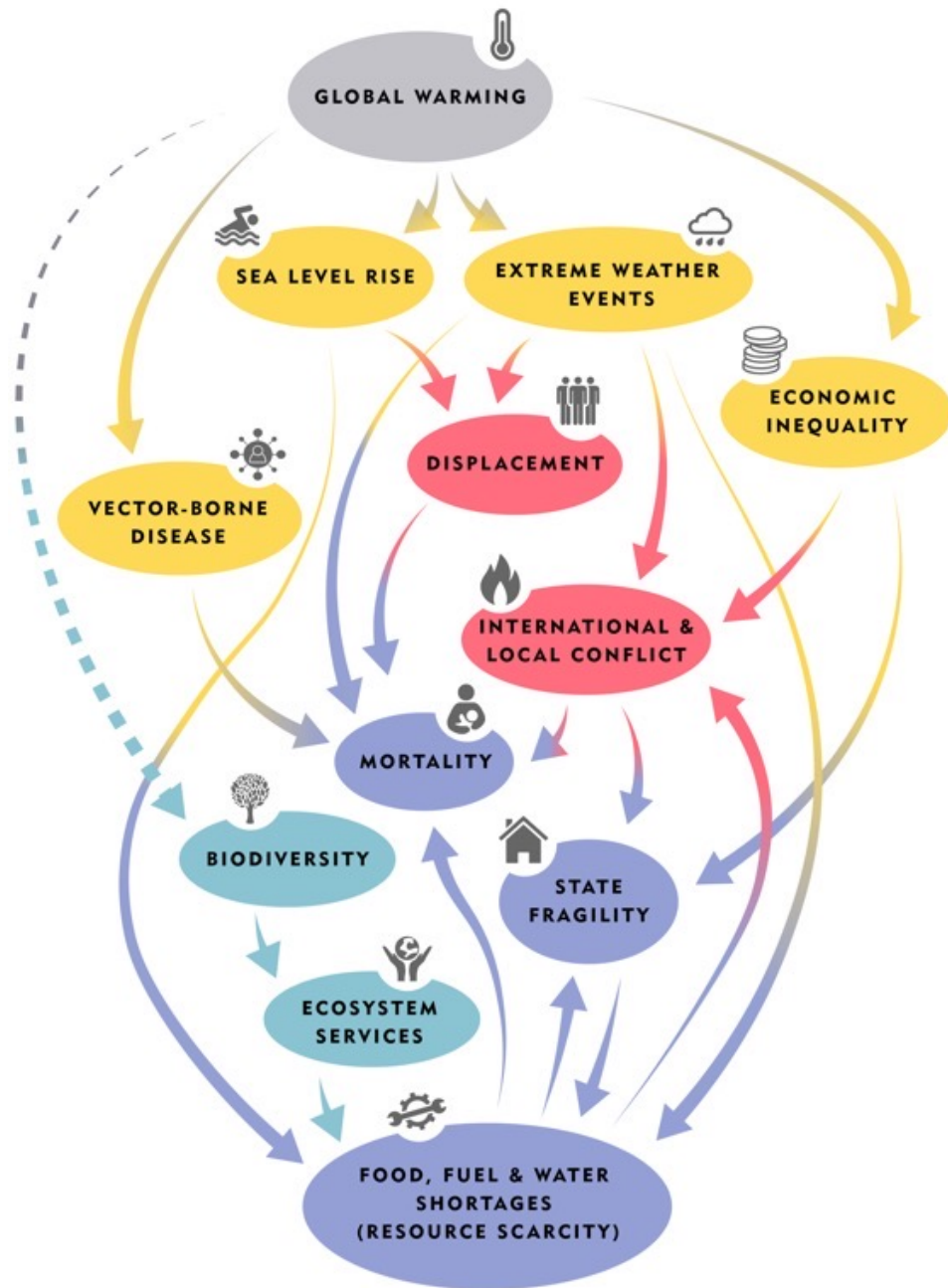


Anthony Thistleton

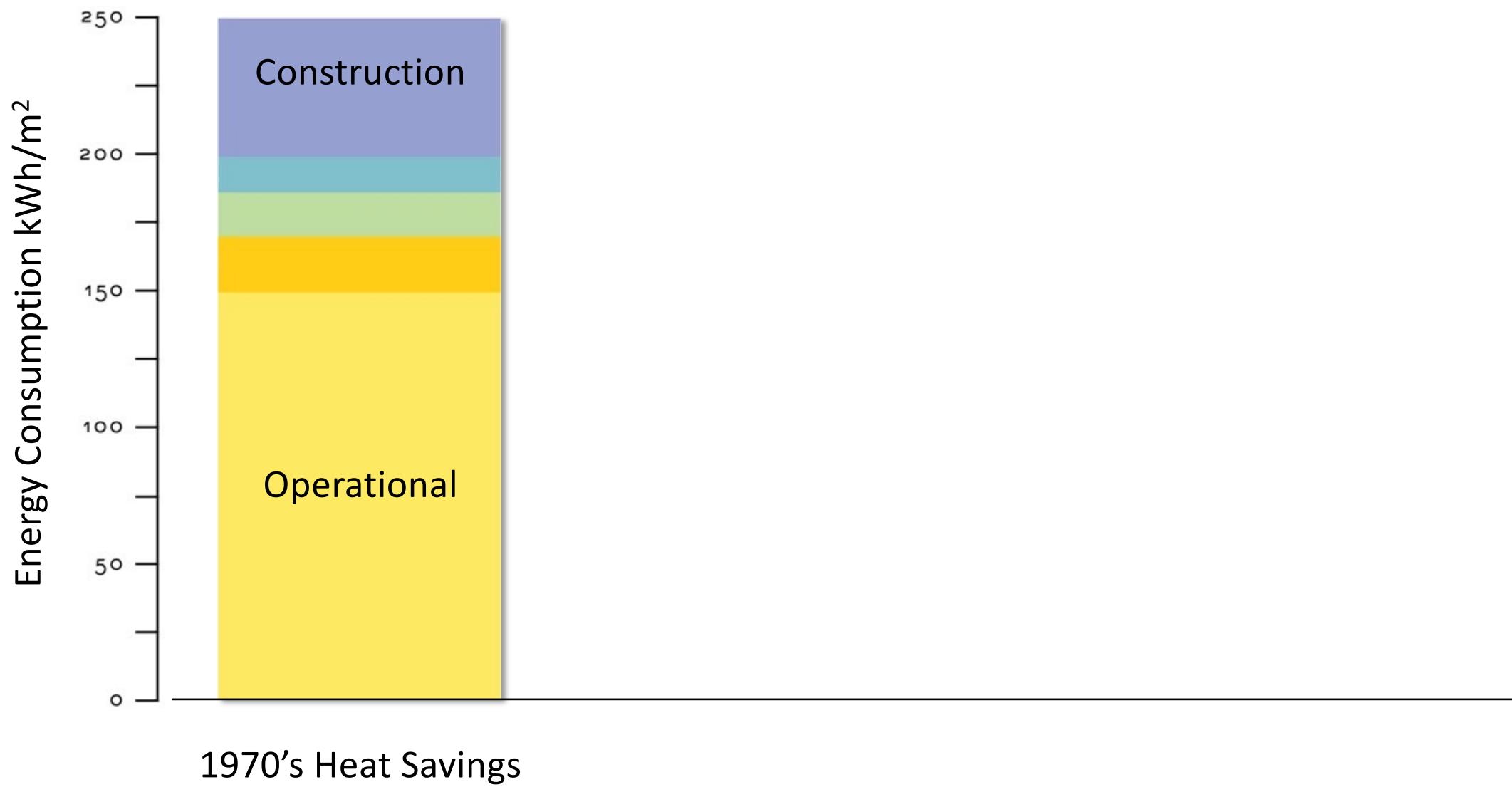
Founder & Director
Waugh Thistleton Architects Ltd.

