Tall Buildings and the Nordic Context

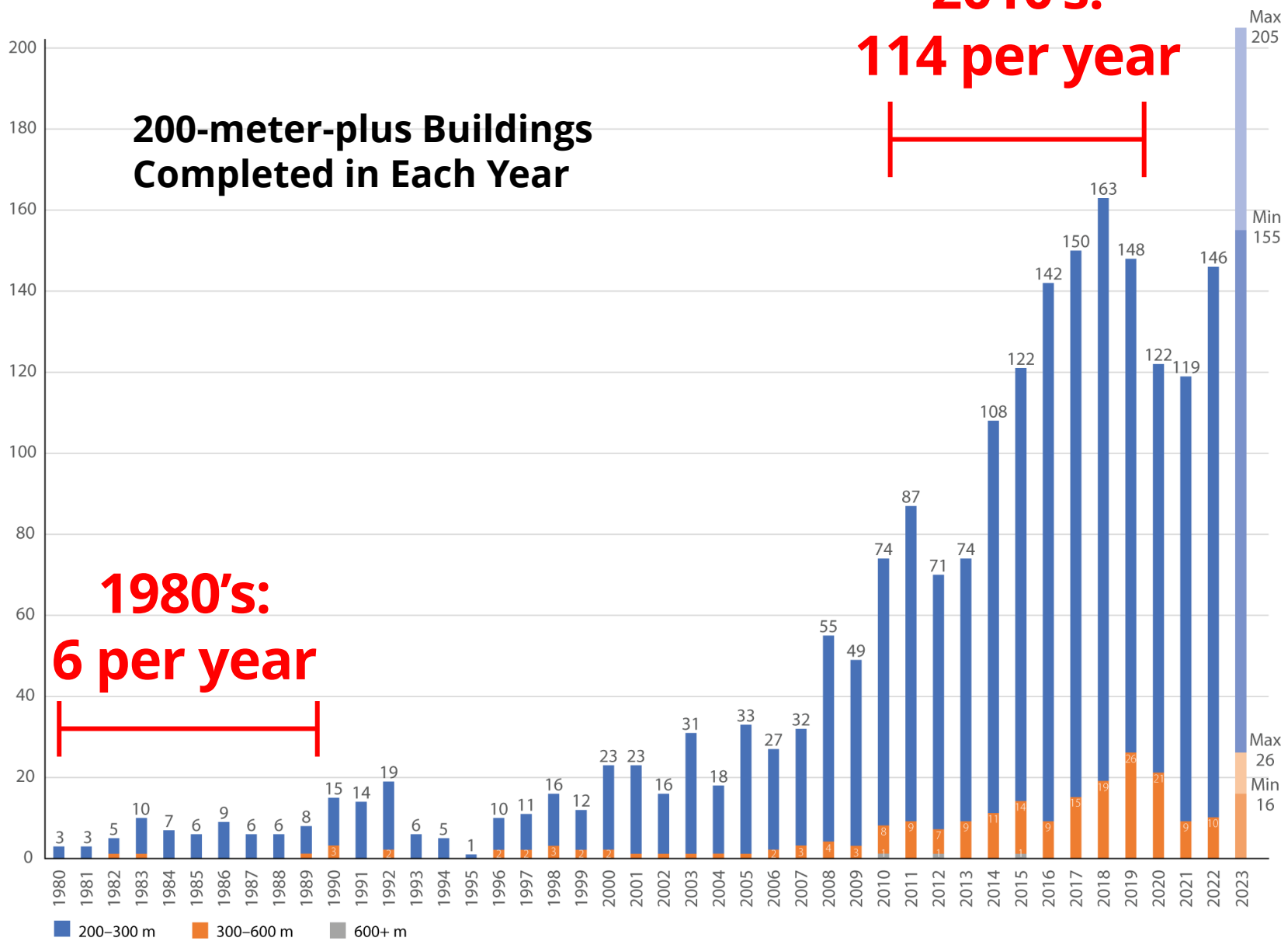
Trends, Drivers, Challenges

Helsinki, 30 January 2024

Dr. Antony Wood, CTBUH President

Council on Tall Buildings and Urban Habitat

