Credit © Losinger Marazzi

### Services & usages

#### AN OFFICE + WELCOMING

To be **comfortable and pleasant to live in**, the layout of an office building **must offer alternative and additional spaces to traditional workstations:** phone boxes, collaborative meeting rooms, creative spaces etc.

It must also integrate **services that free up the occupants from daily constraints** to allow them to **fulfil their tasks more serenely:** portering, delivery of meals, treatments, reserving resources (rooms or equipment) etc.

#### AN OFFICE + LIVING

By, literally, bringing the inside and outside spaces to life, the building offers a **healthier and more harmonious environment** for its occupants: green walls, hosting biodiversity, green spaces and vegetable patches on rooftops, terraces or balconies etc.

#### AN OFFICE + EFFICIENT

To improve the daily experience, the building services must be accessible in a **centralised manner, mobile and connected**.

This digital approach allows for offering **personalised user pathways, contextualised advice and information and adapting the working environment** (lights, blinds, temperature etc.).

The **centralised collection** of usage, operating and accident reporting **data on a digital platform optimises the building performance** by improving reactivity, space management, utility consumption etc.

# Focus on **VIBEO**

(Buildings – Intangible Value and Occupants)

This consortium of industrialists studied and developed a method for the rational evaluation of the value of a building's use.

Applied during the audit of a site or project, it allows for identifying the link between performance variables at work (serenity, wellbeing, motivation etc.) and the building elements. Several strategic levers can be identified in the following areas:

**VIBEO** 

\* Presence of nature, view towards the outside

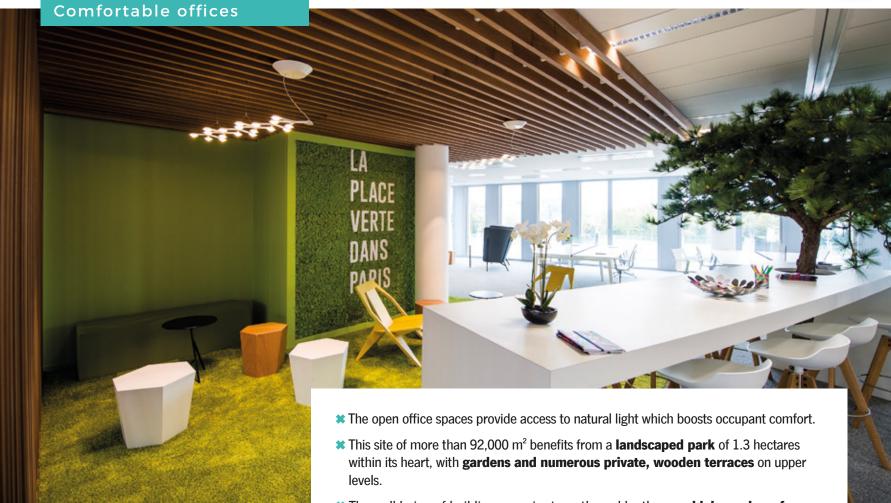
- **\*** Visual, noise and temperature comfort
- **\*** Quality of internal air
- **\*** Internal layout and services

The application of the recommendations arising from this analysis allow for maximising occupant productivity and thus improving the asset use value.

\*Bringing together: Bouygues Construction, BNP Paribas Real Estate, Bolloré, Covivio, EDF, ENGIE, Ivanhoé Cambridge, Sercib, Saint-Gobain, Korus, Goodwill-management.