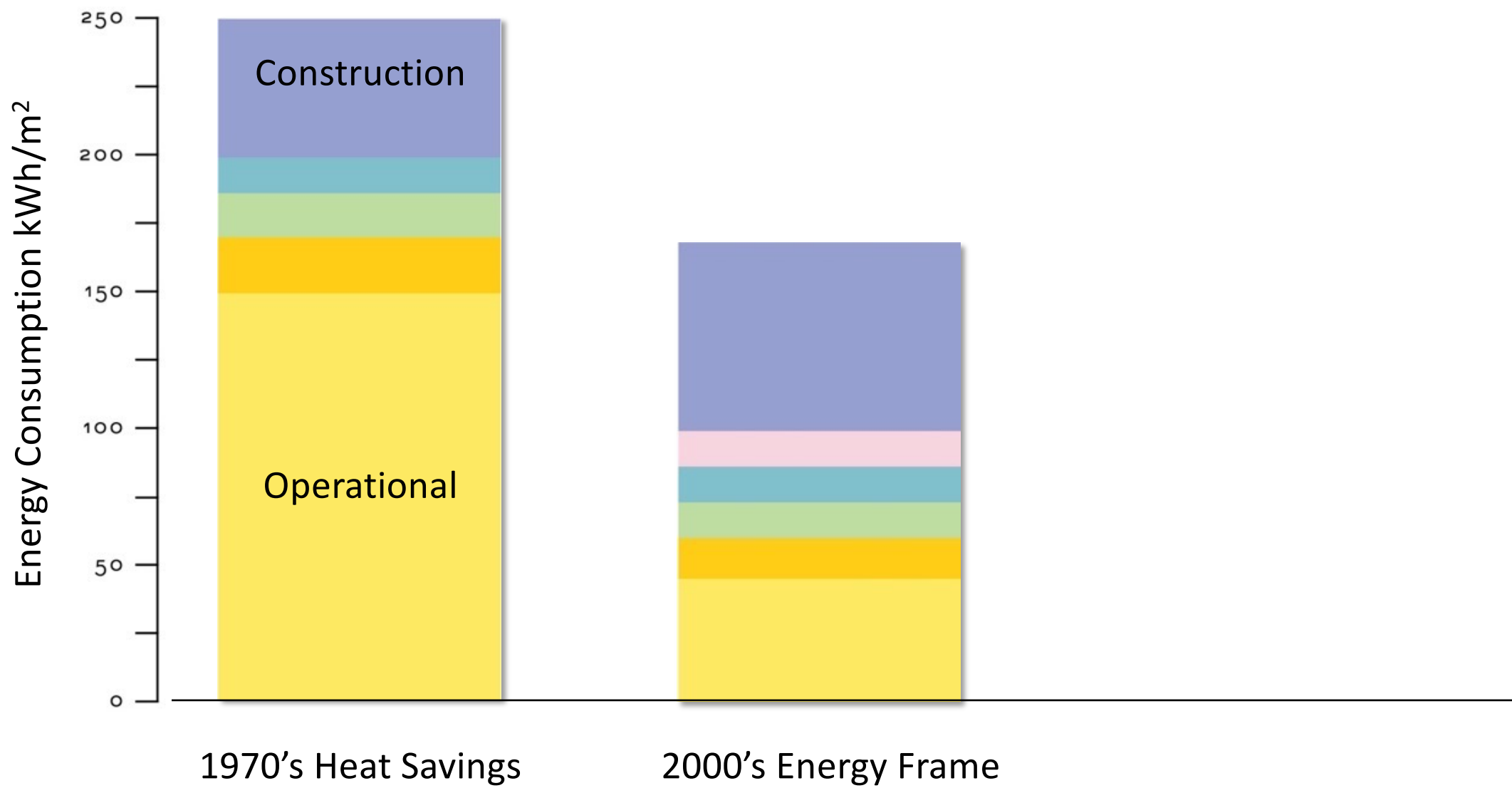


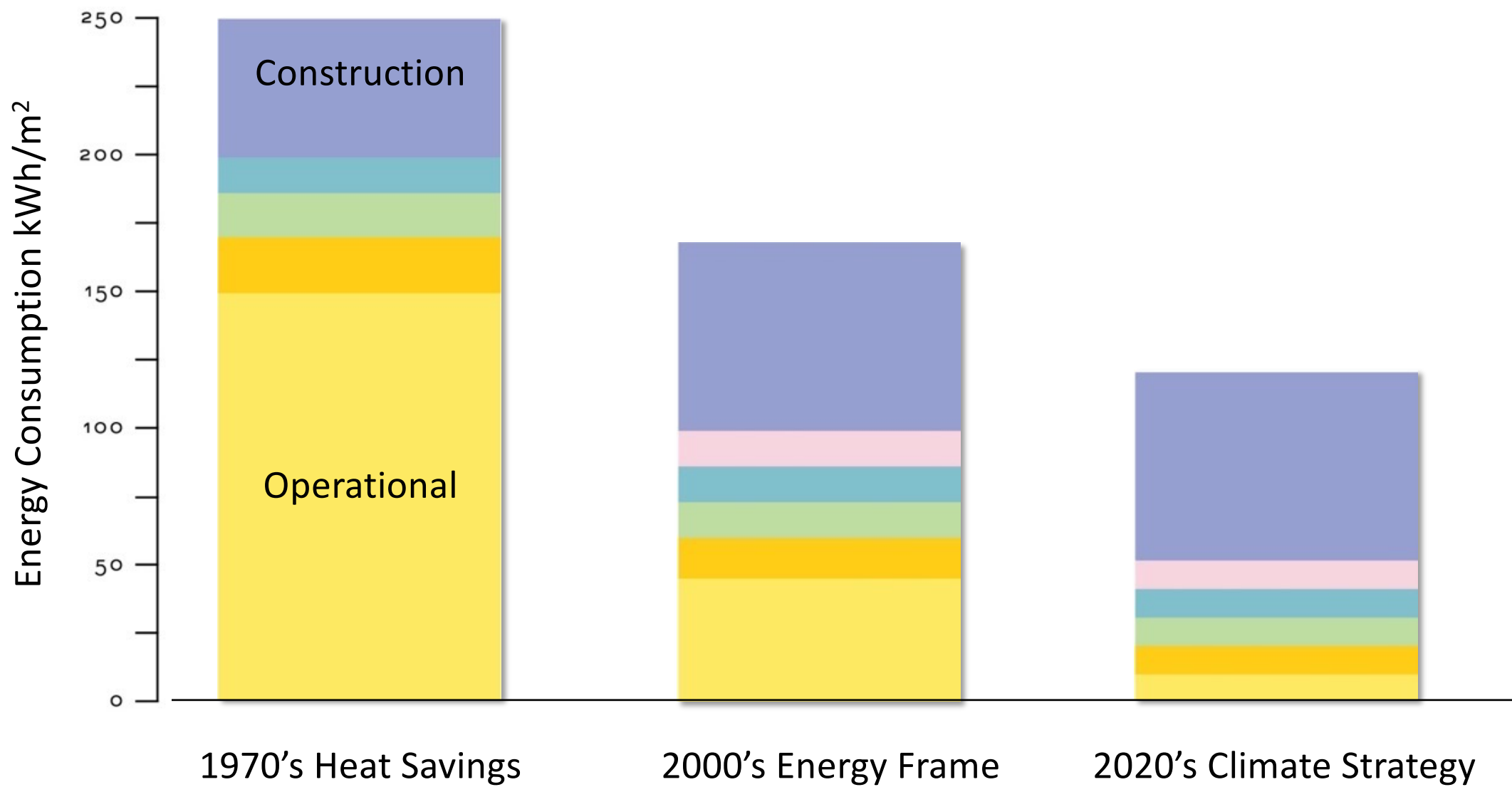
WAUGH THISTLETON ARCHITECTS



Climate emergency
The Here And Now











World first
2008

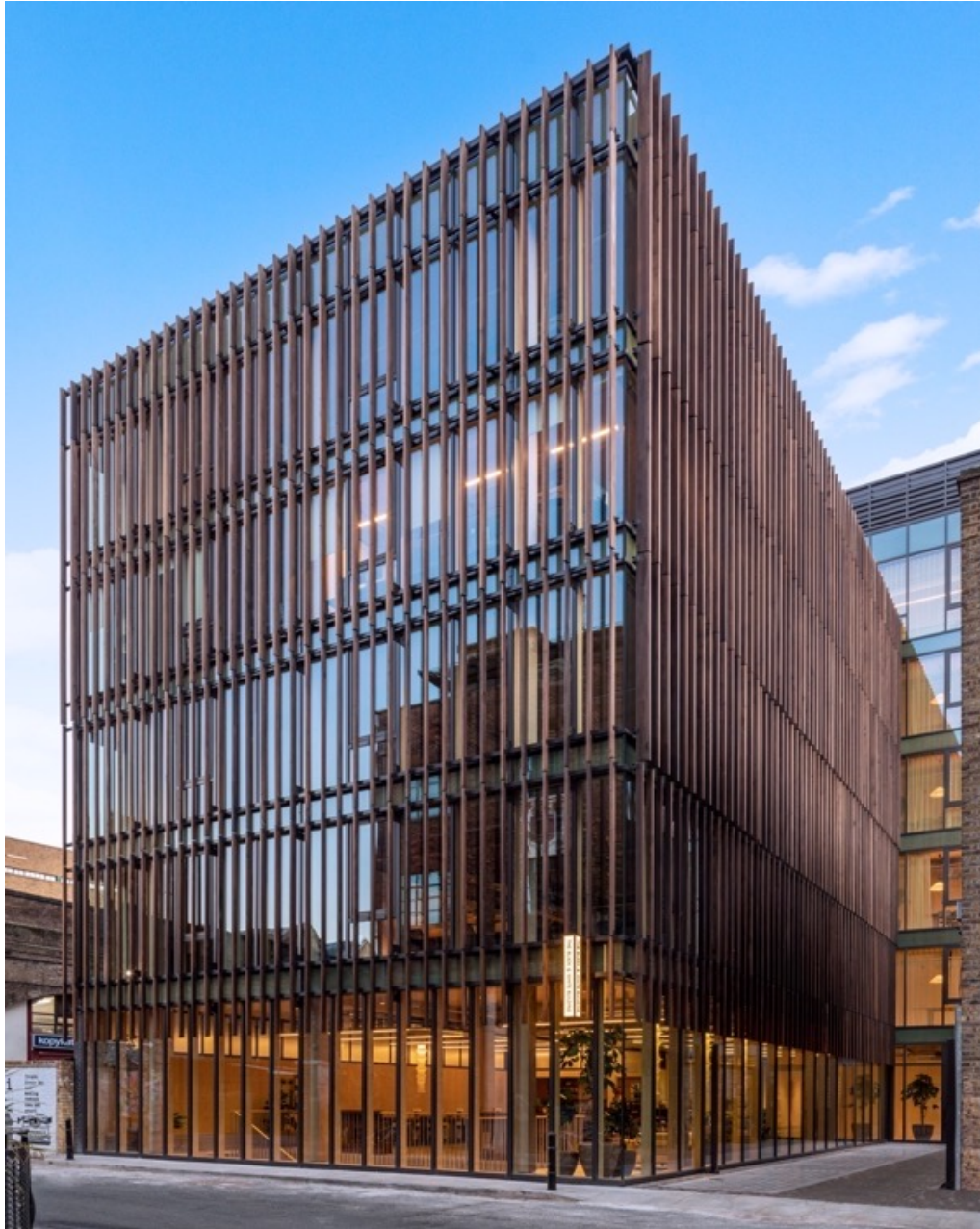




EMBODIED CARBON

As part of planning application

- Less waste
- quiet
- No power tools
- Fewer deliveries
- 80% reduction in traffic
- Light Weight
- Weighs one fifth of concrete



Black and White
The Office Group 2022



ALL TIMBER
5,000m² of office

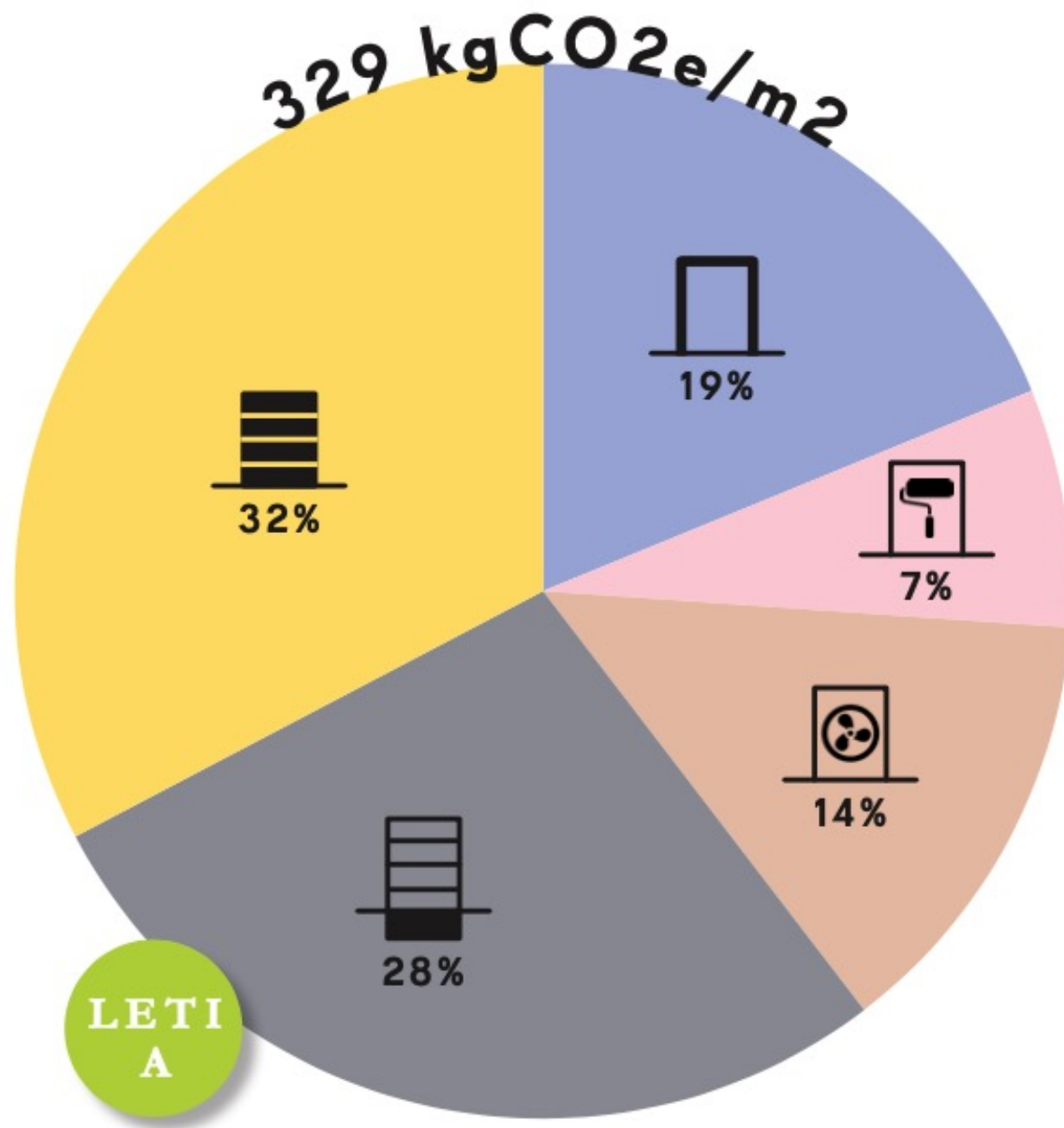
LVL FRAME
CLT slabs and core

Exposed timber
spliced connections









51% Reduction Using Mass Timber

Savings In MEP And Finishes

Half The Carbon In The Basement

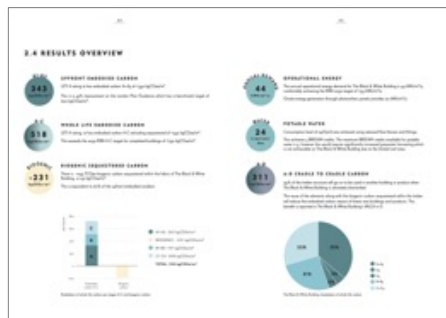
UPFRONT

A 1 - A 5



THE BLACK & WHITE BUILDING LIFE CYCLE ASSESSMENT REPORT

WAUGH THISTLETON ARCHITECTS



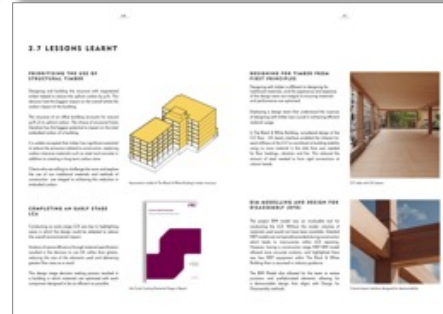
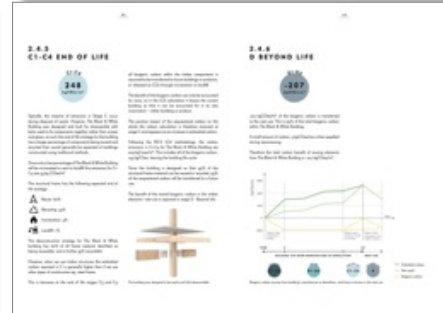
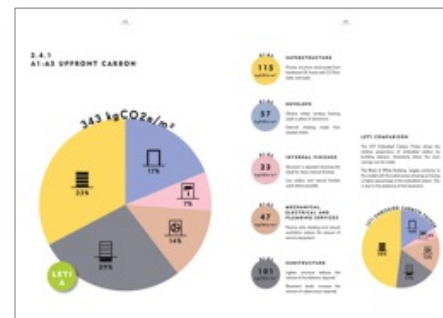
APPENDIX 1 EPD CERTIFICATES

