

Opalia, Paris: Using Steel to Rigidify the Façade and Optimize HVAC Penetrations

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**CTBUH 2022
Steel-Timber Conference**

ARTBUILD

BRUSSELS | PARIS | LUXEMBOURG

CTBUH CHICAGO, STEEL TIMBER HYBRID CONFERENCE

23/5/2022

OPALIA: , PARIS: USING STEEL TO RIGIDIFY THE FACADE AND OPTIMIZE

Steven WARE

HAVAC PENETRATIONS

ARTBUILD



ARTBUILD

An early timber adopter



The team

Public Local Development Company

Occupant

Developer

General contractor

Timber steel subcontractor

Architecte and landscaping

Structural, M&E Engineering

Acoustic engineering

Project management

Building controller and site safety

Environmental consultancy

SEMAPA

Buelens

GROUPE BRIAND

SNC • LAVALIN

OTCI

**Franck Boutté
Consultants**
Conception & Ingénierie Environnementale

MAIRIE DE PARIS

QUARTUS
ET LA VILLE SE PARTAGE

ARTBUILD

D2S
INTERNATIONAL

**Groupe
Qualiconsult**

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A challenging site for timber



The protective hand



Double skin facade

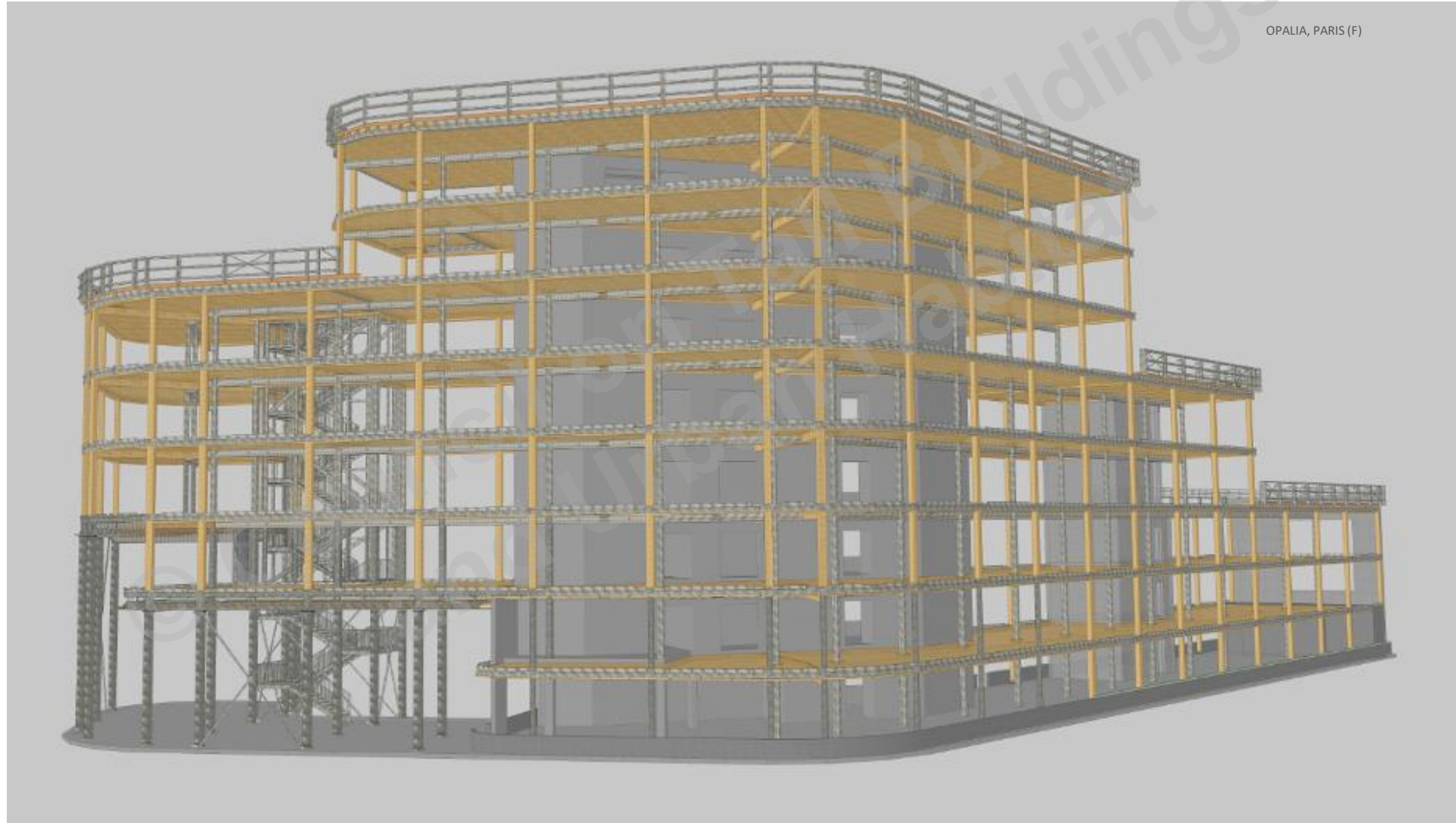


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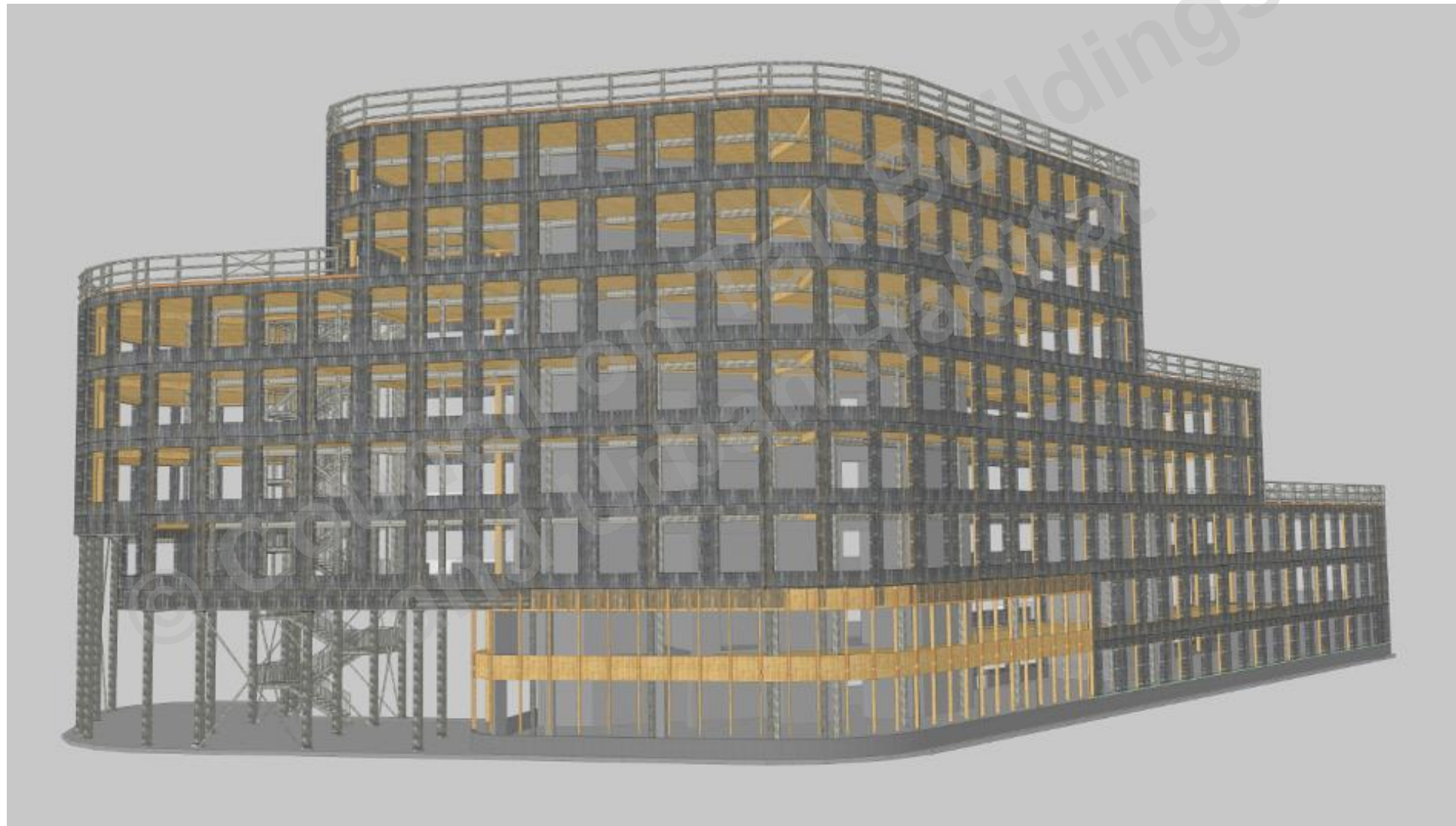
Opalia