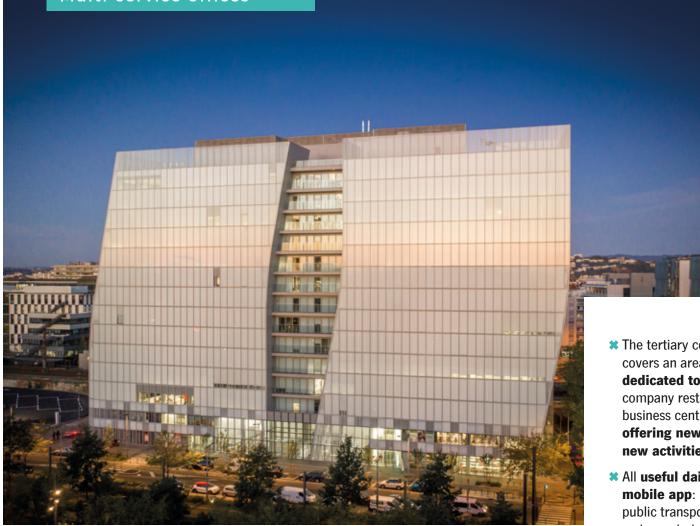


🗱 Credit © Wilmotte & Associés

The well-being of building users is strengthened by the very high number of spaces and services, the use of which is facilitated by a smartphone application: portering, conference rooms, fitness, self-service cafeteria, staff restaurant, VIP areas, parking etc.



#### Multi-service offices









- The tertiary complex Sky 56, built in Lyon covers an area of 30,000 m<sup>2</sup>. Two levels are dedicated to shops and services: inter-company restaurants, centre fitness, creche, business centre and company portering are now offering new services to employees and new activities within the urban setting.
- All useful daily services are accessible via a mobile app: meeting room reservation, local public transport, information about the staff restaurant etc.

🗱 Credit © Nicolas Grosmond

# **Axa Winterthur** headquarters - zürich, Switzerland



Credit © Bouygues Energy & Services

CERTIFICATION AIMED:

- structure with a central piazza as a **meeting zone**, open sharing desk zones were designed with private retreats and team meeting rooms. There are hardly any individual offices for the 450 employees in aim to favorize collaboration
- \* In an office landscape with an **organic design**, the room acoustics were a key to the well-being of the employees. Acoustic absorbers were integrated into walls and ceilings everywhere, in an interior design calculated and architecturally implemented by means of acoustic auralization.

# **Biotope** - Lille, France

Green offices



CERTIFICATIONS AIMED:

**BREEAM**°





- Designed for user well-being, the Biotop is equipped with large openings onto green terraces, dotted with trees and bushes. It is filled throughout with light and natural materials such as wood and stone.
- In addition to the office areas, its 29,300 m<sup>2</sup> host an atrium over 2 floors, a rooftop restaurant area, an auditorium, meeting areas and a 300-space car park. Flexible and versatile, it can easily adapt to evolving requirements.
- \* Overall, it meets the very highest of standards in terms of energy performance, sanitation quality, carbon footprint, local biodiversity and connectivity.

🗱 Credit © HLA KeurK – architecture, graphic design

## An office creating value

# Environmentally friendly Communal

# <sup>+</sup> Hybrid



Credit © Rawpixel.com/Shutterstock



### The benefits?

By opening its services and spaces to other groups of people, the office area **becomes a sharing platform as well as a space creating value**, in harmony with its environment.

In this manner, it contributes towards **stimulating local life** by offering its services and resources, thus enhancing collaboration, sharing and social ties.

With the least possible environmental impact, the office building is contributing towards the effort for environmental change to preserve assets handed-down to future generations.

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### Services & usages

#### AN OFFICE + ENVIRONMENTALLY FRIENDLY

From the cradle-to-grave of a building project, Officity integrates the need to reduce the environmental footprint by offering the use of **sustainable** natural materials.

Thanks to its **Digital Information Model (BIM)**, the building notably becomes a material bank which allows for recycling and reusing its components as much as possible, within the **framework of a circular economy**.

During the occupancy of the building, the **collection of rainwater, the** production and storage of energy reduces the demand for these utilities on traditional networks.

#### AN OFFICE + COMMUNAL

Opening the building to external parties allows for an increased use rate of the spaces (auditorium, meeting rooms, parking spaces etc.) and services (restaurants, fitness, portering etc.).

Fully integrated into its urban ecosystem as from its design, the tertiary building can redistribute energy, heat and/or rainwater, that it will have generated and stored, to the local area and neighbouring buildings.

Digital tools contribute towards implementing this communal sharing as well as managing data, asset and physical safety.