Material	EPD Number	EPD Title	EPD Issued	EPD Validity
Concrete	123456789	Concrete	2023	2025
Steel	987654321	Steel	2023	2025
Timber	456789012	Timber	2023	2025
Glass	321098765	Glass	2023	2025
Brick	654321098	Brick	2023	2025
Insulation	012345678	Insulation	2023	2025
Roofing	876543210	Roofing	2023	2025
Windows	210987654	Windows	2023	2025
Doors	543210987	Doors	2023	2025
Furniture	987654321	Furniture	2023	2025
Lighting	321098765	Lighting	2023	2025
Electrical	654321098	Electrical	2023	2025
Plumbing	012345678	Plumbing	2023	2025
Heating	876543210	Heating	2023	2025
Cooling	210987654	Cooling	2023	2025
Water	543210987	Water	2023	2025
Waste	987654321	Waste	2023	2025
Energy	321098765	Energy	2023	2025
Transport	654321098	Transport	2023	2025
Construction	012345678	Construction	2023	2025
Operation	876543210	Operation	2023	2025
End of Life	210987654	End of Life	2023	2025



APPENDIX 1 EPD CERTIFICATES

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Brick	654321098	Brick	2023	2025
Insulation	012345678	Insulation	2023	2025
Roofing	876543210	Roofing	2023	2025
Windows	210987654	Windows	2023	2025
Doors	543210987	Doors	2023	2025
Furniture	987654321	Furniture	2023	2025
Lighting	321098765	Lighting	2023	2025
Electrical	654321098	Electrical	2023	2025
Plumbing	012345678	Plumbing	2023	2025
Heating	876543210	Heating	2023	2025
Cooling	210987654	Cooling	2023	2025
Water	543210987	Water	2023	2025
Waste	987654321	Waste	2023	2025
Energy	321098765	Energy	2023	2025
Transport	654321098	Transport	2023	2025
Construction	012345678	Construction	2023	2025
Operation	876543210	Operation	2023	2025
End of Life	210987654	End of Life	2023	2025



APPENDIX 3 CALCULATION SPREADSHEET

Material	EPD Number	EPD Title	EPD Issued	EPD Validity
Concrete	123456789	Concrete	2023	2025
Steel	987654321	Steel	2023	2025
Timber	456789012	Timber	2023	2025
Glass	321098765	Glass	2023	2025
Brick	654321098	Brick	2023	2025
Insulation	012345678	Insulation	2023	2025
Roofing	876543210	Roofing	2023	2025
Windows	210987654	Windows	2023	2025
Doors	543210987	Doors	2023	2025
Furniture	987654321	Furniture	2023	2025
Lighting	321098765	Lighting	2023	2025
Electrical	654321098	Electrical	2023	2025
Plumbing	012345678	Plumbing	2023	2025
Heating	876543210	Heating	2023	2025
Cooling	210987654	Cooling	2023	2025
Water	543210987	Water	2023	2025
Waste	987654321	Waste	2023	2025
Energy	321098765	Energy	2023	2025
Transport	654321098	Transport	2023	2025
Construction	012345678	Construction	2023	2025
Operation	876543210	Operation	2023	2025
End of Life	210987654	End of Life	2023	2025