A Global Explosion of Tall Buildings



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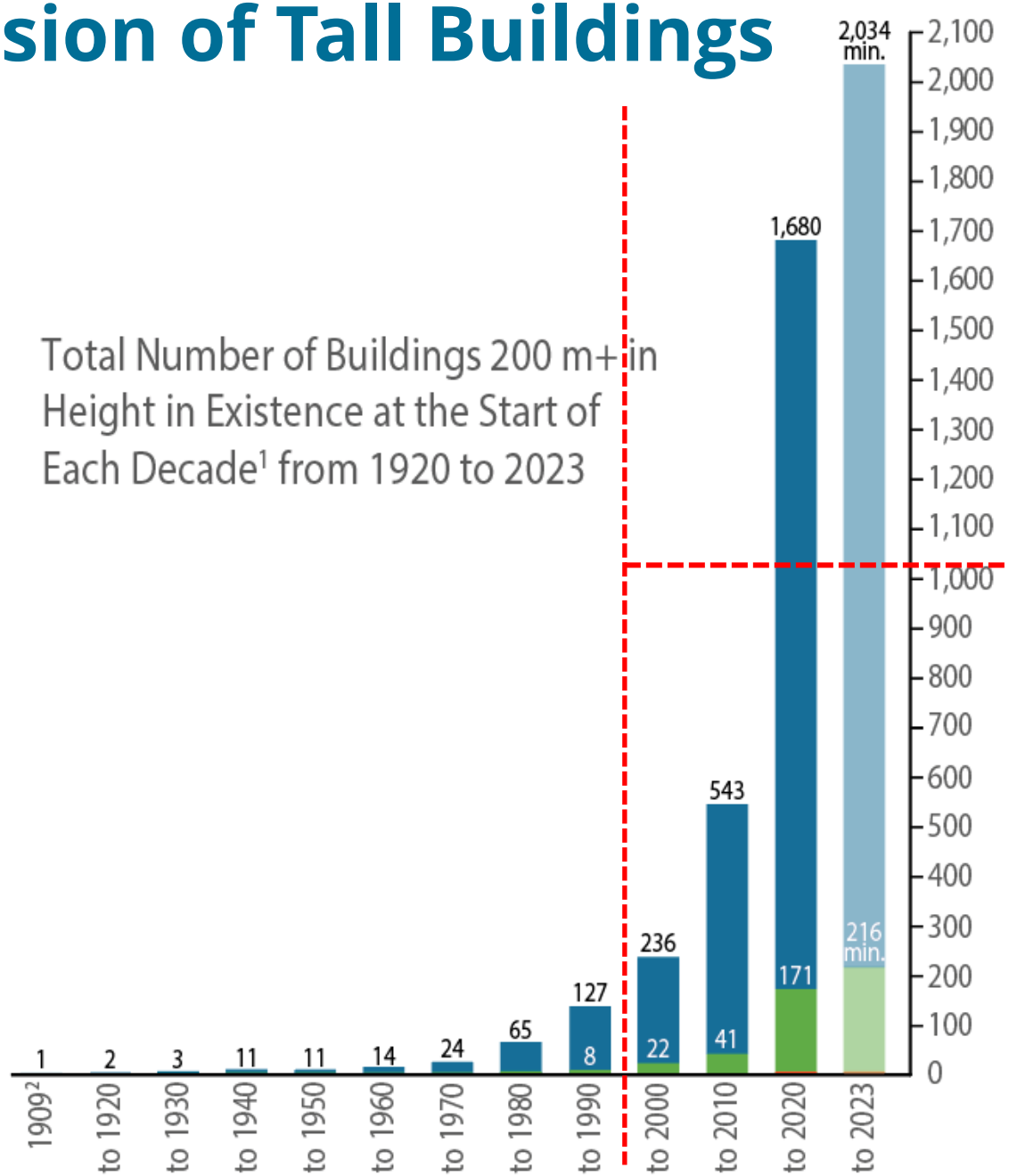


88% of all existing 200m+ buildings built since the year 2000 (1798 No.)

