STREAM BUILDING

A MANIFESTO BUILDING AT THE SERVICE OF URBAN INNOVATION



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Covivio, Hines France, and PCA-STREAM have come together to create the Stream Building, a manifesto building located at the heart of the new Clichy-Batignolles district that integrates almost fifteen years of research by Stream Lab into innovations addressing the key challenges facing the cities of tomorrow.

Circular by design, the Stream Building is a relational and productive hub that will energize this new urban center within the Greater Paris area by concentrating all the activities associated with a vibrant urban life.

KEY FIGURES

16 200	m ² of total surface area
9 500	m ² of office space including 100m ²
1830	m ² of shops and restaurants
4 853	m² of a residential hotel
300	m² for urban agriculture
50	plant species cultivated all year round on the
80	hop vines planted
20 000	liters of beer produced, brewed directly in th
200	parking spaces for bicycles
385	m² of photovoltaic panels

MILESTONES

2014	The "Reinventing Paris 1" call for
2016	PCA-STREAM is awarded the Cl
2019	Construction begins
2021	Pablo Valbuena's artwork is sele
2022	The artwork is installed
2023	The Stream Building is inaugura

of Cinaspic

rooftop vegetable garden

e basement

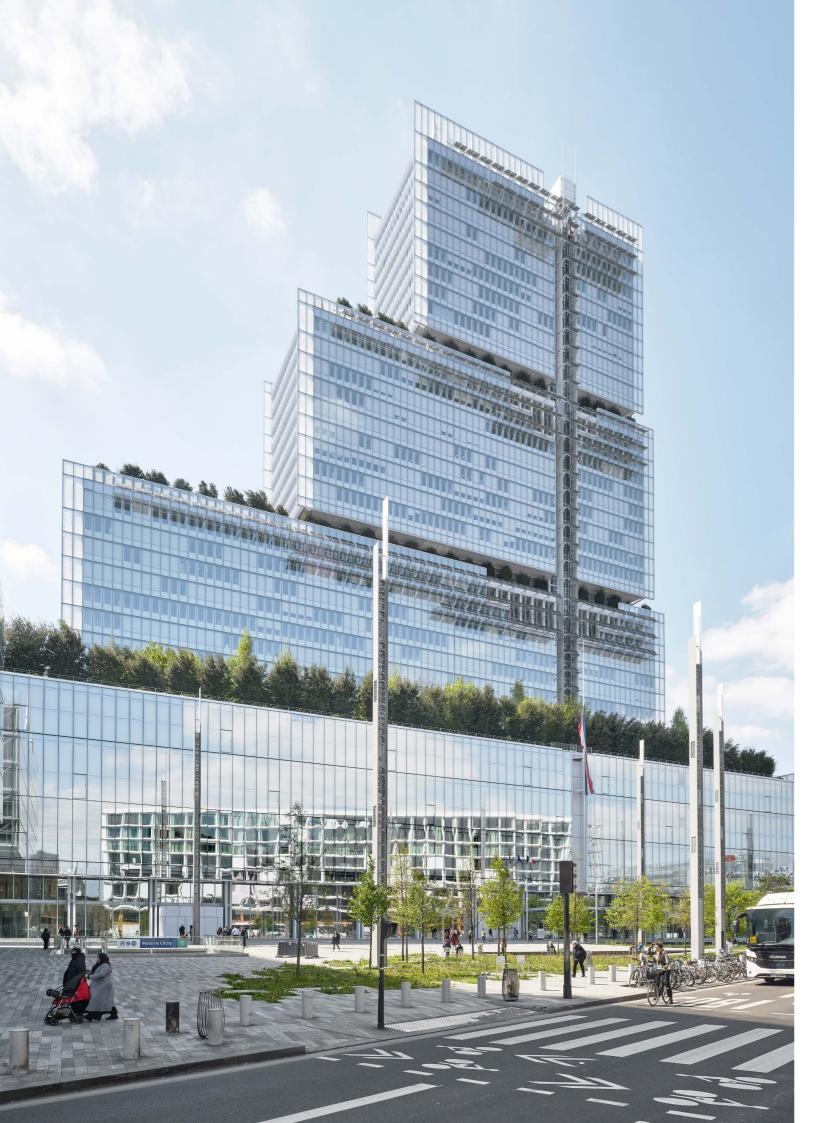
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REINVENTING PARIS: A CONTEXT CONDUCIVE TO MATERIALIZING A RESEARCH APPROACH

The Stream Building emerged from a favorable context for innovation provided by "Reinventing Paris," a call for projects launched by the City of Paris in late 2014 with the ambition of **enhancing the attractiveness of Paris while anticipating contemporary urban changes**. Devised to address the new ways of living, working, moving around the city, and consuming goods and services, the competition called for a rethinking of the programming of uses, construction materials and building techniques, as well as the city's relationship with the living.

"Reinventing Paris" offered a **new way of building the city, involving both public and private stakeholders** through conditional transfers of public land, subjected to provisos both on land development costs and exploration of innovation challenges. A total of 372 international teams responded to the call for proposals across 23 sites, making the initiative a resounding success and inspiring many similar initiatives both nationally and abroad.

Teams were encouraged to embrace a **multidisciplinary approach and to form original partnerships, resembling PCA-STREAM's researchaction philosophy**. The Stream Building in fact serves as a proof of concept for the innovations derived from Stream's research, so much so that it adopted its very name.

With the support of startups and operating partners integrated from the very outset of the project, Stream Building embodies an approach based on **co-design and collective intelligence** that disrupts traditional relationships between project management and project ownership. It has provided an opportunity for unprecedented relationships among city stakeholders within the Covivio–Hines France–PCA-STREAM consortium, where programmatic concepts, economic models, and architectural translation have all been considered in concert.



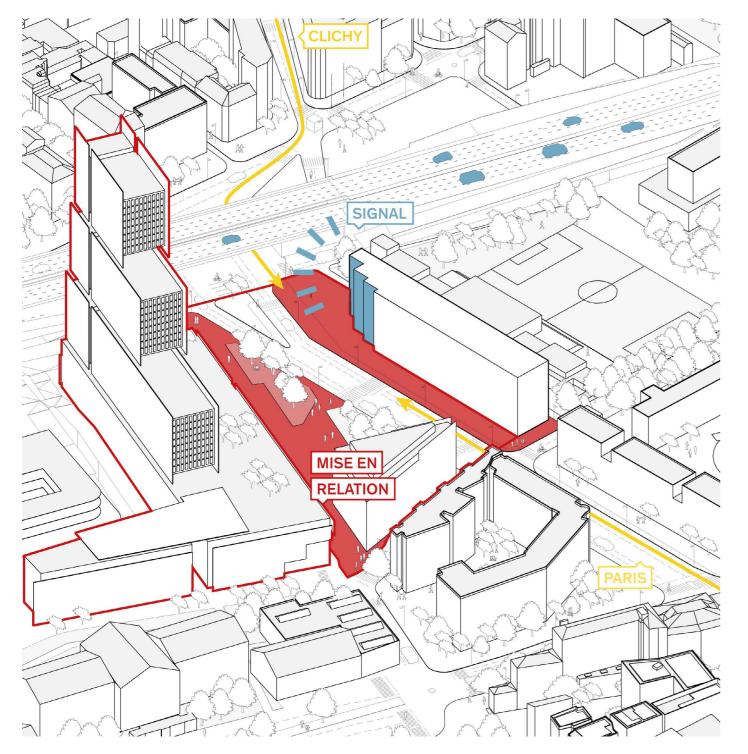
STREAM BUILDING: PRIVATELY-HELD PREMISES OF PUBLIC INTEREST TO STITCH TOGETHER THE URBAN FABRIC