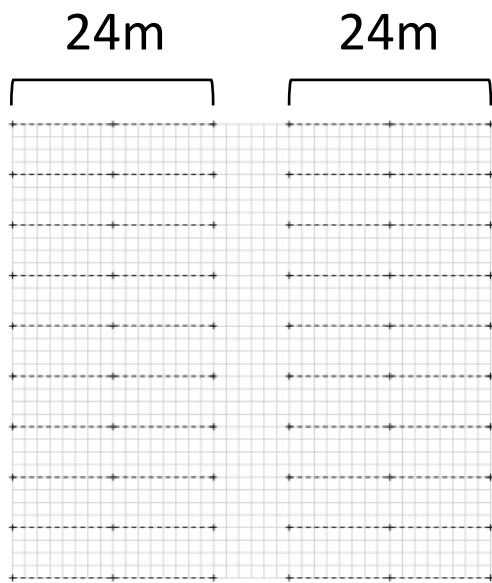
FULLY LEASED
65% Pre-let

ON BUDGET
Cost Equivalent

ON TIME
83 Weeks



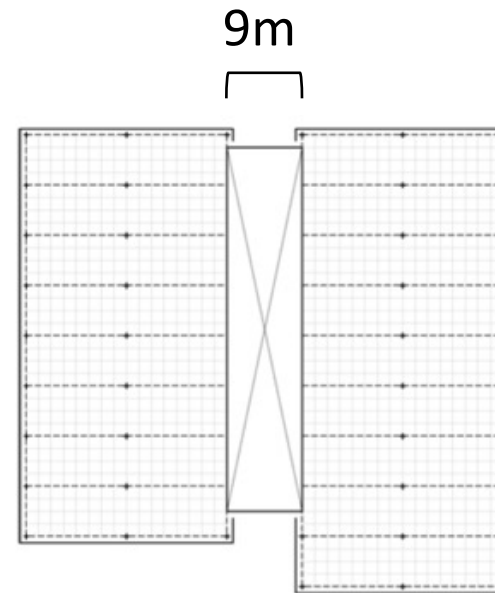
LONDON OFFICE
L e n d l e a s e



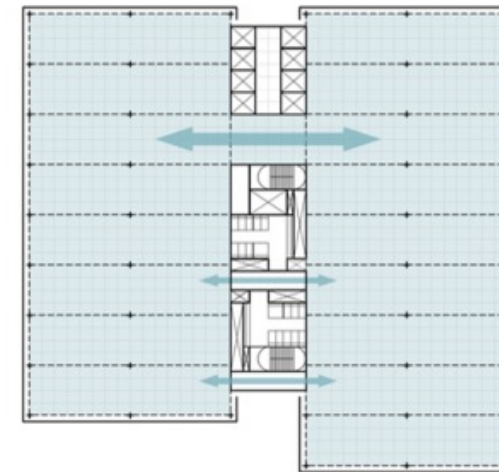
Grid 1.5m



On The Site

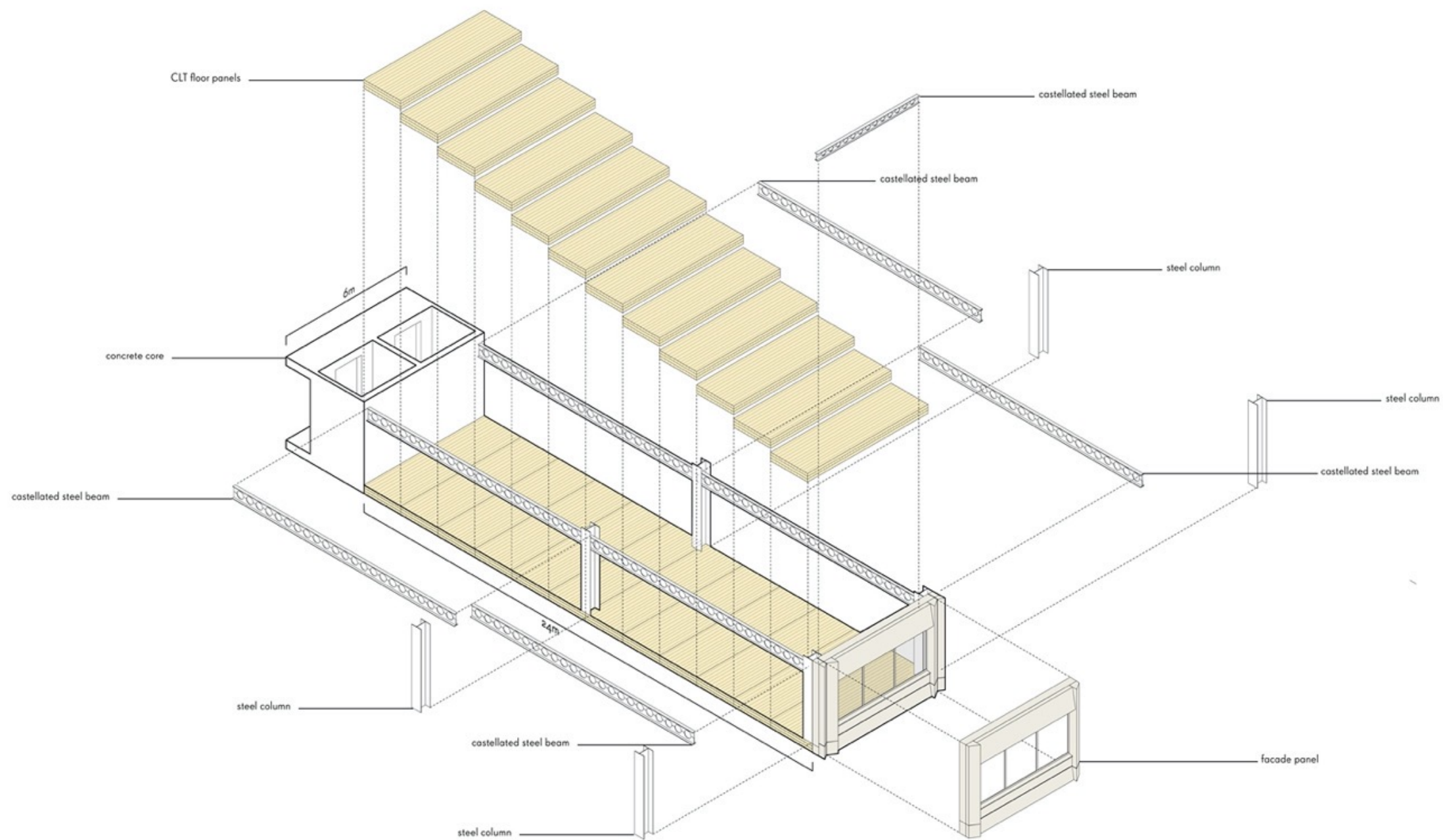


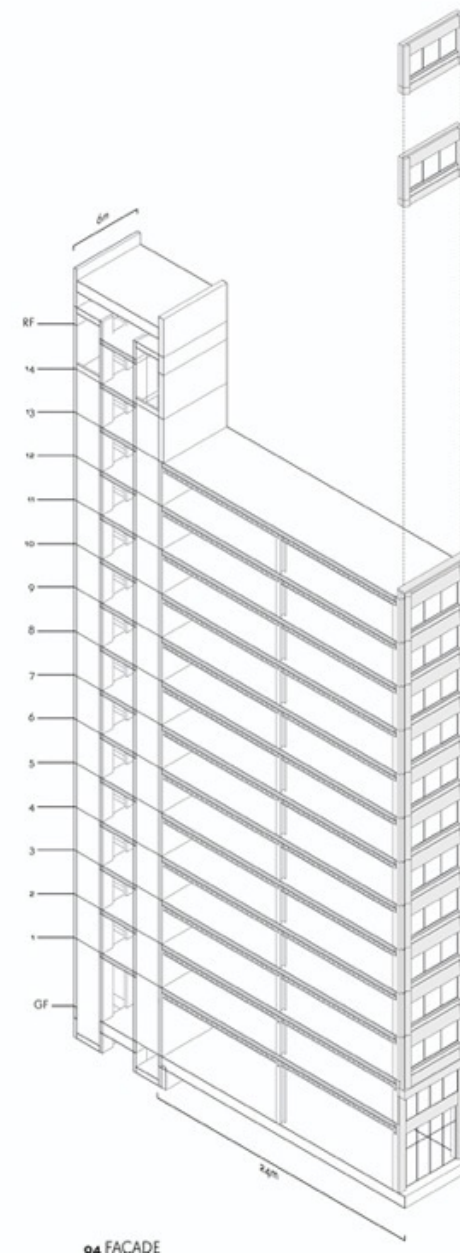
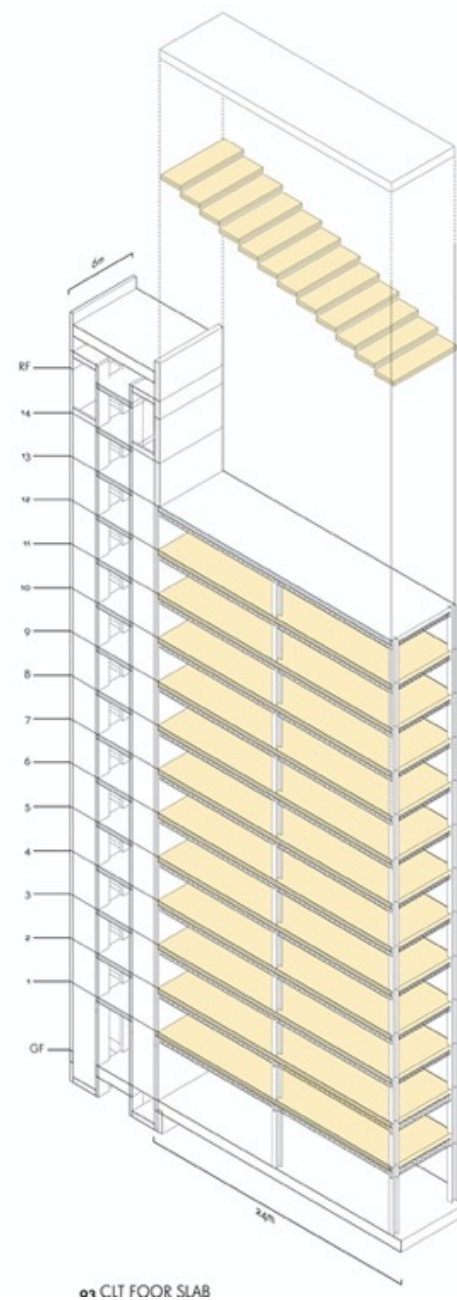
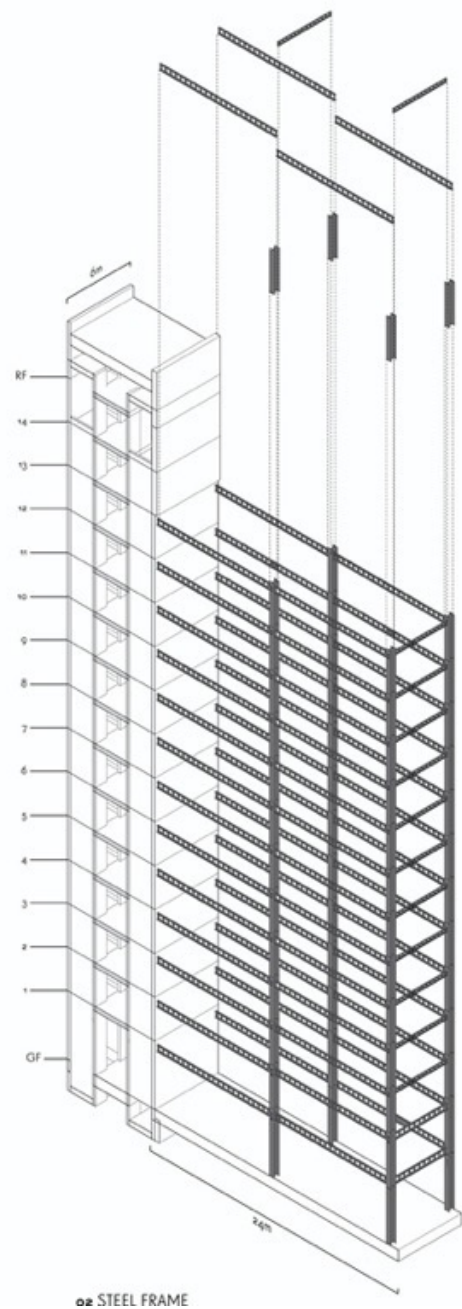
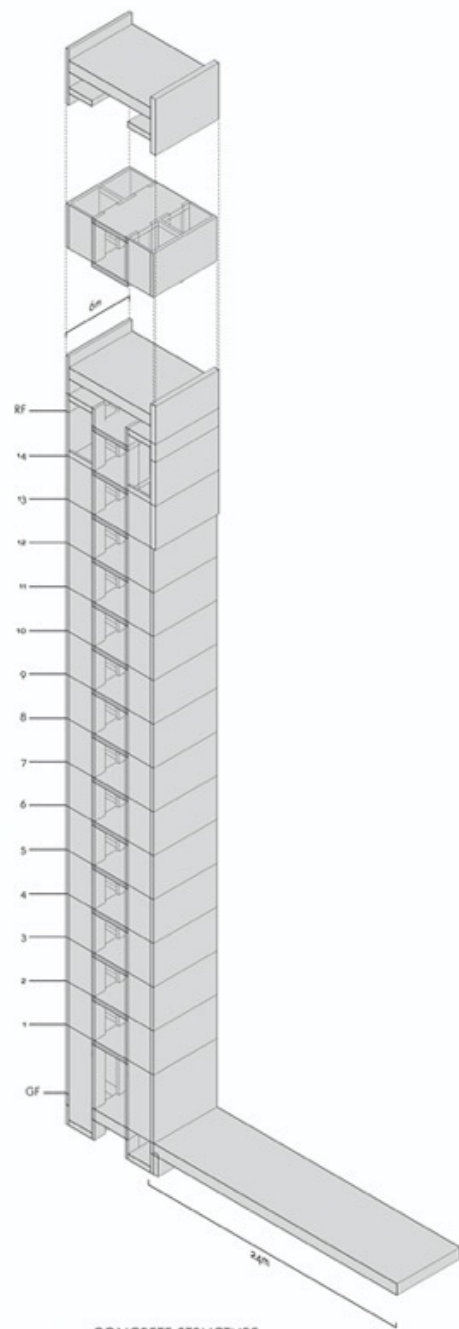
Central Core