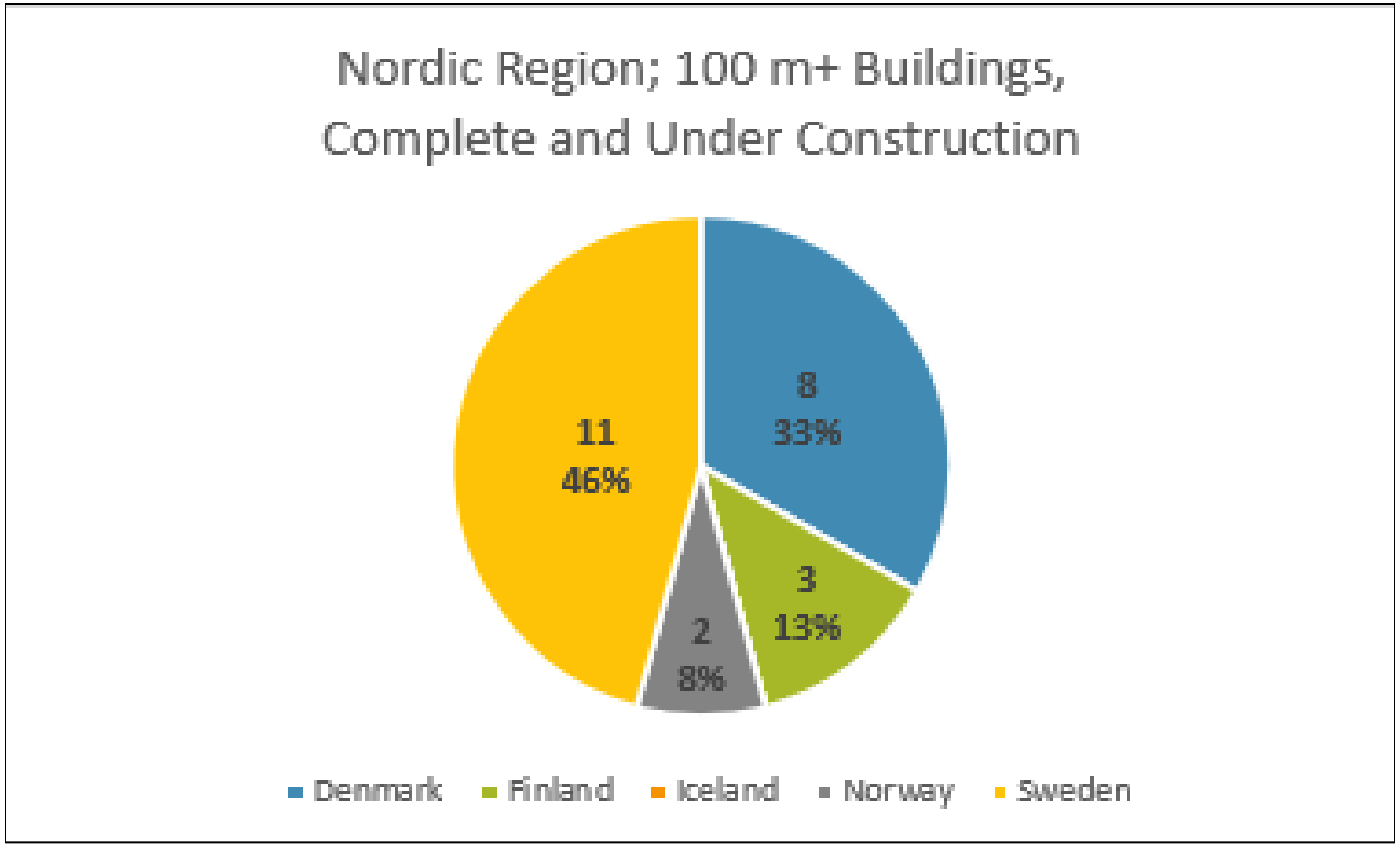
The Nordic Context …. The First 200m+ Building

Karlatornet

Göteborg, Sweden

Expected Completion: 2024
Height: 245 m (804 ft)
Floors: 73
Primary Functions: Residential / Hotel / Office