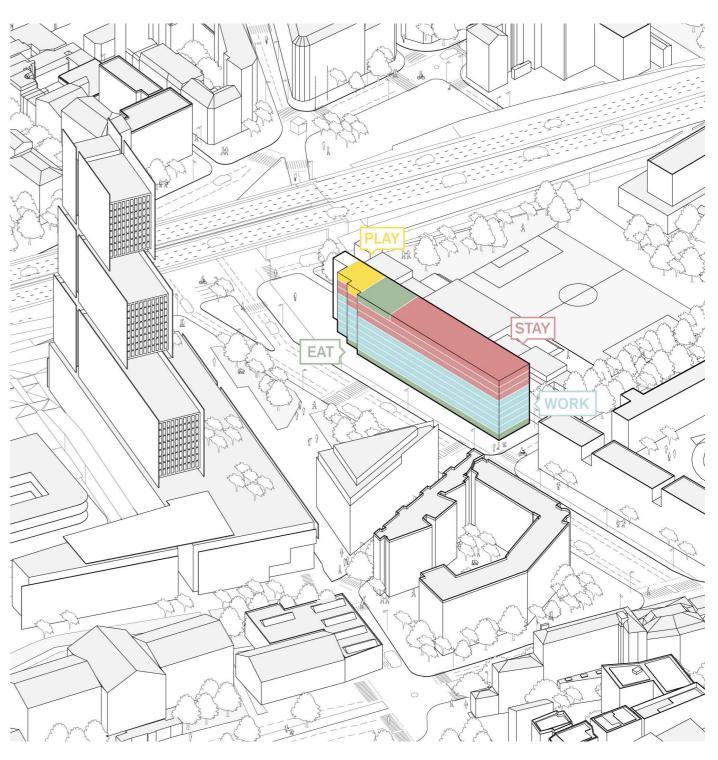
The Stream Building was designed to consciously support urban activity and continuities to the north of the urban development zone of Clichy-Batignolles. A former 54-hectare brownfield located next to the 10 hectares of the Martin-Luther-King urban park, it is one of the only neighborhoods in Paris that was entirely built up in the twenty-first century. As a metropolitan crossroads with enhanced accessibility, it connects the various territories of the Greater Paris area, at the intersection of three cities and departements.

Located adjacent to the Boulevard Périphérique ring road, the Stream Building forms a **bridge between** In its current configuration, the upper levels of the the capital and its outskirts, between the inner city Stream Building house a next-generation residential and the outer city and on the former site of the "Zone," hotel operated by the Dutch hospitality company Zoku, the infamous fringe area beyond the Thiers wall that which is opening its first establishment in France at was littered with shantytowns at turn of the nineteenth this very location. Its micro-apartments, designed for century and the begin. The Stream Building revitalizes medium-term stays, serve both as living and working this urban edge area and contributes to a closer spaces. The micro-apartments are complemented connection between Paris and Clichy by creating an by numerous services and shared areas including attractive and highly accessible destination. a gym, game room, and an open kitchen, catering to the flexible lifestyles of a new generation of mobile workers. From Zoku's reception hall, a bar-restaurant that is accessible to all opens onto a terrace offering spectacular views of the urban landscape and the Tribunal de Paris.

The challenge was to **transform this junction area into a new focal point by bringing in the vibrancy and amenities it lacked**, particularly considering the needs generated by the Renzo Piano-designed Tribunal de Paris, which it shares its concourse with. A "resource building," **the Stream Building brings together within a single envelope all the activities of a mixed and vibrant urban life** and thus aligns with the "15-minute city" concept. It offers a pluralistic, hybrid, and welcoming space inspired by the transformations of contemporary lifestyles, blending services, workspaces, a hotel, and communal areas together.

The base of the Stream Building is largely open in order to provide a **new, vibrant resource area for the neighborhood**. It includes a brewery, a sandwich parlor, a salad bar, and two grocery stores, matching the needs identified through a participatory process in partnership with the civic engagement platform Fluicity. In addition, a solidarity hub/coworking space called Cinaspic, managed in collaboration with the City of Paris Department of Attractiveness and Employment, will host neighborhood organizations. This active ground floor is topped by five levels of offices offering open, bright, and highly flexible workspaces. Fostering the **well-being of employees and well suited to the trend towards horizontal work**, these offices are leased by a leading tech company, French cloud computing specialist OVHCloud. In addition, the offices boast an innovative reception area via a "third place" called the Stream Café, designed as a space for welcoming, networking, and relaxation, but also thinking, as reflected in its extensive library focused on Stream's research interests.

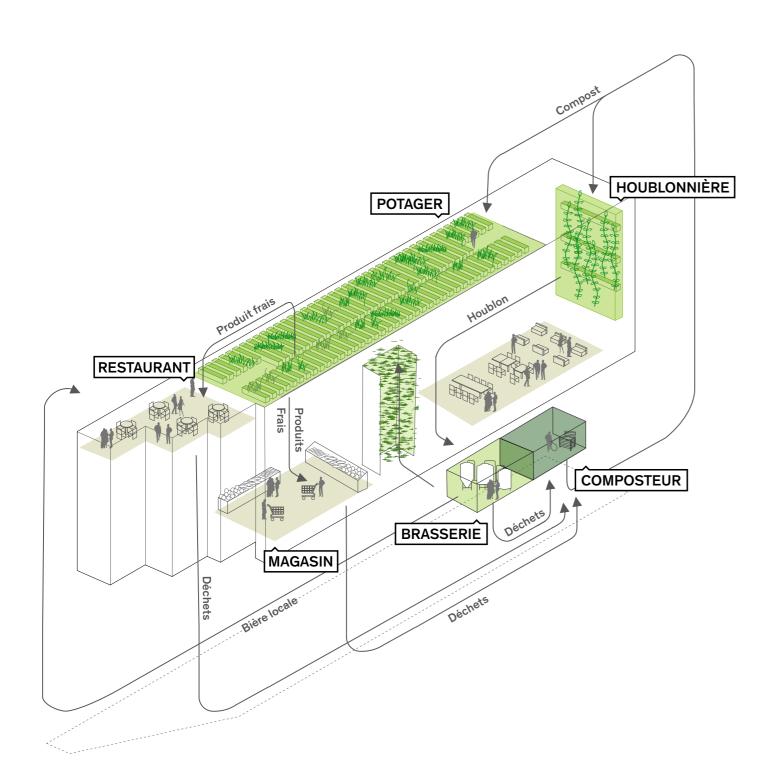




A landmark building highlighting a new urban center and acting as a link between the neighboring municipalities of Paris and Clichy.

Mixed use for the service of all; a 24-hour urban platform.