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Opalia

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TIMBER

Glulam

250 m³ spruce sourced from Finland and machined in France

CLT

5200m² spruce floors slabs supplied by KLH from Austria Thickness
21 cm

Facades

Stud walls 1200 m² including CLT 2300 m²

Cladding

1500 m² Douglas fir sourced in France, supplier PIVETEAU

STEEL

Curtain wall

300 m² Raico wood/steel composite

Bow windows

2050m² to the south facade

Terraces

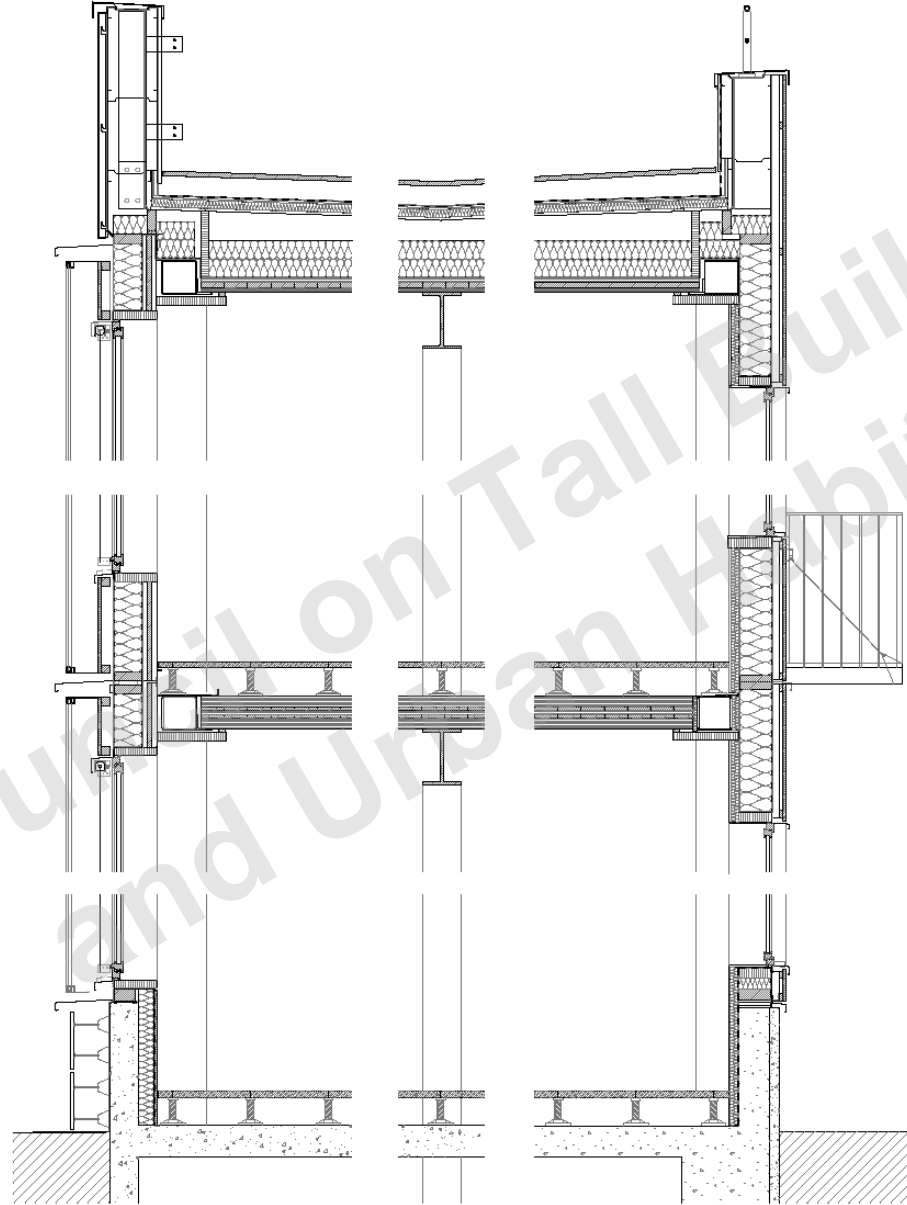
Waterproofed steel and concrete composite floor to support wooden decking and green roofs 1050 m²