Porous Core

MATERIAL SUFFICIENCY
Structure & Grid For Adaptability







60% LESS CARBON

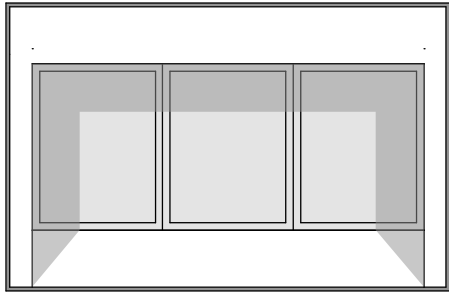
No Basement

TIMBER FLOORS

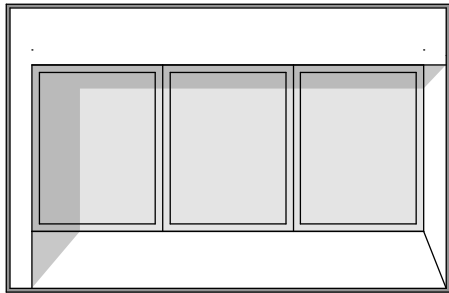
Recycled Steel Frame

PRECAST FACADE

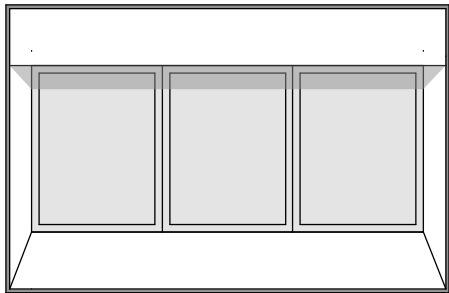
Slipform core



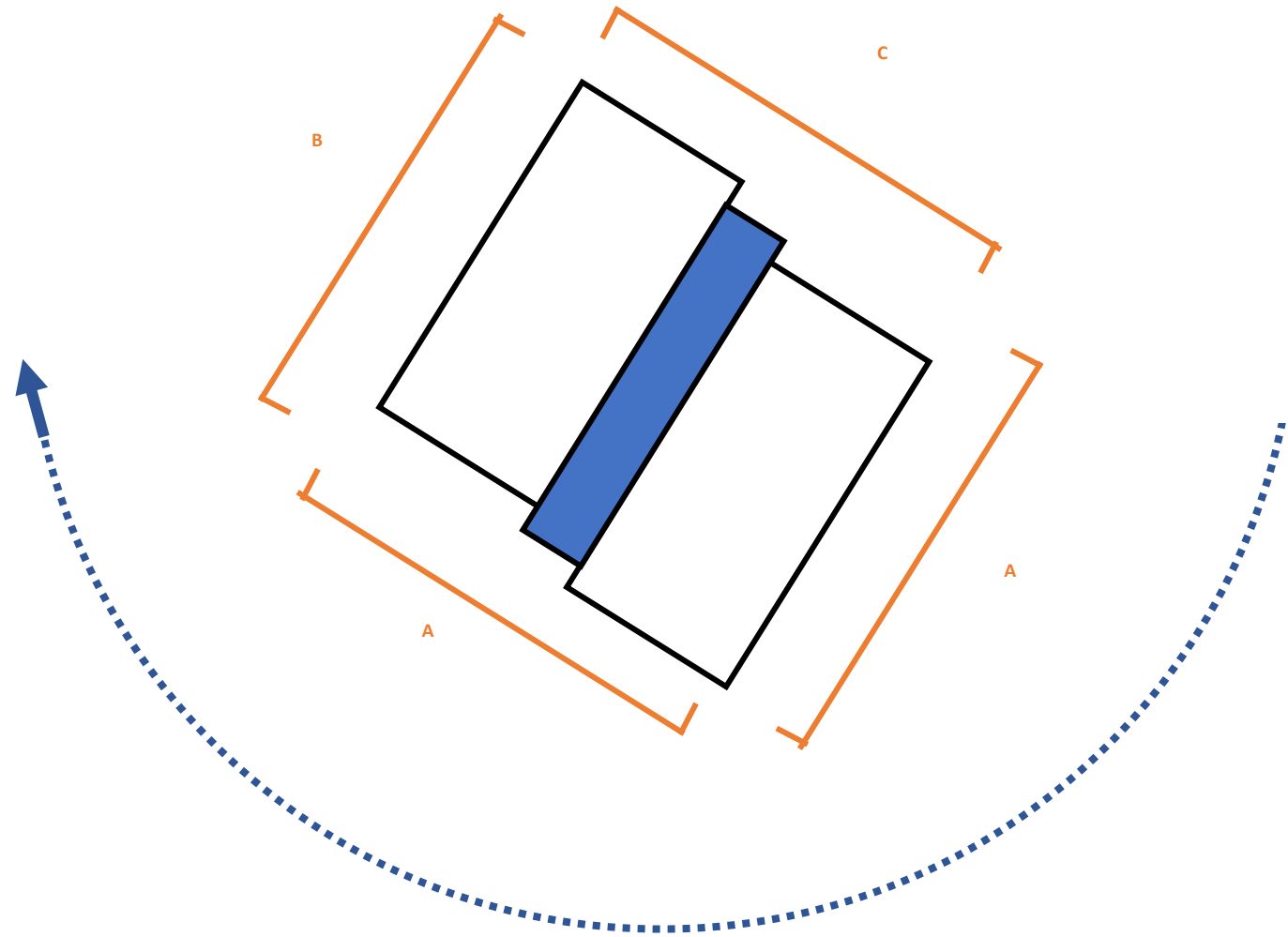
TYPE A



TYPE B

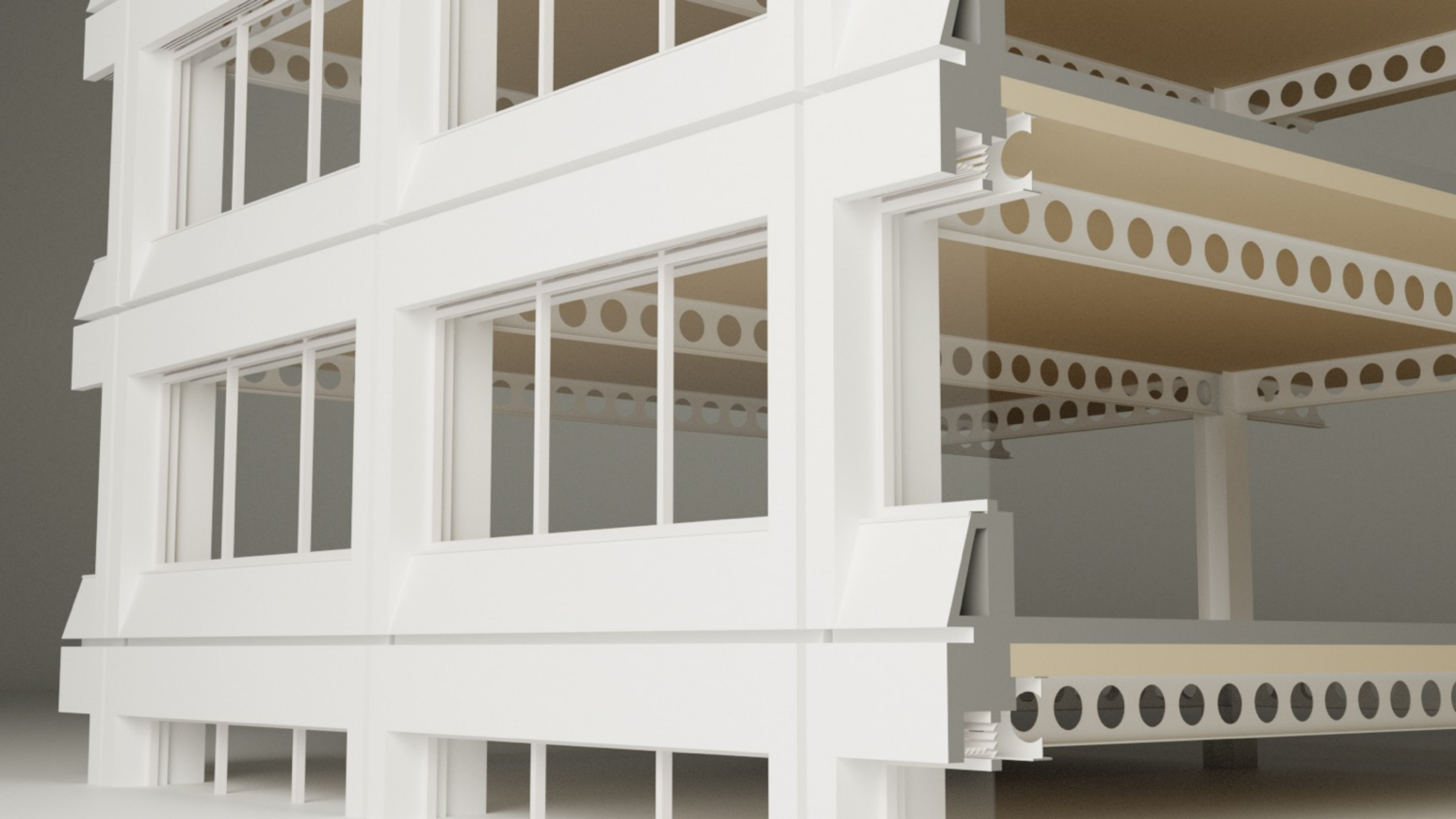


TYPE C



MODULE TYPES

Form In Response To Solar Analysis









NISTEN'S CAFE

REDMAN PLACE



44,000m²

87% Net to Gross

15 STORIES

66m tall

MULTI TENANTED

Double Entrance





L o n d o n
2 0 2 1

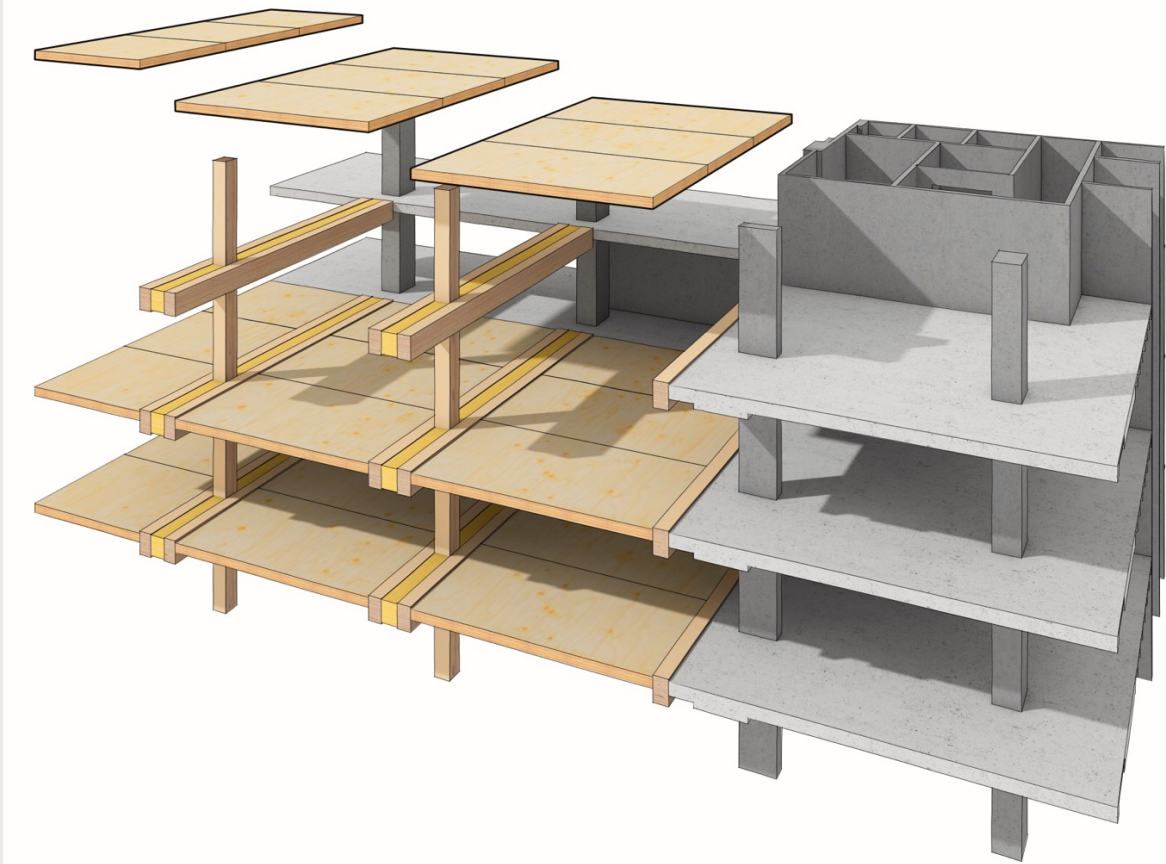