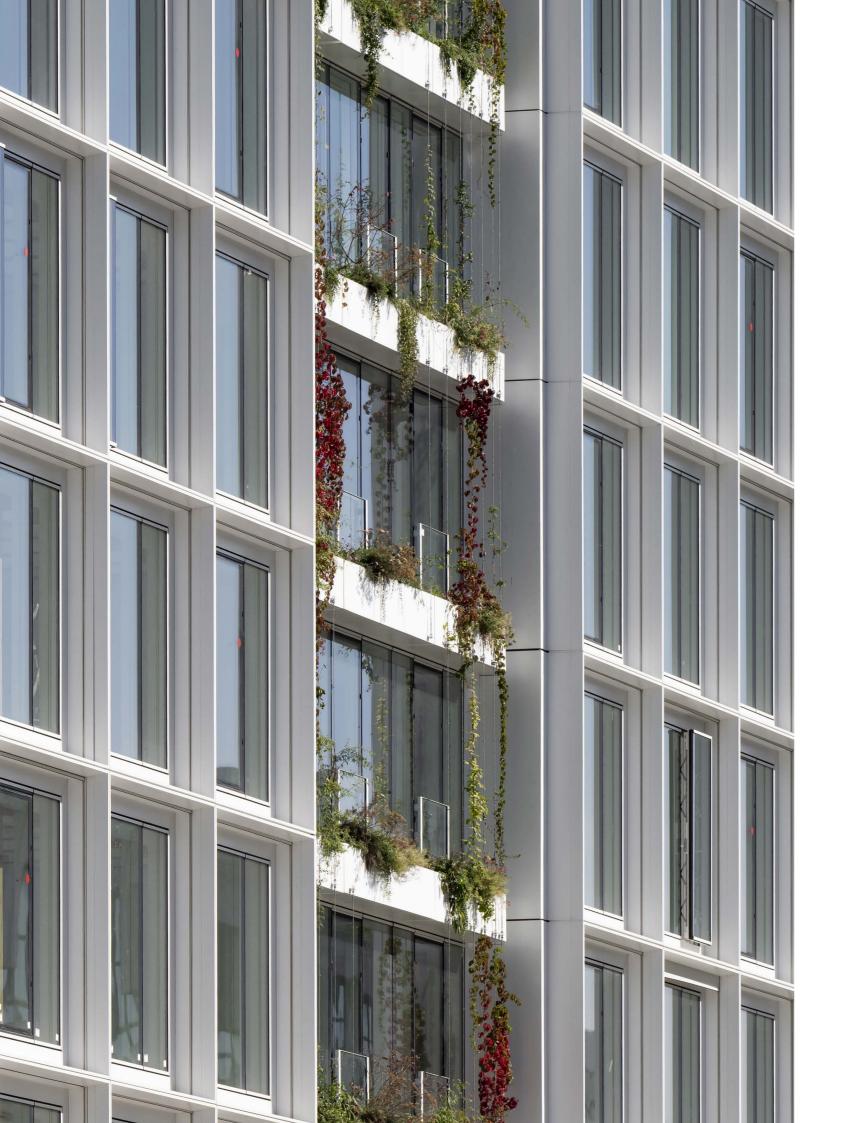
A MANIFESTO PROJECT: **EXPERIMENTING WITH THE BUILDING AS A METABOLISM**

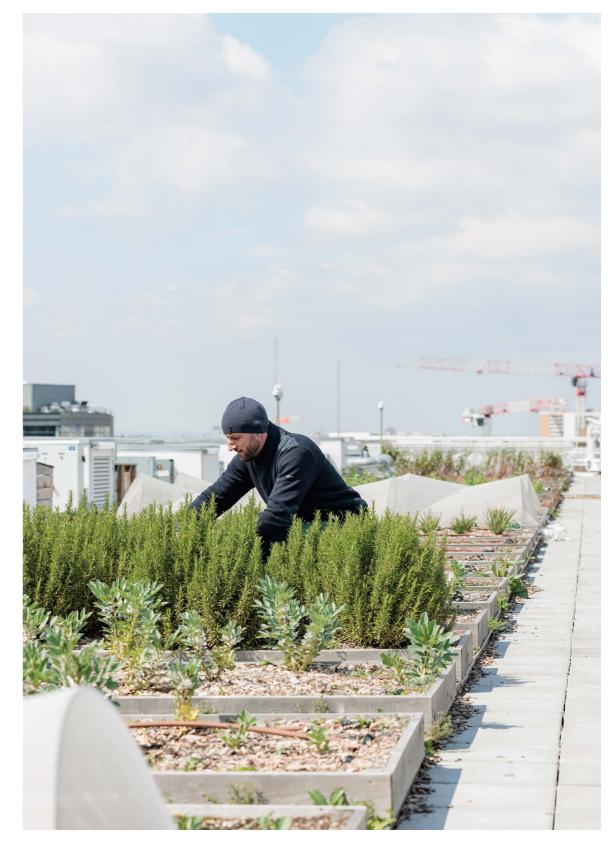
The Stream Building is a manifesto project for PCA-The Stream Building is also a prototype for an STREAM. An applied research building, it embodies innovative construction method using a mixed over ten years of prospective thinking, in particular wood-concrete structure in order to optimize its relating to ideas explored in issues 02 and 03 of the carbon footprint. It is complemented by an ambitious Stream magazine, which focused on new uses and the prefabrication system (for the flooring, bathrooms, challenges of the Anthropocene. and facade modules in particular), allowing for a rapid and minimally disruptive construction process. The architectural and technical challenges of this laboratory for functional mixed use, which is entirely classified as an ERP under French law (i.e., the whole building is fully open to the public, with no staff-only areas with less exacting safety standards), were overcome through the development of a modular structural grid that promotes reversibility by allowing for various layout configurations. The spaces currently used as offices may be converted into residential units in the future, and vice versa, without requiring any structural transformations.

The result is a design based on the concept of metabolism, moving beyond the modern metaphor of the building as a machine to that of a building as a living organism. The building is conceived as a productive organism that processes its resources through circular synergies emerging between its various areas.

The productive rooftop was designed in collaboration with the startup Topager, following the principle of agrivoltaics-almost 400 m² of photovoltaic panels combined with over 300 m² of urban agriculture (kept free from chemical inputs). The urban garden is productive both in winter and summer, and fresh produce is cultivated based on the discussions between the market gardener and the chefs of the restaurants located in the building. The rooftop garden helps mitigate the heat island effect and absorbs rainwater. Along with the vegetated south-facing facade and the hopped southeast facade, it forms a biodiversity corridor. The hop garden provides passive thermal protection on the south-facing facade (allowing the sun to shine through during the winter and providing shade in the summer), while also providing a microbrewery located in the basement with its critical input: hops. The brewery can produce 20,000 liters of beer to be consumed on-site in the building's various bars and restaurants, and, as with the vegetables and herbs from the rooftop garden, amounts to a short, efficient food supply chain. A composting unit recycles hop residues and organic waste from the brewery and restaurants in the building, thus closing the cycle and helping provide the rooftop crops with nutrients.

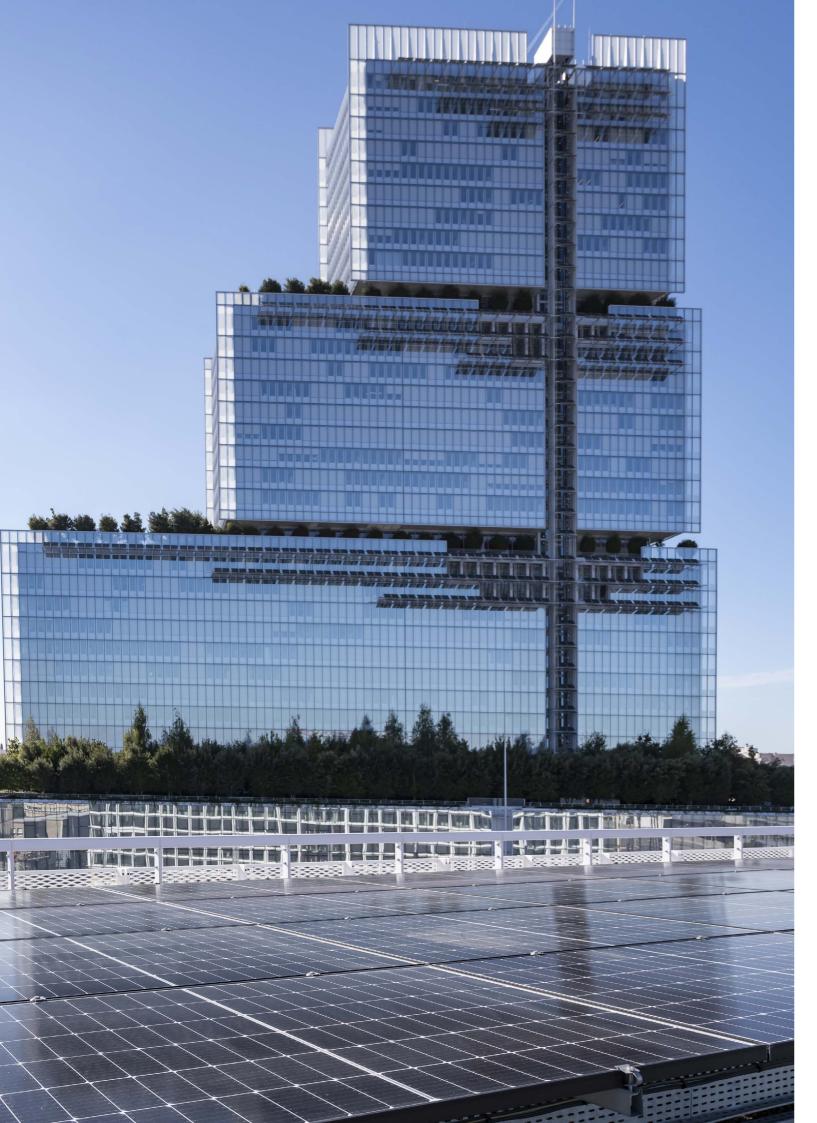
The Stream Building's experimental dimension will be tested out over the long term, as **the building** will be subject to annual reviews carried out by Covivio and Hines France every year for ten years in order to gain feedback on all the innovations implemented there. Topager and PCA-STREAM will monitor biodiversity and the quality of the agricultural production harvested within the building. It also is the very first practical application for PCA-STREAM's long-term research into the place of prefabrication in low-carbon architecture, which will eventually be disclosed in a scientific publication shared during a dedicated symposium.