#### AN OFFICE + HYBRID

To further maximise the rate of use of the spaces, an office building can offer **multi-purpose/hybrid uses**, as much for its occupants as for external parties. This is highly efficient and smooth-running as the convertibility has been well planned for by an appropriate choice and range of facilities and services.

Thus, an efficient management of the safety and flow of people allows for hiring out a space such as a roof-terrace or an auditorium for events. In the same manner, well thought-out connectivity and partitioning enables the **rapid transformation** of a staff restaurant into meeting rooms or into working spaces.

#### Credit © Monkey Business Images/Shutterstock



### Focus on **Hybrid buildings** with a positive economy

An approach towards office buildings as a means of generating profits, based around different sources of income:

- \* Making spaces and services available to external parties
- **\*** The reversibility of spaces to maximise their usage
- \* Enhanced productivity thanks to occupant well-being
- \* Production, storage and distribution of utilities (energy, water, heat) shared with the local environment
- \* Planning for regulatory changes and the valorisation of a reduce environmental impact
- **\*** Reusing materials at the end of a building's life

#### A SOLUTION WITH CERTIFICATION



# Hounslow Civic Center - London, UK

BREEAM®



The offices allow flexible working practices, thanks to shared spaces between the municipality, the police and the health services. The architecture allows the diffusion of natural light and improves the well-being of the occupants.

✗ Credit © Jack Hobhouse



CERTIFICATION AIMED: **NF HQE**®

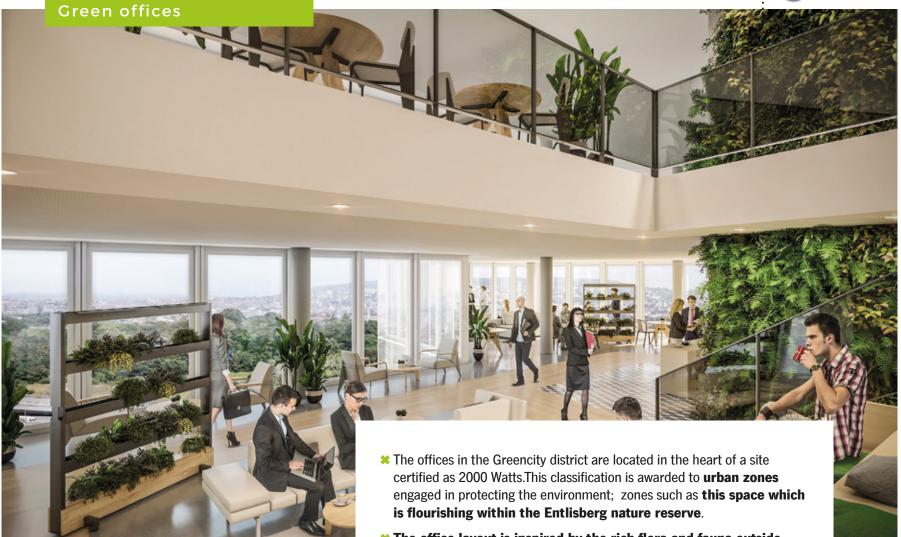


**X** Credit © Ignacio-Prego Architecture



CERTIFICATION AIMED:

Site 2000



🗱 Credit © Losinger Marazzi – Vitra AG - echt3d

**\*** The office layout is inspired by the rich flora and fauna outside, allowing nature to boost staff well-being.

# BCA Academy - Singapour

**Green offices** 



- The phase 2 Intensification Works at BCA Academy, with a total gross floor area of 21,800 m<sup>2</sup>, comprises a 7-storey
   "Zero Energy Building" built with Mass Engineering Timber (MET) and a 16-storey "Super Low Energy Building" built with Advanced Precast Construction System (APCS) and Pre-fabricated Prefinished Volumetric Construction (PPVC).
- The reduction of energy consumption is made possible by application of passive solutions (natural ventilation, improved thermal insulation, control of internal heat production...) as much as active solutions (high-efficiency equipment, lighting according to the uses and occupation of spaces, passive displacement ventilation system...) which will also improve the comfort of the occupants.
- These strategies are reinforced by precise and efficient energy management (intelligent energy network, personalized control of equipment, reduction of waste automated or by encouraging good practices, etc.) and by the deployment of photovoltaic panels in all the spaces available on the roofs.