The Nordic Context … 24 Buildings over 100m+



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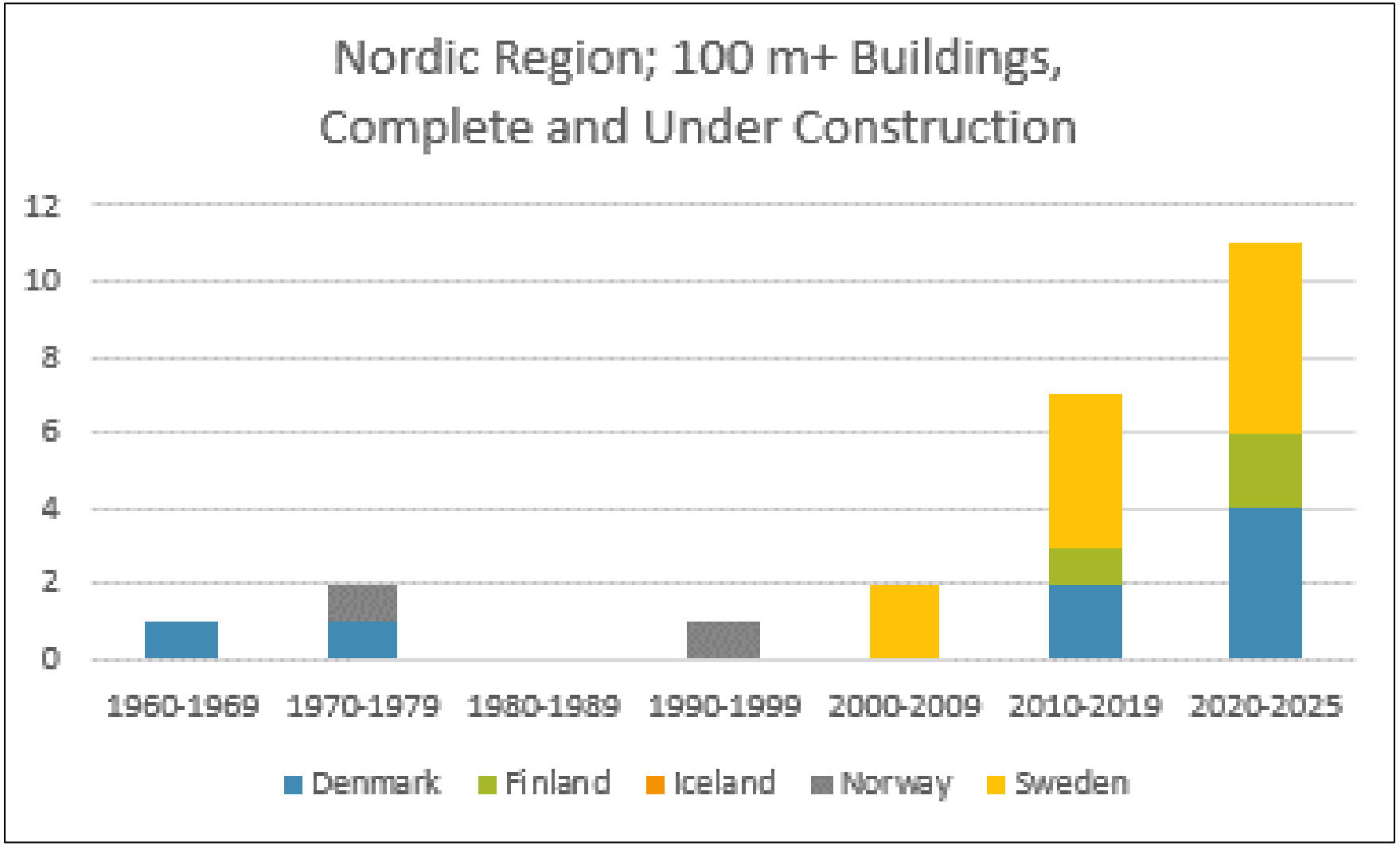


Tall Buildings and Place: The Shortfall of Tall?

SHORTFALL ONE

The Commercial Approach

Seagram Building - Global Hijack
New York City, 1958

SHORTFALL TWO

The Iconic-Sculptural Approach

RAK Financial City
UAE, 2007

A Menagerie of Icons…

Homogenization of Cities....