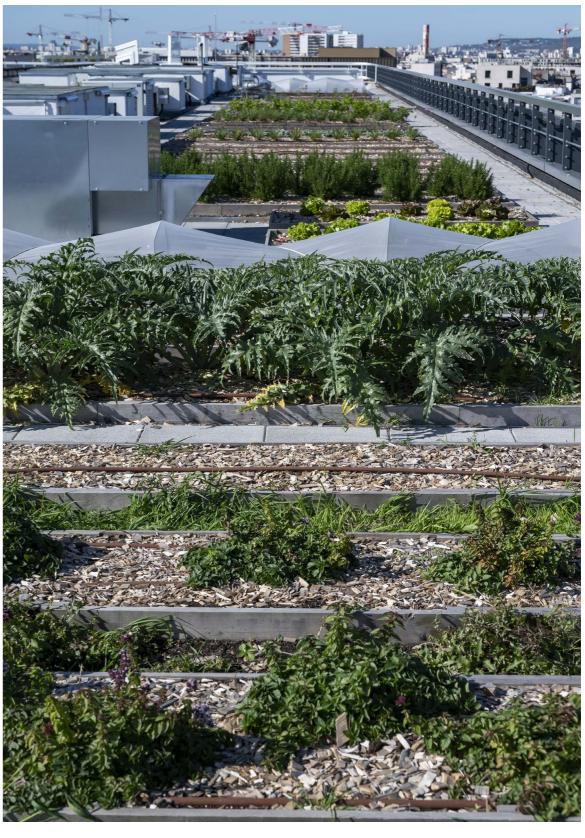




Market gardening

50 plant species will be cultivated according to the needs of the kitchens. These will be seasonal vegetables and fruits and melliferous plants suited to the Parisian climate artichokes, lettuce, chard, carrots, fennel, spinach, raspberries, currants, strawberries, verbena, chives, coriander, tarragon, laurel, oregano, thyme, ceanothus, jasmine, rosemary, etc.





Photovoltaic power generation 385 m² of solar panels – 65 MWh of electrical power generated per year, amounting to 10% of the building's electricity use.





ARCHITECTURE AT THE SERVICE OF MIXED-USE: WORKING TOWARDS RESPONSIBLE AESTHETICS

Despite acting as a landmark to highlight an access point to the inner city of Paris and engaging in dialogue with the nearby Tribunal of Paris, **the Stream Building primarily embodies a rejection of formalism and gratuitous authorial gestures**. Its intentional simplicity of expression takes on a symbolic dimension, setting forth a necessary aesthetic transition and a paradoxical architectural "style" that aligns with new imaginaries that are suited to the transitions associated with the key challenges of our time.

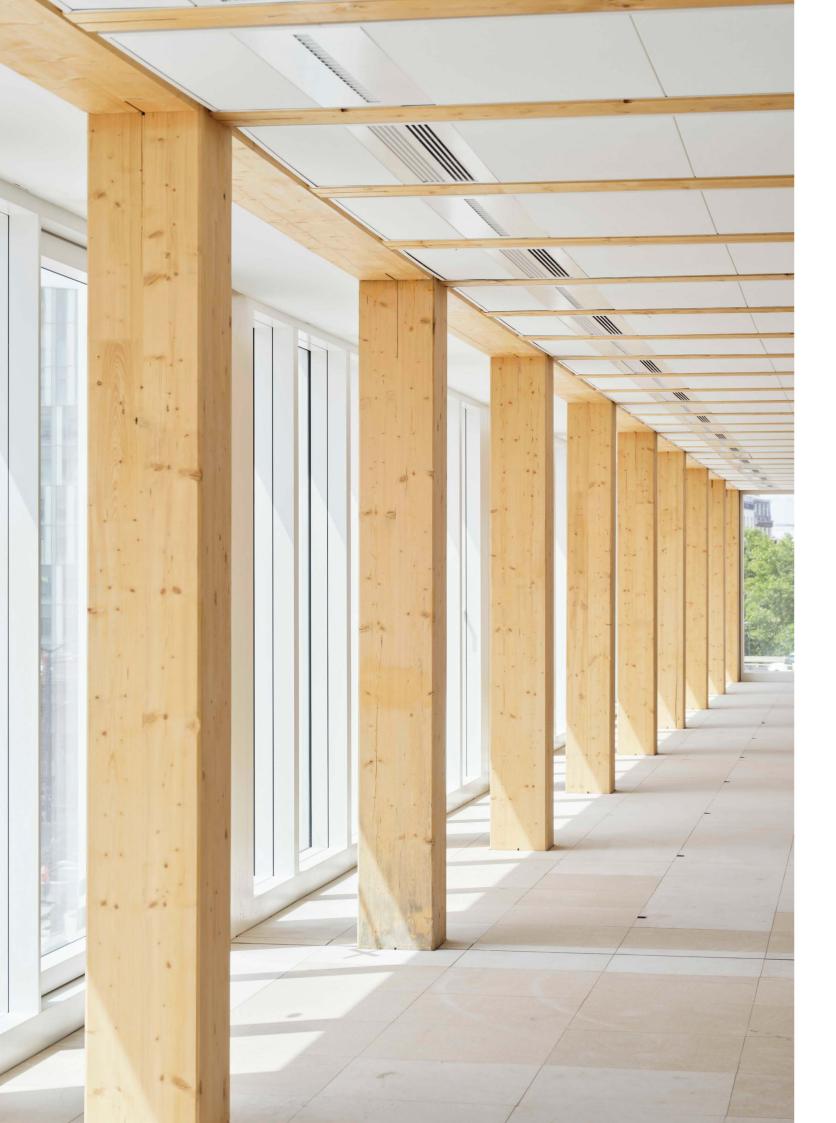
The Stream Building embraces—and even asserts the humility and legibility of its geometric facade. Its congruous sobriety reflects both an **environmentally conscious architecture focused on material efficiency and an inspiration that echoes the work of minimal artists** such as Sol LeWitt.

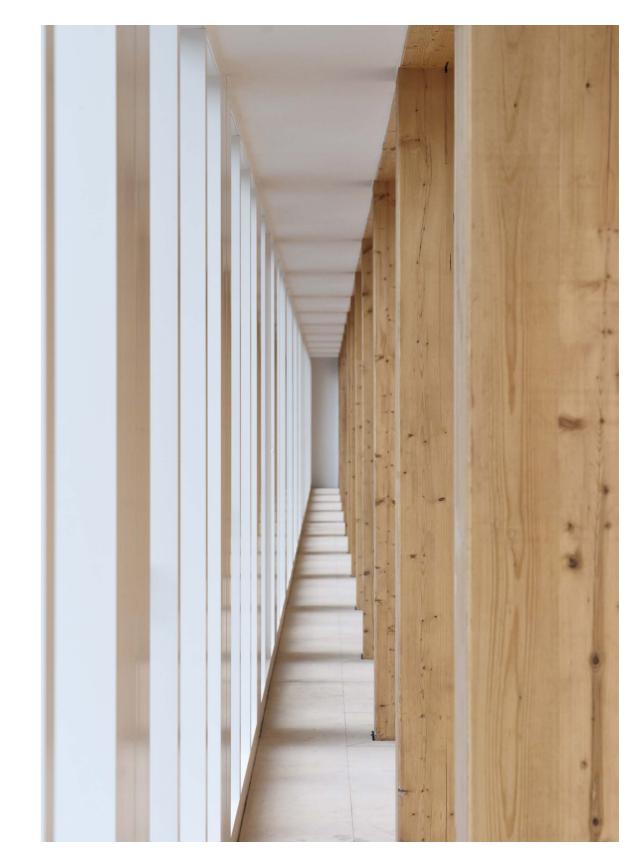
Ensuring the building allows for adaptable programming, the uniform grid makes any changes in the use of the building easy to carry out without having to resort to major structural interventions. This design approach turns it into a prototype of resilient architecture. In that regard, as with its bioclimatic approach to the envelope—white facade to the south, black facade to the north, and featuring vegetation as a thermal protector on the east facade—**the Stream Building is a prefiguration of the future bioclimatic urban development plan (PLU) of the City of Paris**.