**X** Credit © Dragages Singapore / ADDP Architects

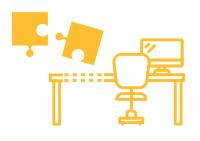
# A flexible building

### <sup>+</sup> Connected

<sup>+</sup>Open <sup>+</sup>Adaptable



**\*** Credit © Jacob Lund/Shutterstock



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### The benefits?

Whether a building project is being envisaged as a short or long-term investment, the residual value of the tertiary building is improved by planning for **adapting it to evolving usages, services and technologies**.

The choice of solutions adopted allows for reducing the impact of the changes required (costs, timeframe etc.)

Integrating evolution planning at the point-of-design enables the building to benefit from a longer lifespan: it becomes more resilient and sustainable.

### Services & usages

#### AN OFFICE + CONNECTED

The availability of digital services has created a better building economy and user-experience; however, digital options remain a means and not an outcome.

Building services data is collected then formatted and structured within the **Building Operating System**. The data provides an objective overview of the operating and usage of the building. It also feeds one or more **digital platforms that provide users with services adapted** to their profile and context, from a workstation, an interactive kiosk or a smartphone.

#### AN OFFICE + OPEN

The choice of **open and interoperable systems** and facilities enhances building operations and the provision of services for its occupants. Cable and radio networks offer to users a **continuity of digital experience** between the inside and outside. The networks also ensure an exchange of data between the building and its environment.

With **spaces designed to be open on the outside**, sharing resources and services with other users is possible but requires **digital tools to measure and bill uses** while having **secure management of people, data and goods**. The data must of course be managed **in a strict accordance with the rules in force**, whether they concern data protection (RGPD, LPD...) or exceptional situations (health crisis, climate crisis or others).

#### AN OFFICE + ADAPTABLE

The office building must be adaptable to new working methods and to the occupants' different usages: this requires a **specific selection and scaling of equipment and technologies**. Digital services can easily evolve: the **Building Operating System will simplify and accelerate their deployment** by offering normalised and easy-to-use data sets.

If the operation of a building is no longer appropriate following a change of context, **it can be reversed if it has been planned for**.

By integrating this principle at the point of design, the transformation of the building into residential (homes, student accommodation, serviced apartments etc.) can be carried out within a reduce timeframe and for less cost.



### Focus on Office Switch Home

# The office that can be converted to residential

- **\*** Façade architectural framework adapted to different uses
- **\*** Separating the structure from the façade
- Height of spaces allows for a residential layout without losing surface area
- **\*** Integration of external spaces (balconies, terraces etc.)
- **\*** Modularity and flexibility of technical and network systems

Simple, adaptable and flexible, OSH is designed to achieve high sustainability.

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# 100 Adelaide Street - Toronto, Canada

#### Connected offices





- In this 40-storey tower of approximately 1,178,000 square feet, the various equipment (elevators, alarms, lighting, ventilation / air conditioning, security, sensors, etc.) are interconnected to facilitate the creation of use cases through automated rules, both for the needs of the operator and the occupants. Their interoperability makes it possible to adapt building services to the expectations of occupants and to changes in use.
- A portal dedicated to building management concentrates reports on energy efficiency, space occupancy, use of services and condition of equipment to allow more efficient interventions or redevelopments. It also makes it possible to manage the safety of the occupants and their access rights.
- The integration of digital in offices contributes to an improvement of the user experience by facilitating access to building services as well as communication between employees and the operator.

\* Credit © Oxford Properties Group

# Chapelle International - Paris, France

#### Adaptable offices



•• 🗱 CERTIFICATIONS AIMED:



BREEAM®

WELL

- Offices based around the modularity of space layouts and the range of services, with a changeable ground floor and spaces enabling the configuration of open, partitioned or mixed spaces.
- A programme of 14,000 m<sup>2</sup> integrating innovative services to improve employee well-being: a range of restaurants, terraces, outdoor working, portering etc.