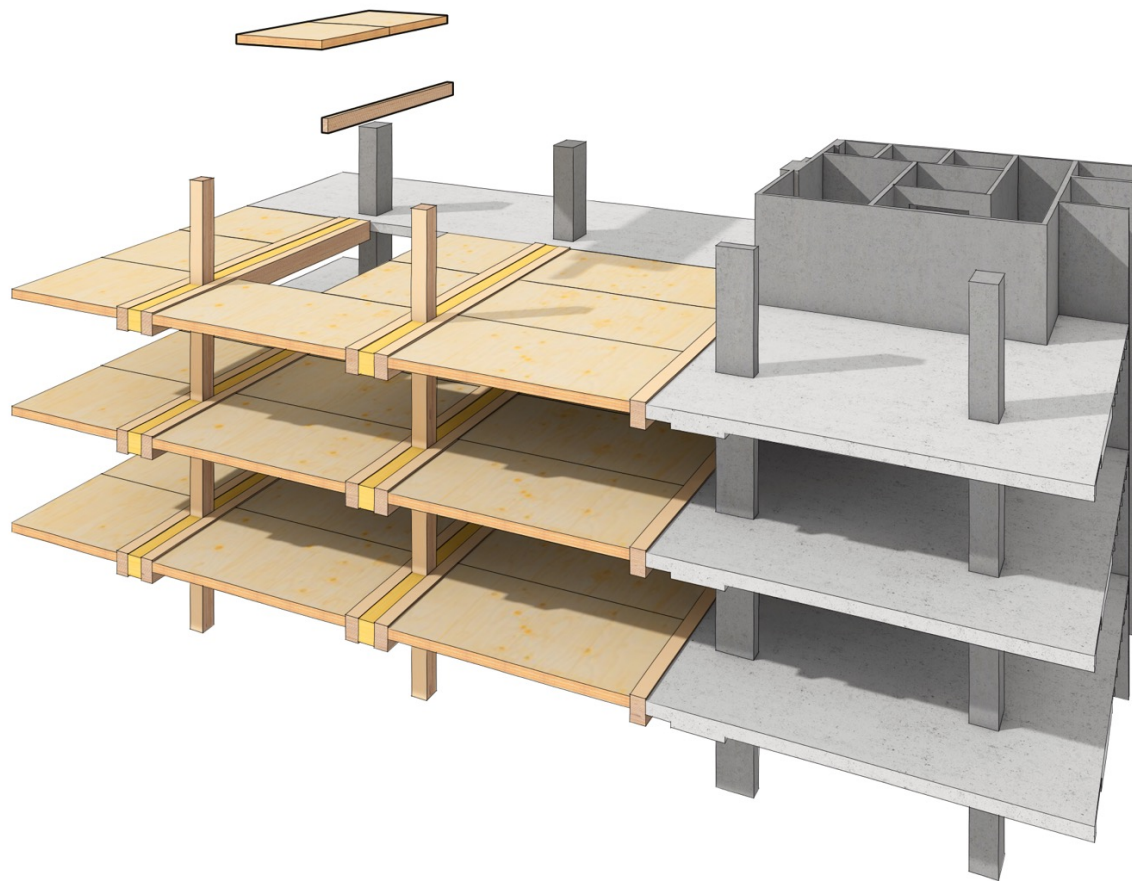
OFFICE TOWER
38 Storeys, 1968

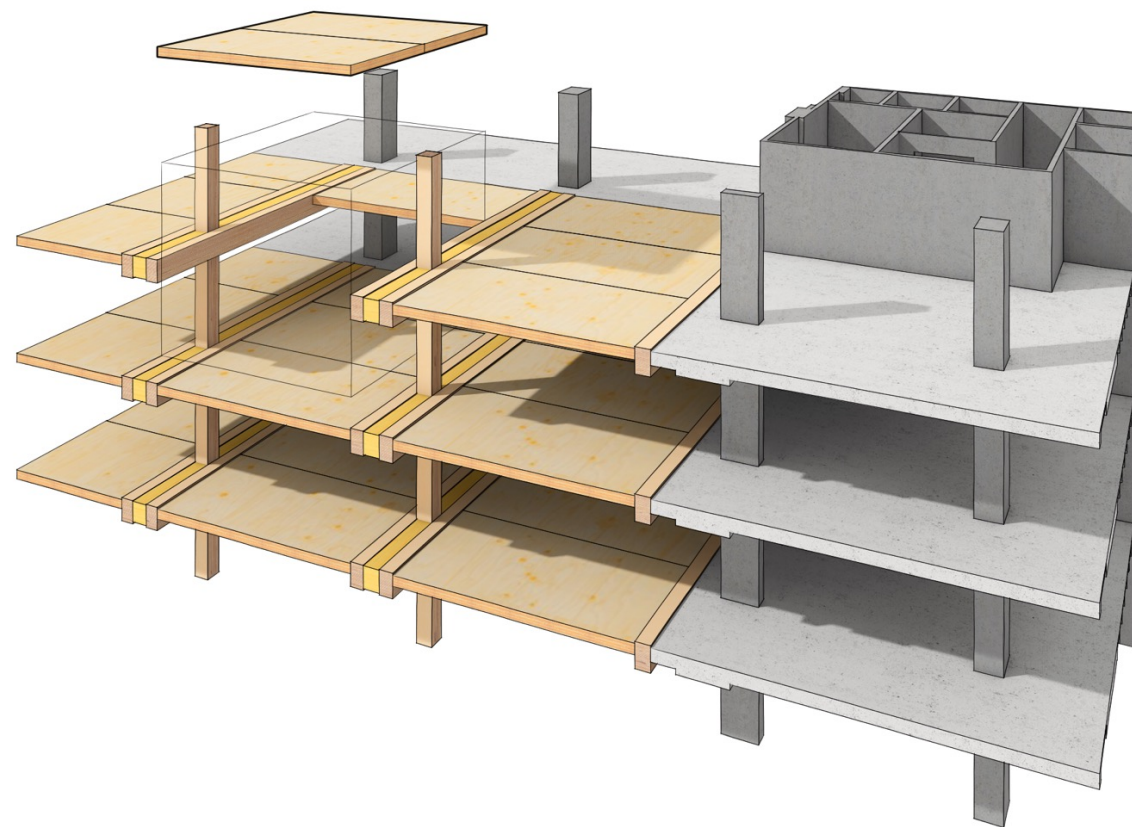


- 27,000 m² added
- Four Additional Stories
- 41 stories
- 80,000m² Gross Area
- 60,000 m² net area
- 74% Net To Gross









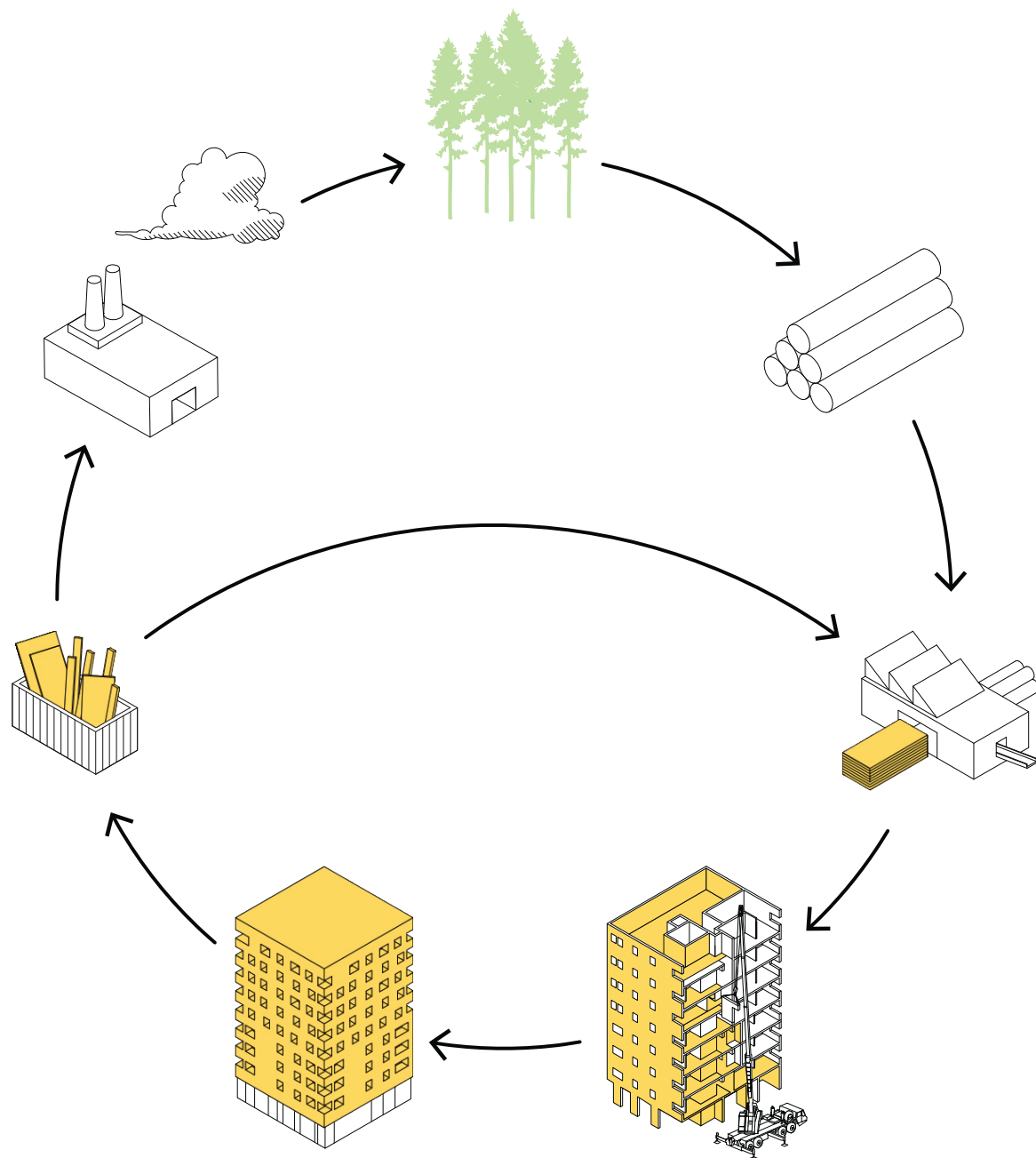




9,000 m³ of timber
30 Months To Completion

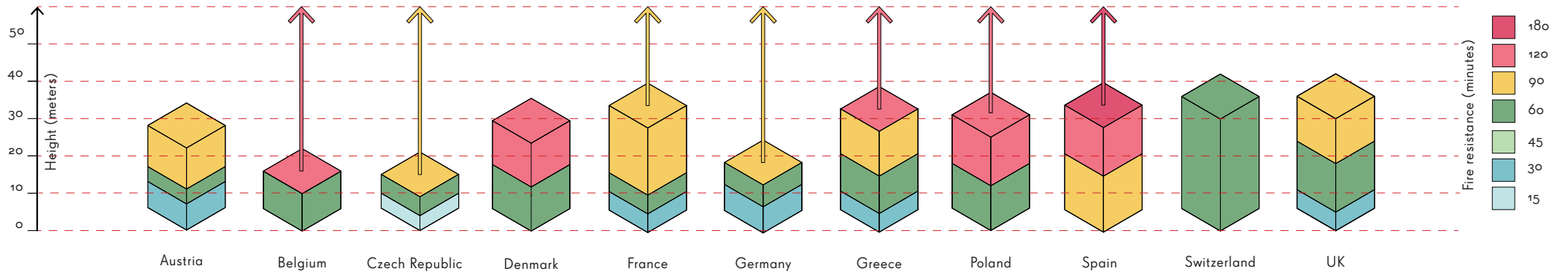




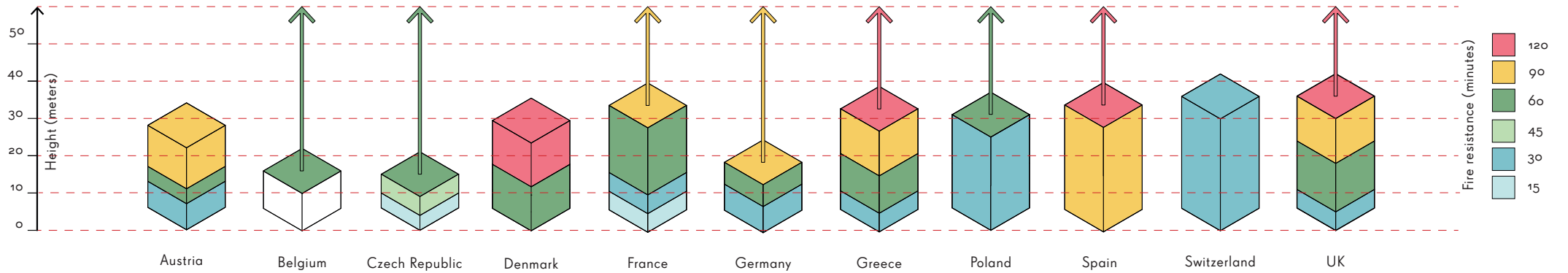


BUILD IN WOOD
Horizon 2020 Research





Structure

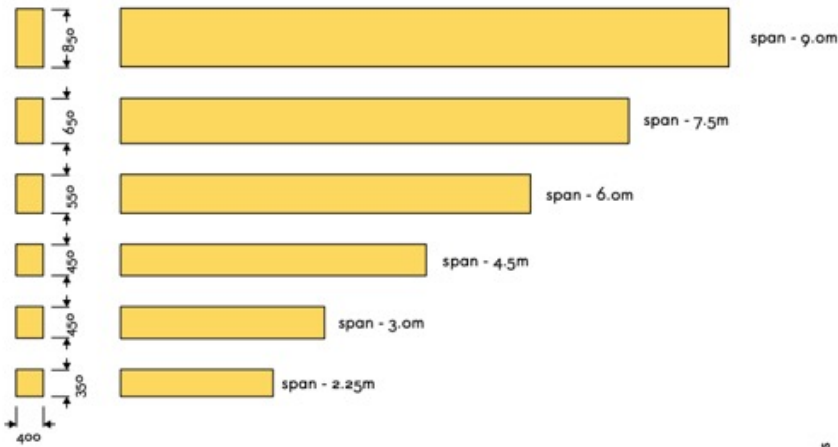


Façade

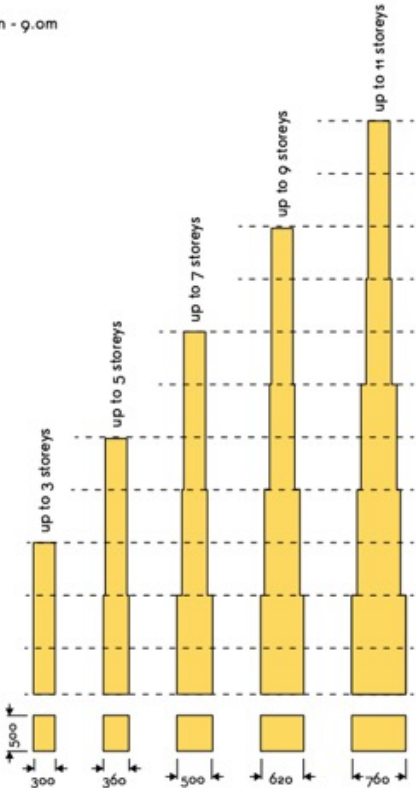
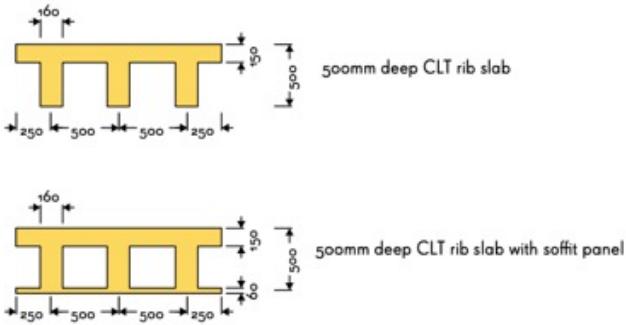
Fire codes
EU + One