Wood, which remains an experimental material at this scale, is intentionally showcased on all floors, while its elegant framework juts out in the form of an exoskeleton, creating a sense of movement and highlighting its structure. This projection becomes a distinctive aesthetic feature that is very much unique to the Stream Building, more so as it serves as a canvas for an artwork created by artist Pablo Valbuena. Selected through a competition organized with Covivio and an expert committee, Valbuena's minimalist-inspired work on light resonates perfectly with the spirit of the building. **Beyond its decorative aspect**, *Modulation is intricately embedded into the building* and "explores the modular system of the Stream Building using time and light as materials," in the words of the artist. Using power generated by the building's solar panels, illuminated geometric combinations emerge, overlap, and randomly disappear based on an algorithm.

The Stream Building becomes the canvas for a true tableau vivant visible from public spaces and by the million or so daily users of the Boulevard Périphérique ring road, **emphasizing and engaging in a dialogue** with the material, aesthetic, and symbolic dimension of its structural grid.

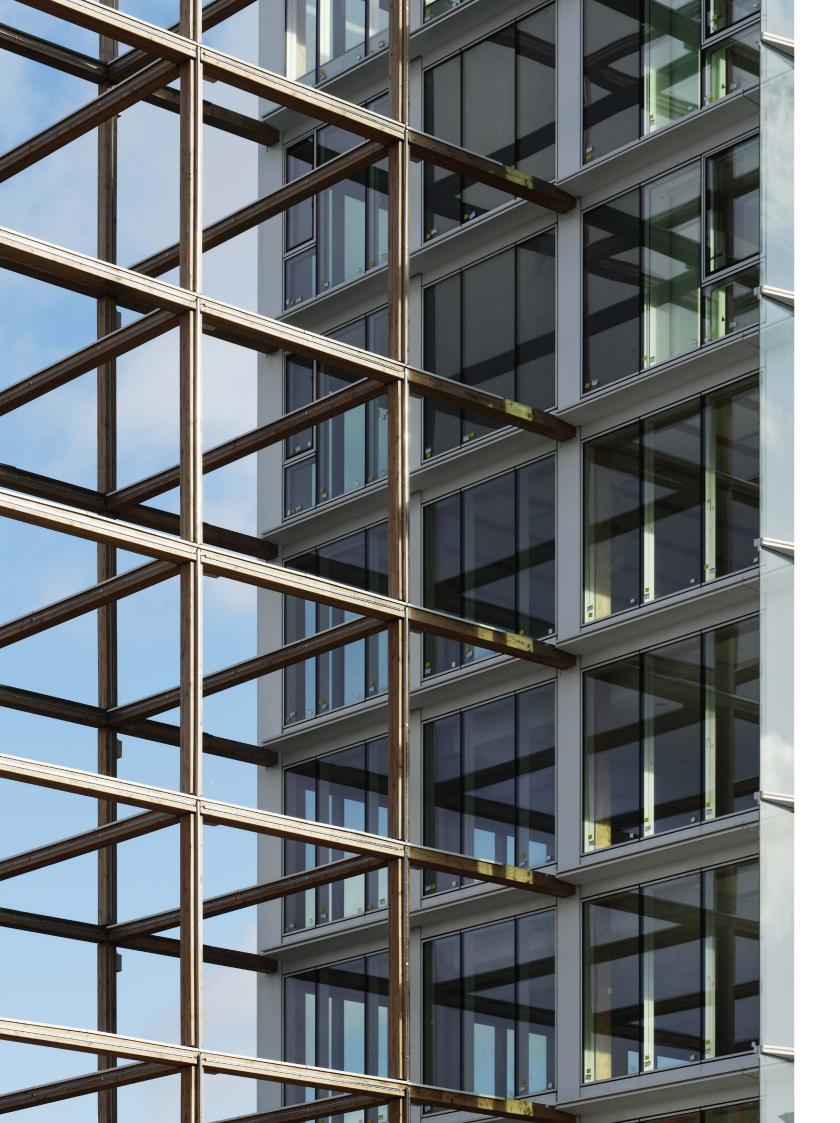






Timber construction

1,820 m³ of wood – 100% of the wood used was processed in France – 57% of the wood used for the structure was sourced from French forests – Softwoods used: larch, spruce, pine, Douglas fir – Waste recovery: the wood trimmings are transformed into particle boards or biomass briquettes used to heat the Mathis factory.



Covivio is particularly proud of this iconic project In 2015, the City of Paris embarked on a true for the 17th arrondissement of Paris. The Stream revolution in architectural production methods with the Building is an ambitious undertaking that addresses "Reinventing Paris" project, which placed innovation the challenges facing today's office spaces, while also as the primary criterion in awarding twenty-three pilot anticipating future challenges. Through its mixedprojects to multidisciplinary teams. To put innovation use approach, its unique, adaptable framework that ahead of cost and the architectural gesture was a farcan evolve over time, and its strong environmental sighted and bold move. For us, it was an opportunity to dimension, the Stream Building aligns with Covivio's materialize our research conducted over nearly fifteen vision of "living real estate," as the Stream Building is a years with the Stream magazine around new lifestyles place where people can gather throughout the day to and ways of living and working, the need to rethink the work, lodge, dine, and more! This development is also city, and a vision of buildings as metabolisms-making the result of a successful partnership with a unique the city more desirable and sustainable. The Stream group of stakeholders who collectively developed a Building is a manifesto building that materializes these landmark project for Greater Paris. research efforts through its emphasis on mixed-use as well as its innovative circular approach, and beyond all Christophe Kullmann, CEO of Covivio expectations, we were chosen out of 45 projects!

This project, which started in 2016 as part of the "Reinventing Paris" competition, was conceived around four founding pillars: mixed use, circular economy, timber construction, and reversibility. Today, these themes resonate strongly, but at the time, it required visionary thinking! With the Stream Building, we sought to design an innovative operation, a veritable laboratory for new ideas. The financial strength and resoluteness of the stakeholders involved allowed us to sustain this project over time and see it through to completion together. The Stream Building is an emblematic project, but it is, above all, the result of the research undertaken by Hines, PCA-STREAM, and Covivio on the future of workspaces, integrating new uses and societal and environmental commitments.

Xavier Musseau, President of Hines France

As hybrid and remote work are becoming more widespread, an increasing number of companies are embracing the trend. Zoku is a pioneer in creating mixed-use buildings across Europe for digital nomads and for networking. Our latest opening, Zoku Paris, serves international business travelers and Parisian companies in the thriving French capital. This establishment, Zoku's fourth, also marks the beginning of our partnership with Covivio, following our success in the "Reinventing Paris" competition with the innovative Stream Building designed by PCA-STREAM. By incorporating both sustainable elements and multifunctional spaces, we are proud to be part of a building that truly showcases Zoku's DNA.

Marc Jongerius, Cofounder Zoku

Philippe Chiambaretta, Founder de PCA-STREAM

Modulation draws from the modular structural framework of the Stream Building to create an everchanging light installation. The artwork projects three virtual modules with changing dimensions, that move, and overlap onto the building itself. These transformations are generated in real time by an algorithm that endlessly explores the infinite combinations of the building's structural grid, transforming it into a life-size three-dimensional screen powered by the building's solar panels, converting natural daylight into digital light at night. Modulation works like a public clock, marking the passing time and adapting its daily patterns to the solar cycle. It operates at a slow pace, encouraging recurring viewing and can be perceived from various circulation areas, by pedestrians and cyclists, as well as drivers traveling on the Périphérique ring road, serving as a recognizable landmark at the urban scale.