Credit © Metra + Associés

# **Confluence** - Lyon, France

**Reversible offices** 

**CERTIFICATIONS AIMED:** 



- Perfectly adapted to its "office" usage for its first lifecycle, this building marks a new, mainly tertiary, initiative in the Rhône region. Located on a peaceful urban street right in the heart of a mixed-use and evolving district of Lyon, it could easily become a residential project over time.
- The presence of balconies, rare in the tertiary sector, improves the quality of spaces and offers external areas highly sought after in this era of well-being at work.
- The innovative design of the project significantly increases its lifespan and perfects fits into the format of a circular economy.

\* Credit © David Chipperfield Architects





**CERTIFICATIONS AIMED:** 

WELL



#### **Connected offices**

- Located in the business district of La Défense, the ALTO tower offers a multi-purpose office covering nearly 51,000 m<sup>2</sup>.
- It's facilities (BMS, blinds, lighting, lifts, security barriers etc.) are selected for their interoperability, facilitating their connection with a digital services platform. They provide all users with a set of bespoke services that are adapted to each profile and accessible via a smartphone application: workspace reservation, user guides, comfort feature management, accident reporting etc.
- The tower also offers several spaces and services that enhance user comfort: a wellbeing and fitness centre with a panoramic view, 4 restaurant areas, top-floor garden and portering.



\* Credit © IF Architectes



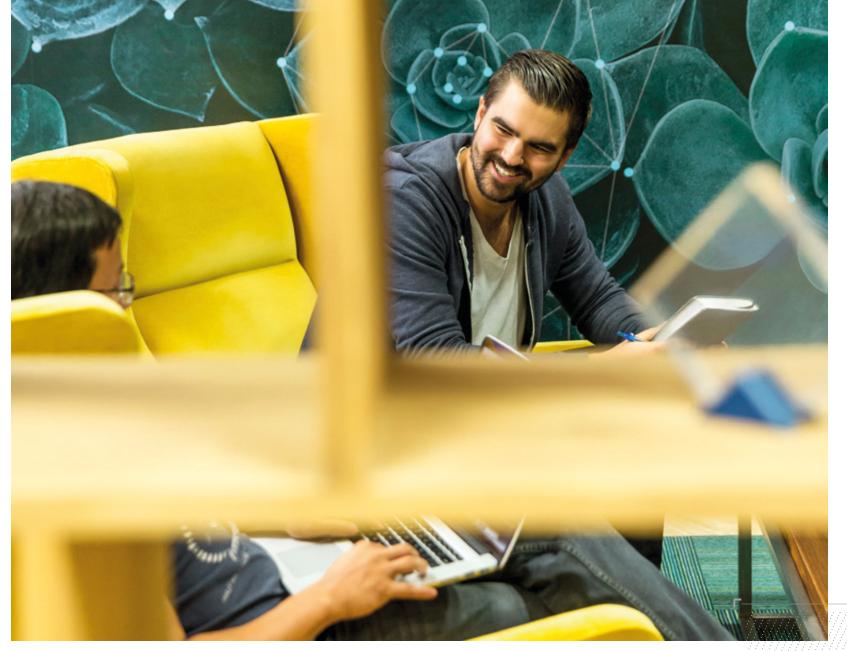
Credit © fotoinfot/Shutterstock

# **Expertise + commitment** AT YOUR SERVICE

Thanks to their management of the entire value chain, Bouygues Construction's diverse teams can bring their experience and expertise to each and every stage of your building project.

Our staff can offer the ultimate bespoke responses to your building and occupant requirements by relying on R&D and our ecosystem of expert corporate partners.





Credit © LinkedIn Sales Navigator/Unsplash







#### APPLY PREVENTIVE MEASURES.

This photo and illustration was produced before the implementation of Covid-19 public health measures.