Structure

175 tonnes of post and beam

Freestanding egress stairwell

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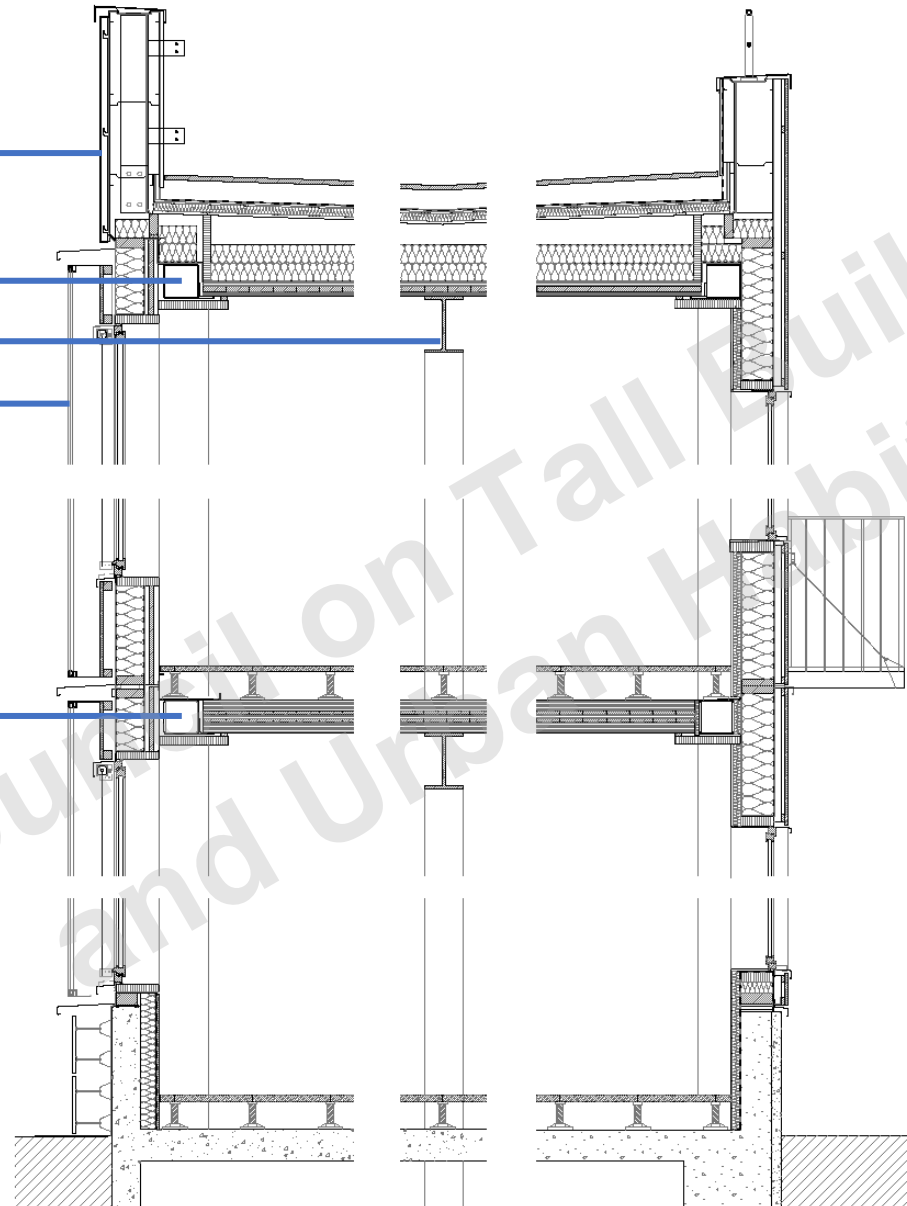
facade
maintenance rail