Pablo Valbuena, artiste

PORTFOLIO

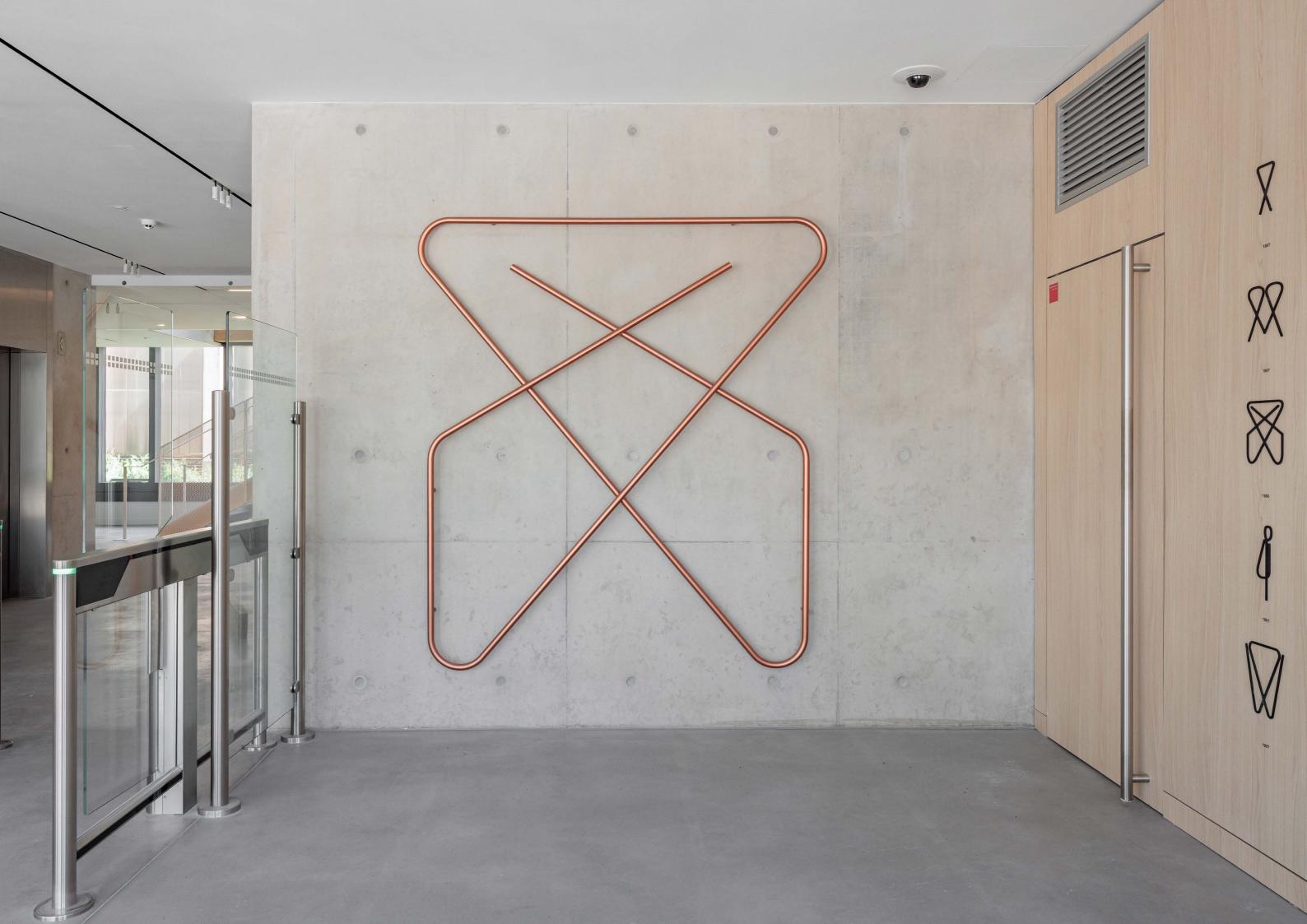




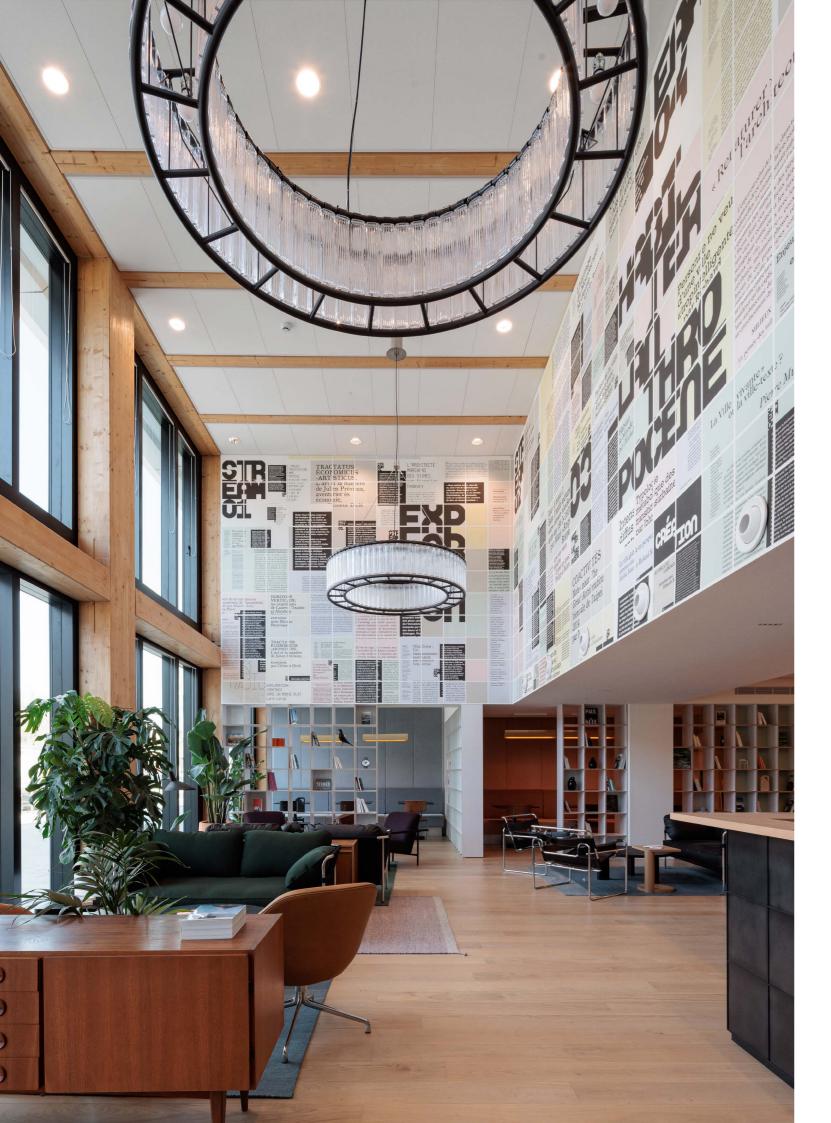


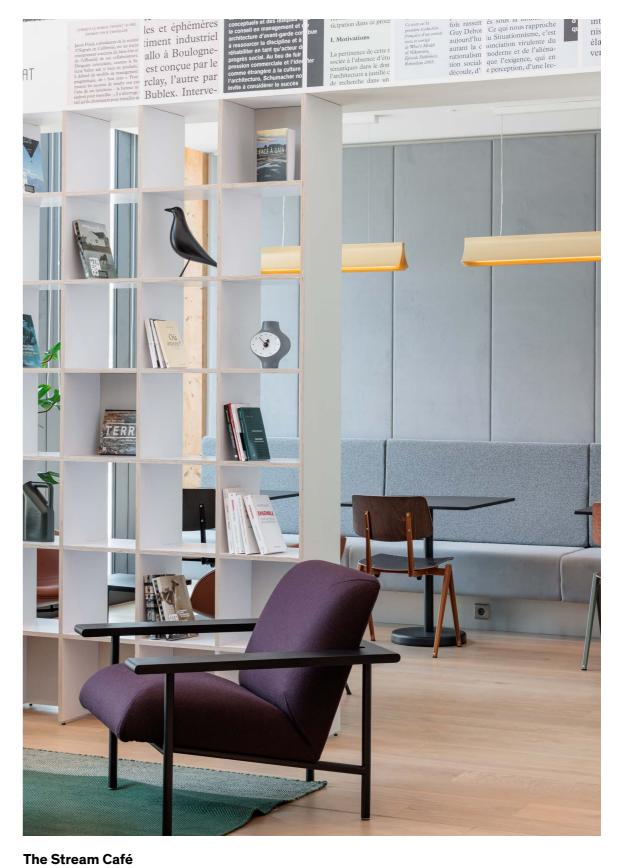






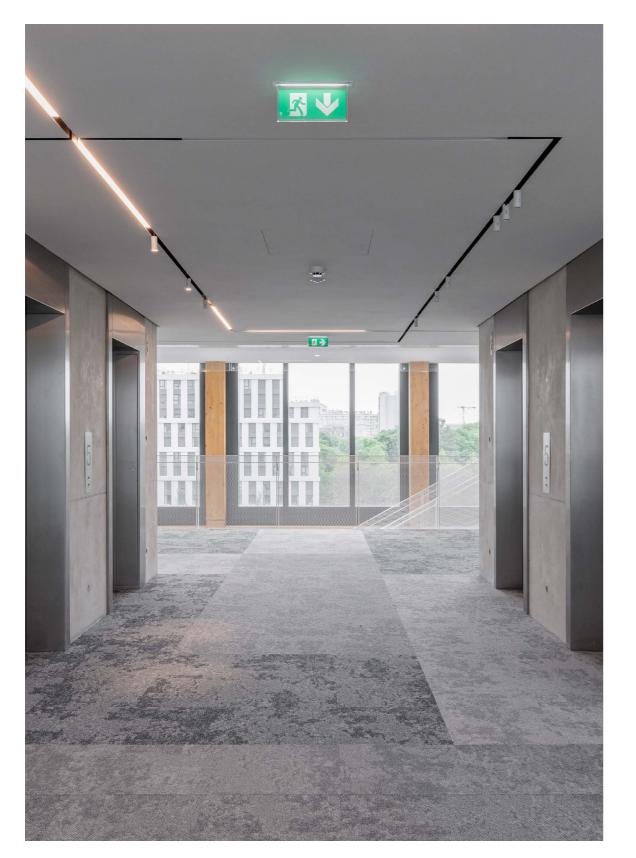






A place designed to welcome, meet and relax, but also to reflect, with an extensive library on Stream research themes.