COMPONENTS

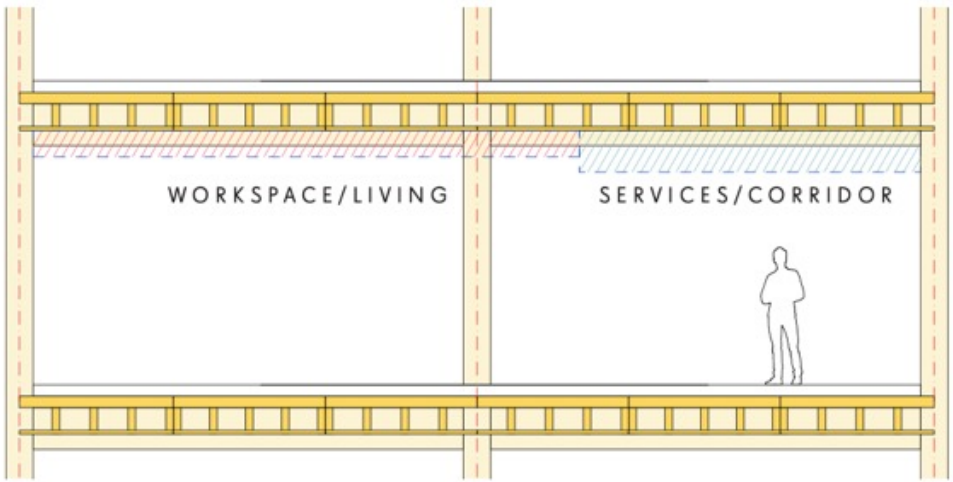
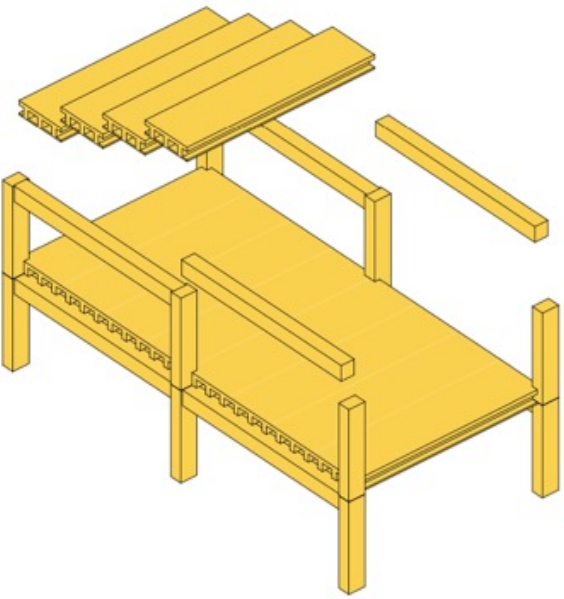
TIMBER BEAMS