perimeter beam

central beam

bow window

perimeter beam



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SCHEDULE

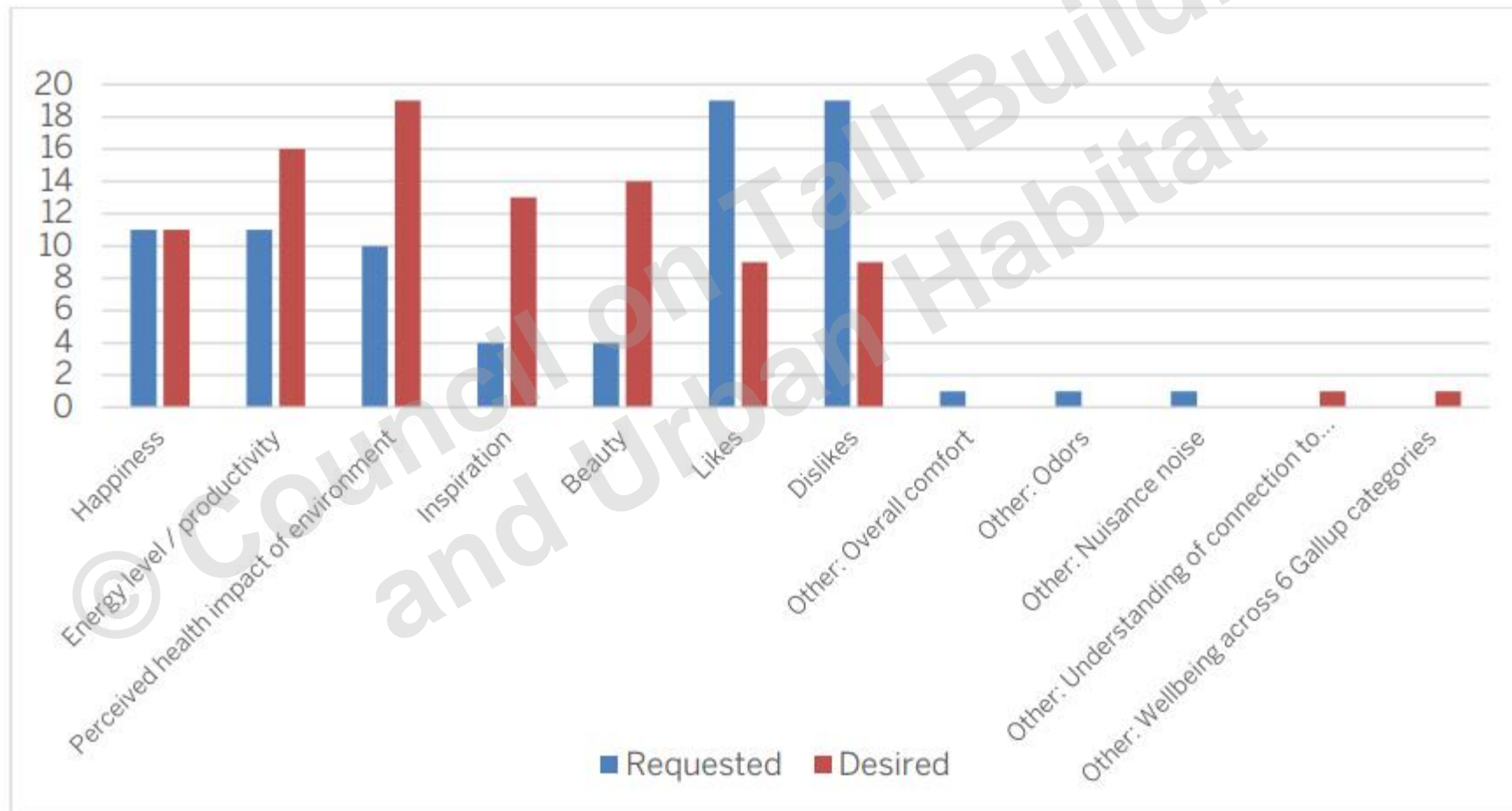
4 months

for off site prefabrication of stud wall panels, CLT slabs,
and steel structure

Biophilia



REX – post occupancy survey



Birth of the Lab

LAB MUS (bioéconomie)



Timber DNA

TRYO, Nantes (FR)	4 000m ²	2018
ODYSSEE, Guyancourt (FR)	12 000m ²	2020
ENVA, Maisons Alfort (FR)	4 000m ²	2021
WOODEN, Leudelange (LX)	14 000m ²	2022
SWITCH, Brussels (BE)	4 000m ²	2024
CITE ADMINISTRATIVE, Amiens (FR)	20 000m ²	2023
Laval (FR)	4 000m ²	2023
Rennes (FR)	4 000m ²	2023
Harmonie, La Garenne Colombes (FR)	92 000m ²	2023
Symphonie, La Garenne Colombes (FR)	46 000m ²	2024
CFC Casablanca (MAR)	30 000m ²	2024



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THANK YOU



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