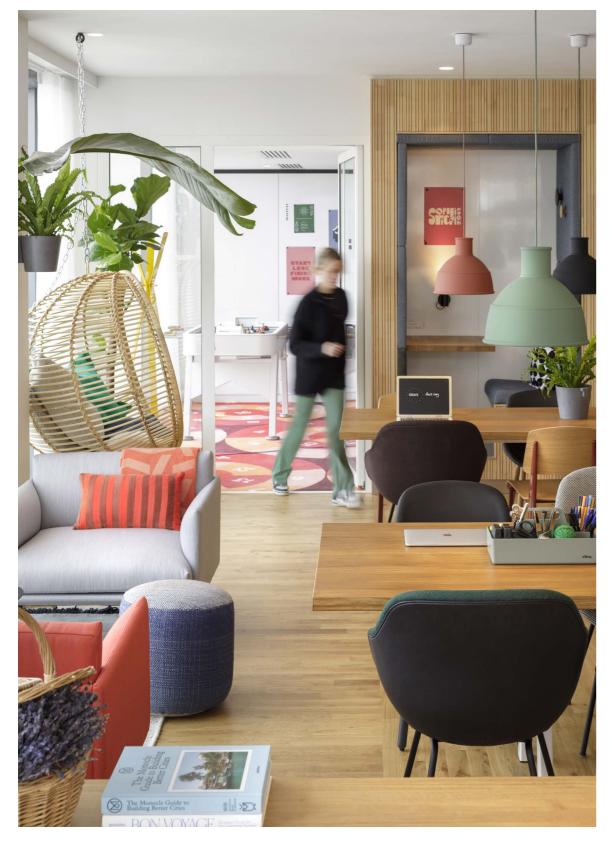
The cores Walk-through lobbies on all floors with exposed structural concrete.







Hotel Zoku's restaurant.



Zoku "Social Spaces"

Rooftop coworking, dining, meeting, and living spaces for Parisian locals and international travelers.



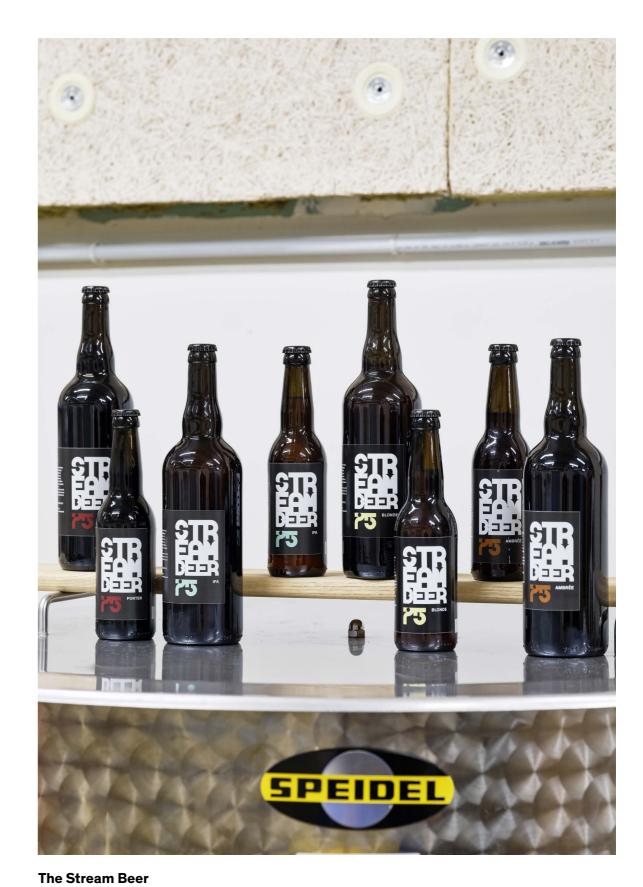




The rooftop on the 8th floor.







Brewed from hops grown on the facade of the building, Stream Beer is consumed in the building's bars and restaurants.