TIMBER FLOOR SLABS



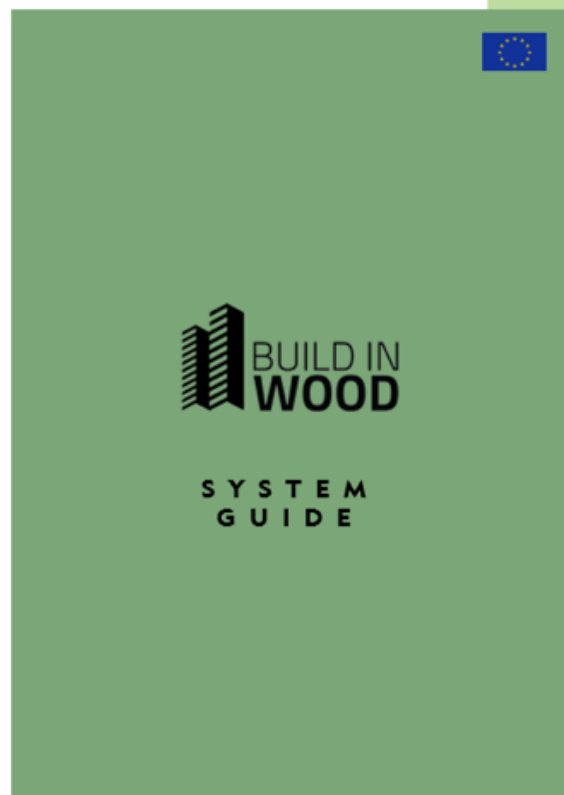
TIMBER COLUMNS



Parametric dfma
today



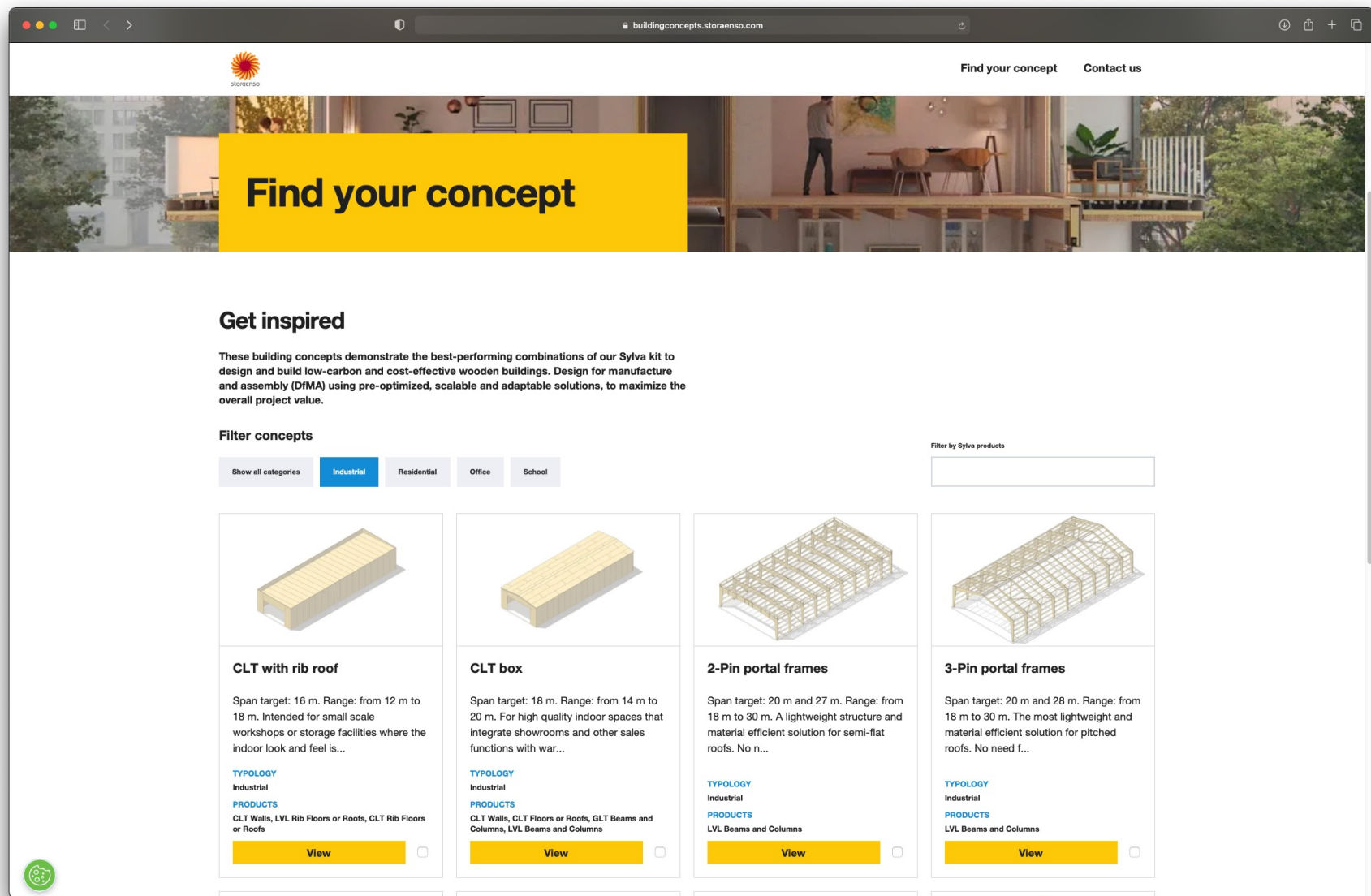
7 EUROPEAN CITIES
Pilot Projects



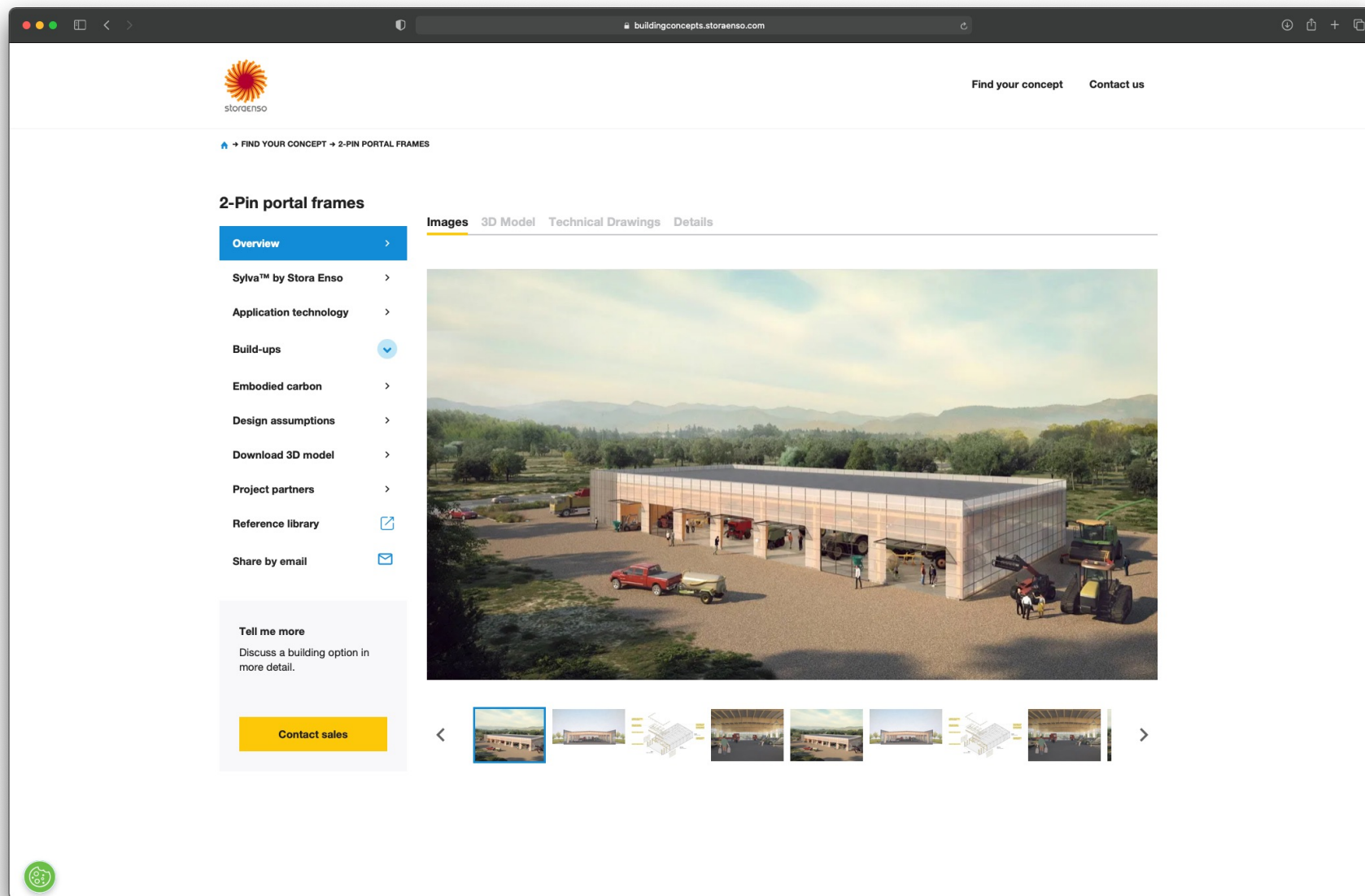
OPEN SOURCE
Build In Wood



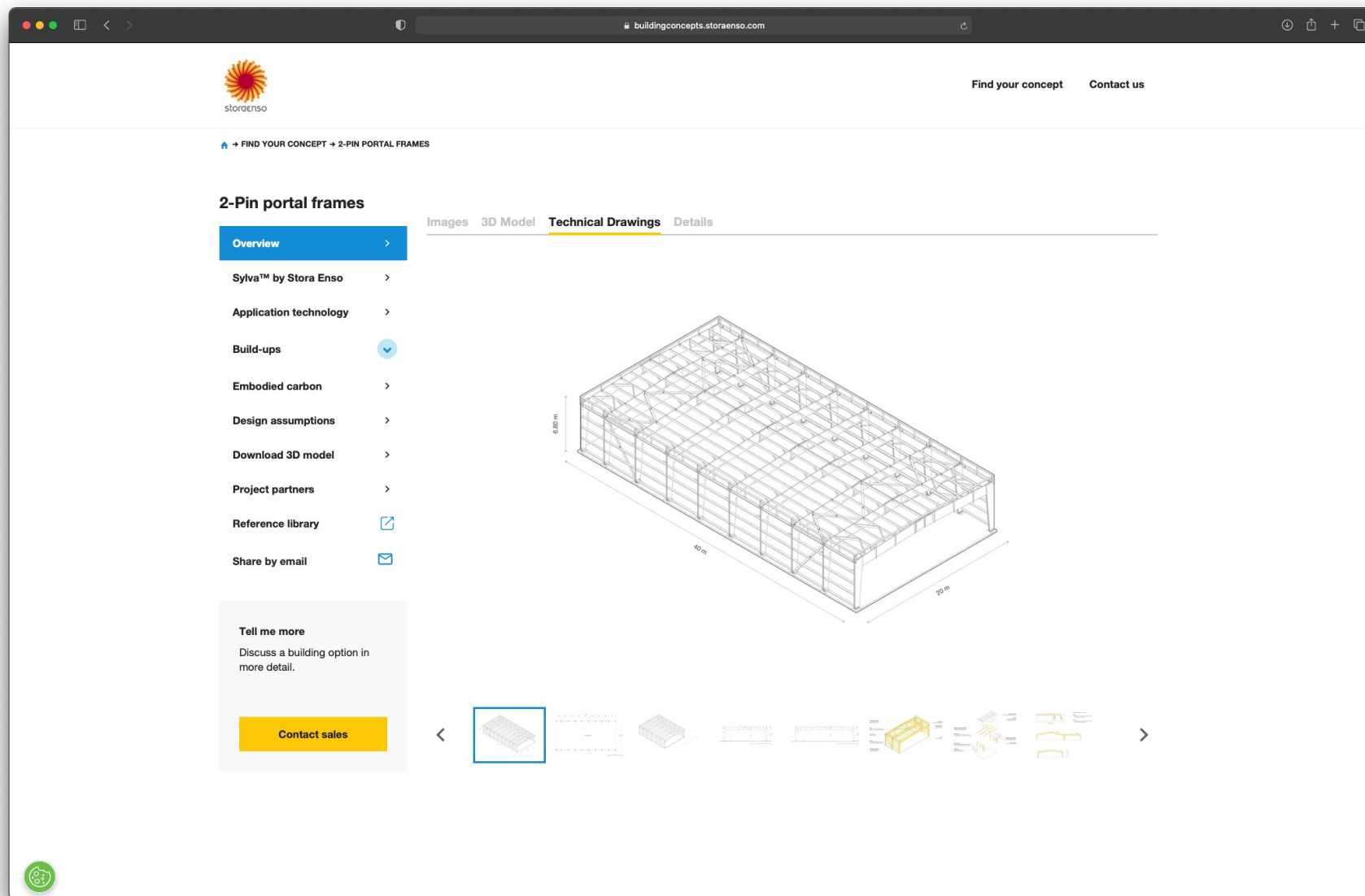




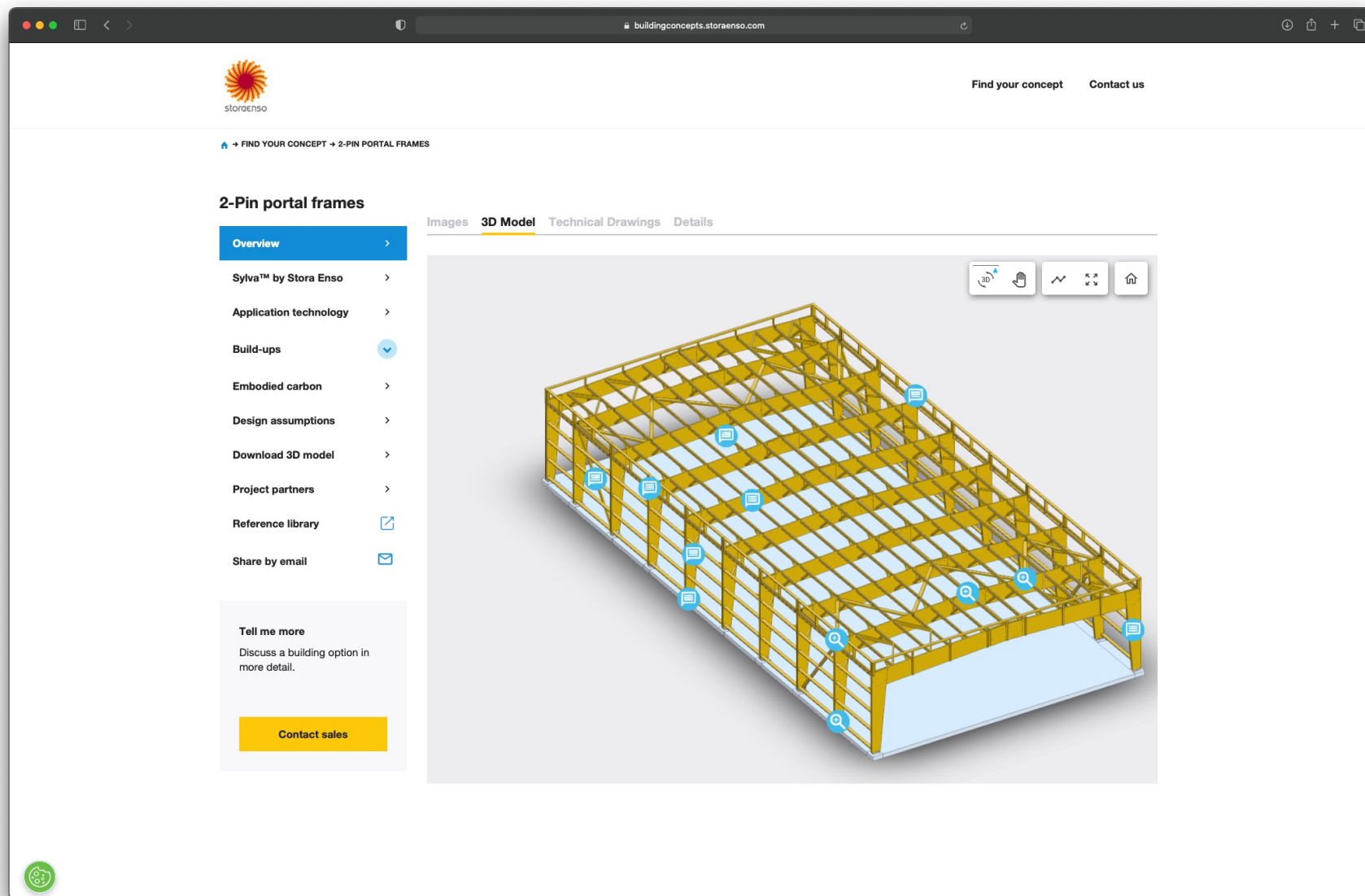
BUILDING SYSTEM



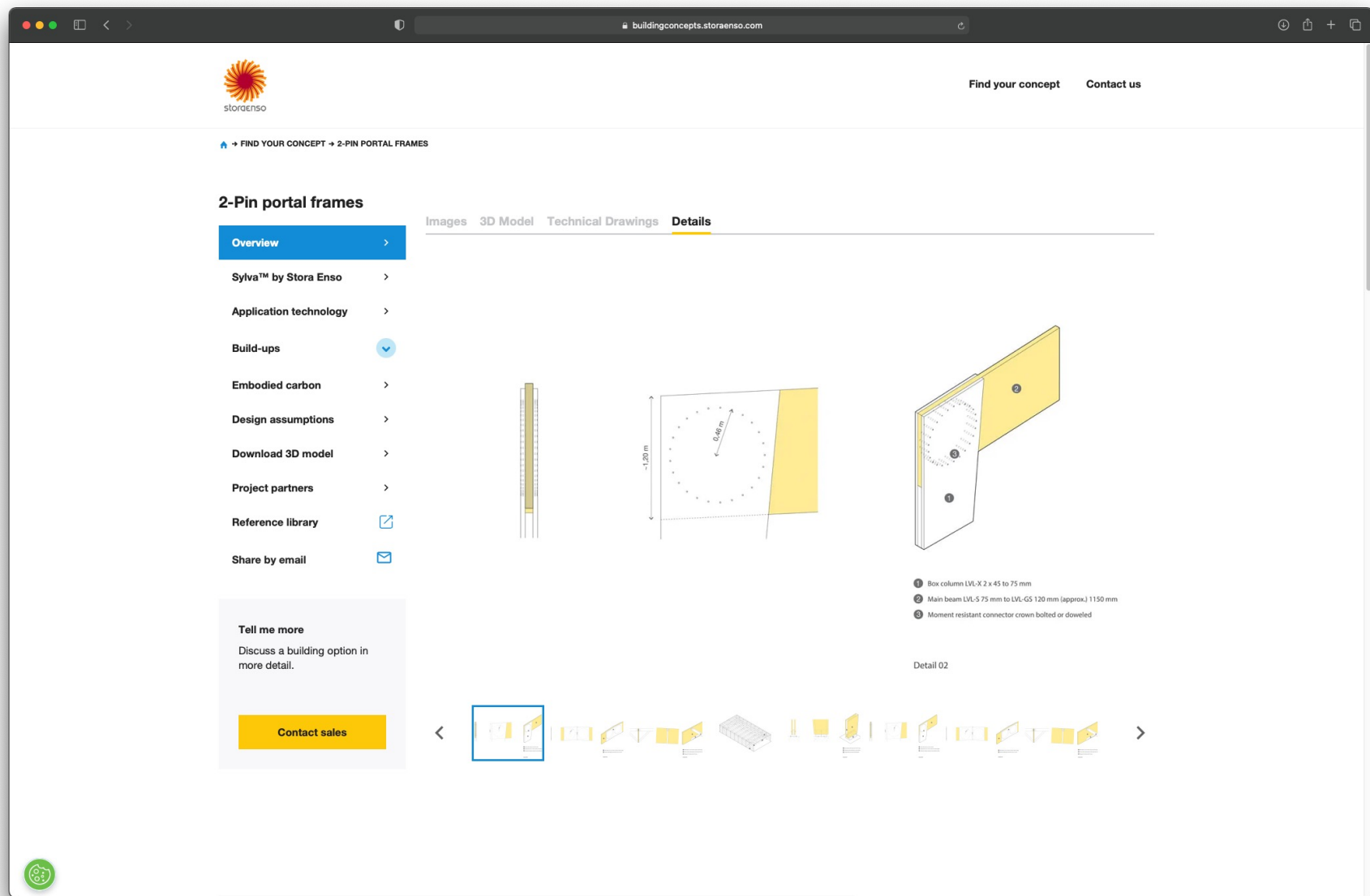
SELECTION



CONFIGURATION



REVIEW



ORDER

A REPEATABLE process
not A repetitive product