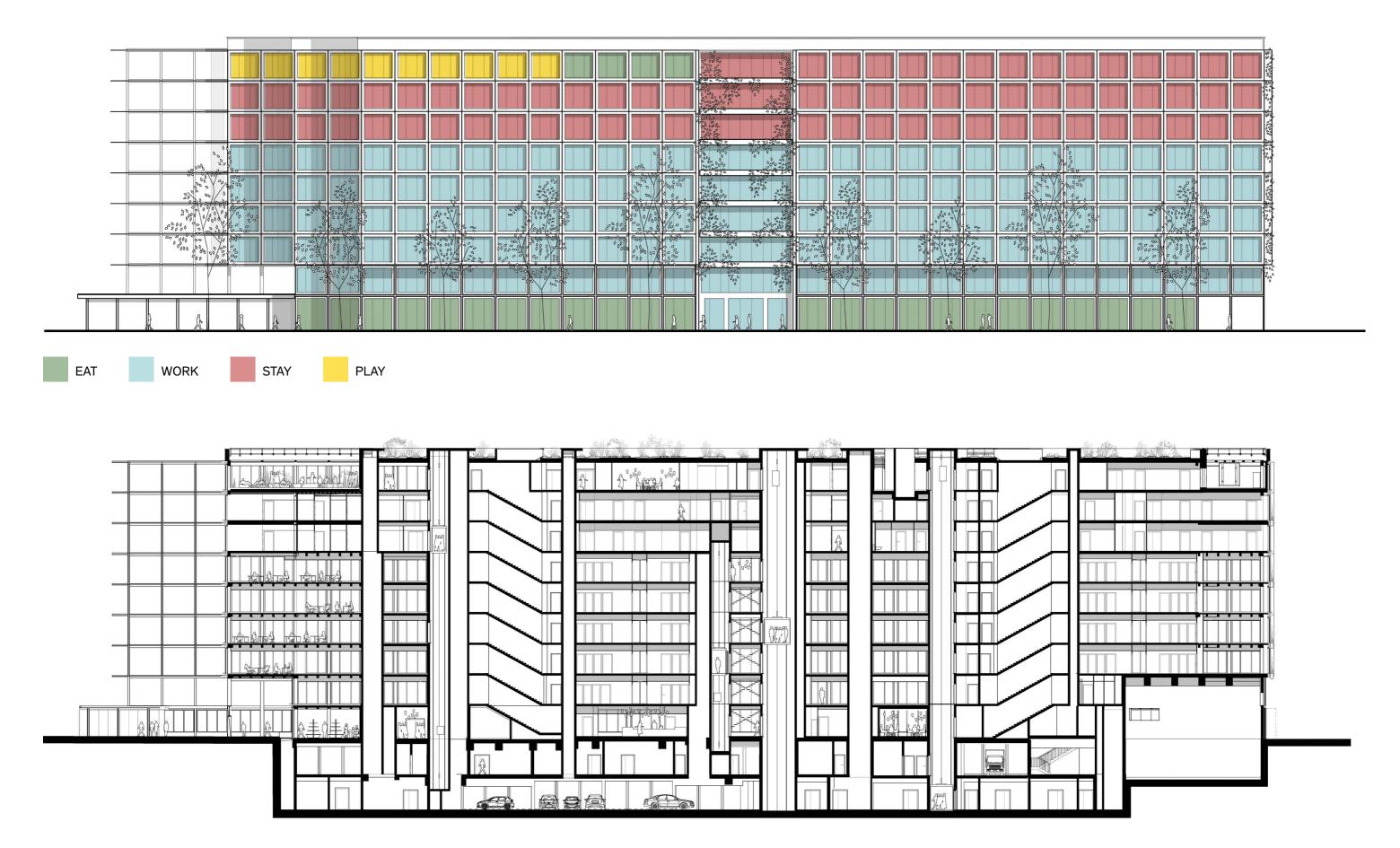


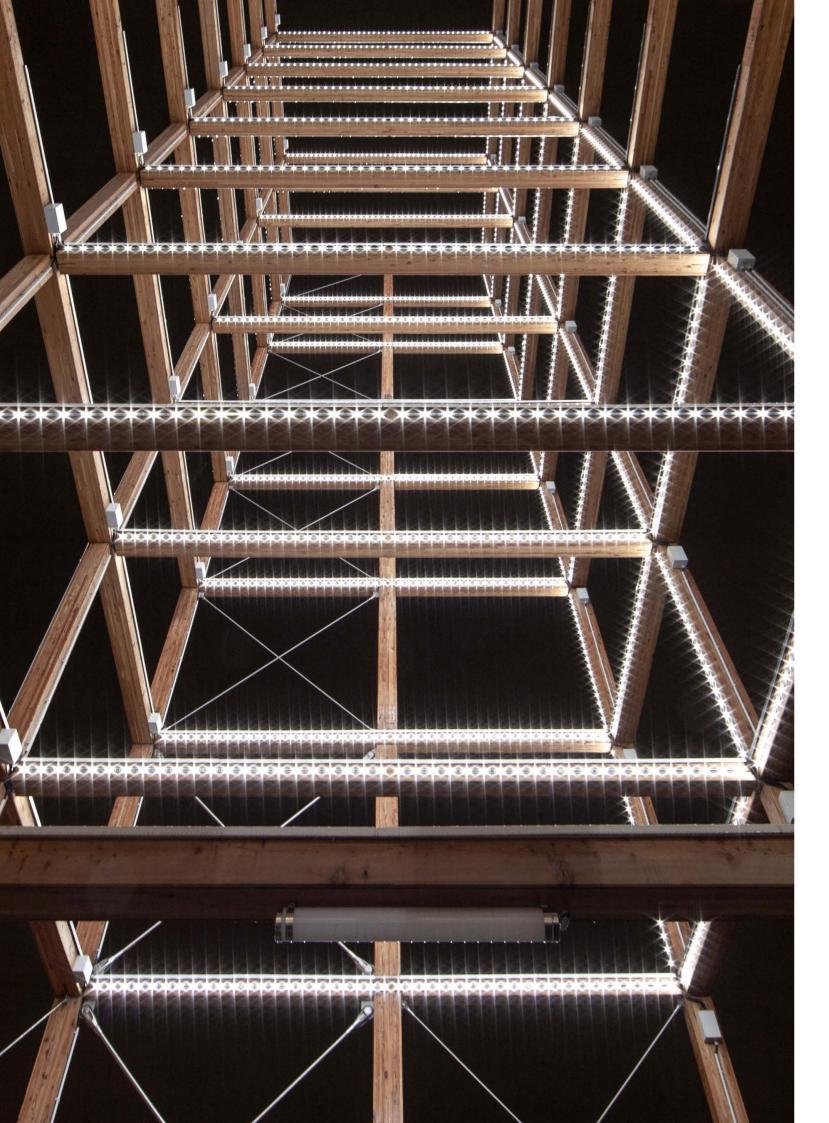












ABOUT

COVIVIO

Drawing on its collaborative history, real estate expertise, and European culture, Covivio is inventing the user experience of today and designing the cities of tomorrow. A leading real estate player in Europe, Covivio engages closely with end users, capturing their aspirations, creating spaces that seamlessly integrate work, travel, and living, and co-inventing vibrant everyday spaces.

With its €26-billion portfolio, Covivio supports businesses, hotel brands, and local authorities in their efforts to enhance their attractiveness, drive transformation, and achieve socially responsible performance.

Covivio's corporate mission is to build sustainable relationships and well-being. The company takes on the role of a responsible real estate operator that is committed to all of its stakeholders—its clients, shareholders, financial partners, internal teams, local communities, and the future generations. In addition, Covivio's dynamic approach to real estate offers exciting prospects in terms of projects and career development to its teams.

GROUPE HINES

Hines is an international real estate player, operating as an investor, developer, and property manager. Founded in 1957 by Gerald D. Hines, the group operates in thirty countries. Hines manages a portfolio of high-performing assets worth €94 billion¹ in residential, logistics, retail, office, and mixed-use properties. The Hines teams oversee 685 real estate assets worldwide, amounting to a total of nearly 20.1 million square meters. The group is committed to achieving carbon neutrality for all its buildings by 2040, without relying on offsets. ¹As of December 31, 2022.

HINES FRANCE

Established in 1995, Hines France is a developer, investor (both with its own capital and on behalf of third parties) and asset manager operating across all asset classes. It has recently expanded into property management. This French subsidiary of The Hines Group is renowned for its understanding of the needs relating to corporate real estate, its extensive experience relating to headquarters and high-rise buildings, and its intimate knowledge of the Paris La Défense area. Hines France manages a portfolio consisting of offices as well as retail properties, including prestigious addresses in Paris such as 114 Avenue des Champs-Élysées, 213 and 223 Rue Saint-Honoré, as well as Marché Saint-Germain.

PCA-STREAM

Driven by a dynamic that combines research and action, PCA-STREAM is organized around two hemispheres. PCA, the architecture and urban planning firm, devotes itself to tangible large-scale projects and brings together a team of one hundred architects, urban planners, designers, engineers, and researchers who can understand and respond to the challenges of a complex world. STREAM, the crossdisciplinary research program, introduces reflexivity into the firm's constructive practice and examines major contemporary issues through contributions from various disciplinary fields and creative practices. This approach allows for a cross-cutting and collective understanding of the questions that are shaping tomorrow's architecture and urbanism

ZOKU

Zoku makes living and working internationally easier for today's business travelers. Founded in Amsterdam in 2016 by Dutch entrepreneurs Hans Meyer and Marc Jongerius, Zoku is named after the Japanese word for family, tribe or clan. Zoku has created a new category in the hotel industry, combining the services of a hotel with the buzz of a thriving neighborhood. Midway between a home and an office, their private "Loft" rooms and rooftop "Social Spaces" provide a place for residents and locals to connect throughout Europe. You can live, work, relax, and socialize at Zoku—now in Amsterdam, Copenhagen, Vienna and Paris.



PROJECT DETAILS

PROGRAM

Construction of a mixed-use building including offices, coworking spaces, a residential hotel, restaurants, a leisurely terrace, retail outlets, an agricultural rooftop, and a microbrewery producing beer from local hops.

LOCATION

6 avenue de la Porte de Clichy, 75017 Paris

SURFACE

16 200 m²

DELIVERY 2023

PROJECT TEAM

Owner: Covivio (co-investor and co-developer) Hines France (co-developer) Assurances du Crédit Mutuel (co-investor) Architect: PCA-STREAM Artistic Intervention: Pablo Valbuena Contracting Consortium: Mathis, Rinaldi Structural, Multispe, Axima, Apilog, Inéo, Otis and Topager with Spie Batignolles Île-de-France as the lead contractor General contractor: Groupe Vertical Sea BIM Manager : Synthesia Wood Structure Engineering : GUSTAVE Concrete Structure Engineering: Khephren Facade Engineering: VS-A **Restoration Engineering: HACS** Building Environmental Quality Advisory: Deerns **Commissioning :** ENEOR HVAC/Mechanical, Electrical, and Plumbing Engineering and Elevators: CCingénierie Fire Safety Engineering: CSD Faces Fire Protection Coordinator: CSD Faces Acoustics: AVLS Landscape Design and Urban Agriculture: Topager **Quantity Surveyor :** AE75 Health and Safety Coordinator: Quartet Technical Building Control: Bureau Veritas Geotechnical Engineering: Fugro Pollution Consultant: Tauw France

Office Lessee: OVHCloud Hotel Operator: ZOKU Interior Design of the Hotel: Concrete

PHOTOS

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DRAWINGS

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