Shibam, Yemen

circa. 16th Century

New Paradigms in High Rise Design

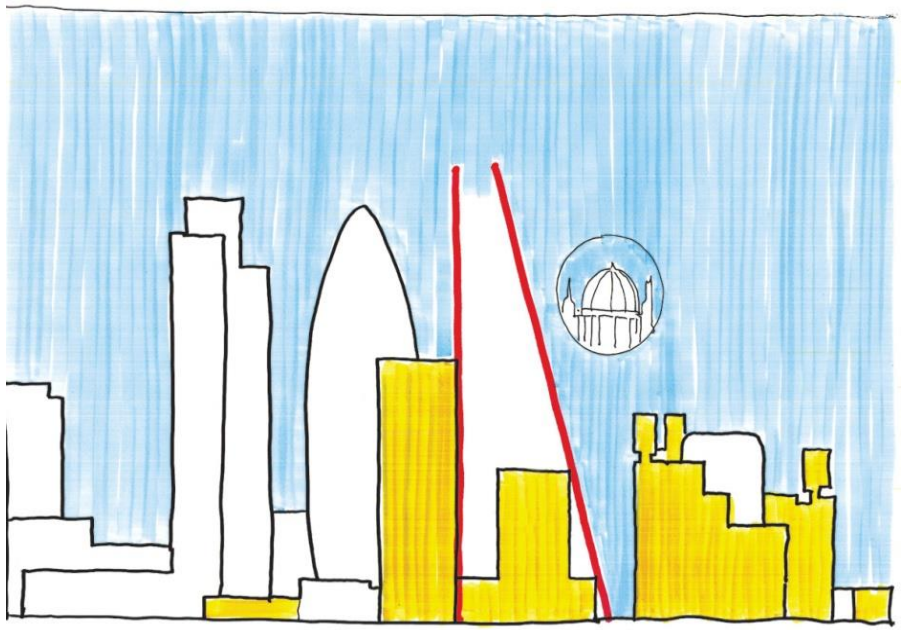
10 Design Principles for a New Vernacular for the Skyscraper

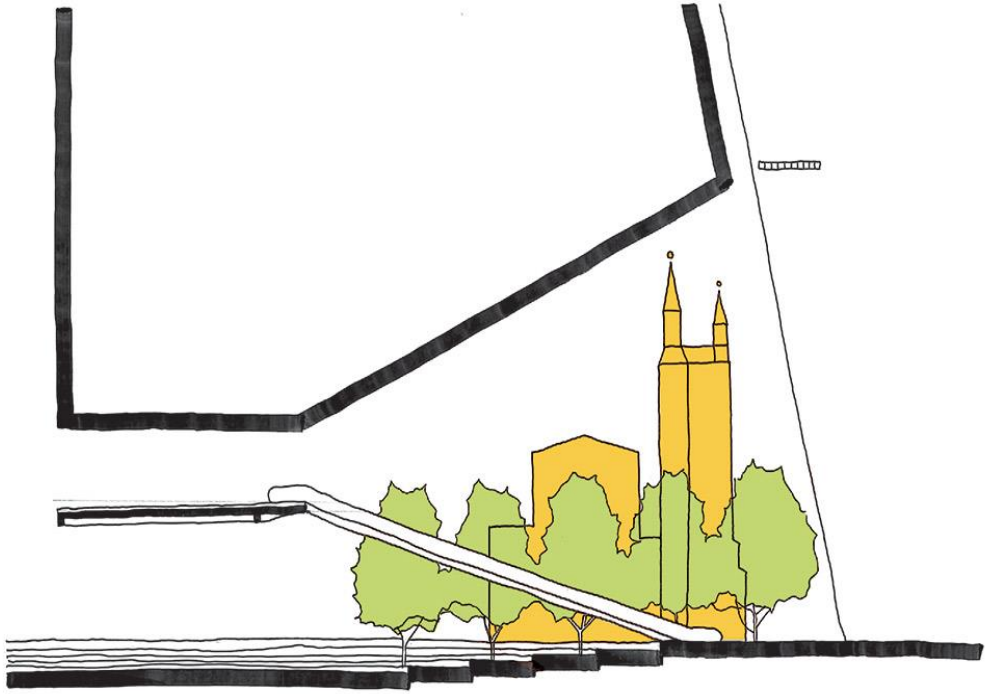
With a Nordic flavour.....

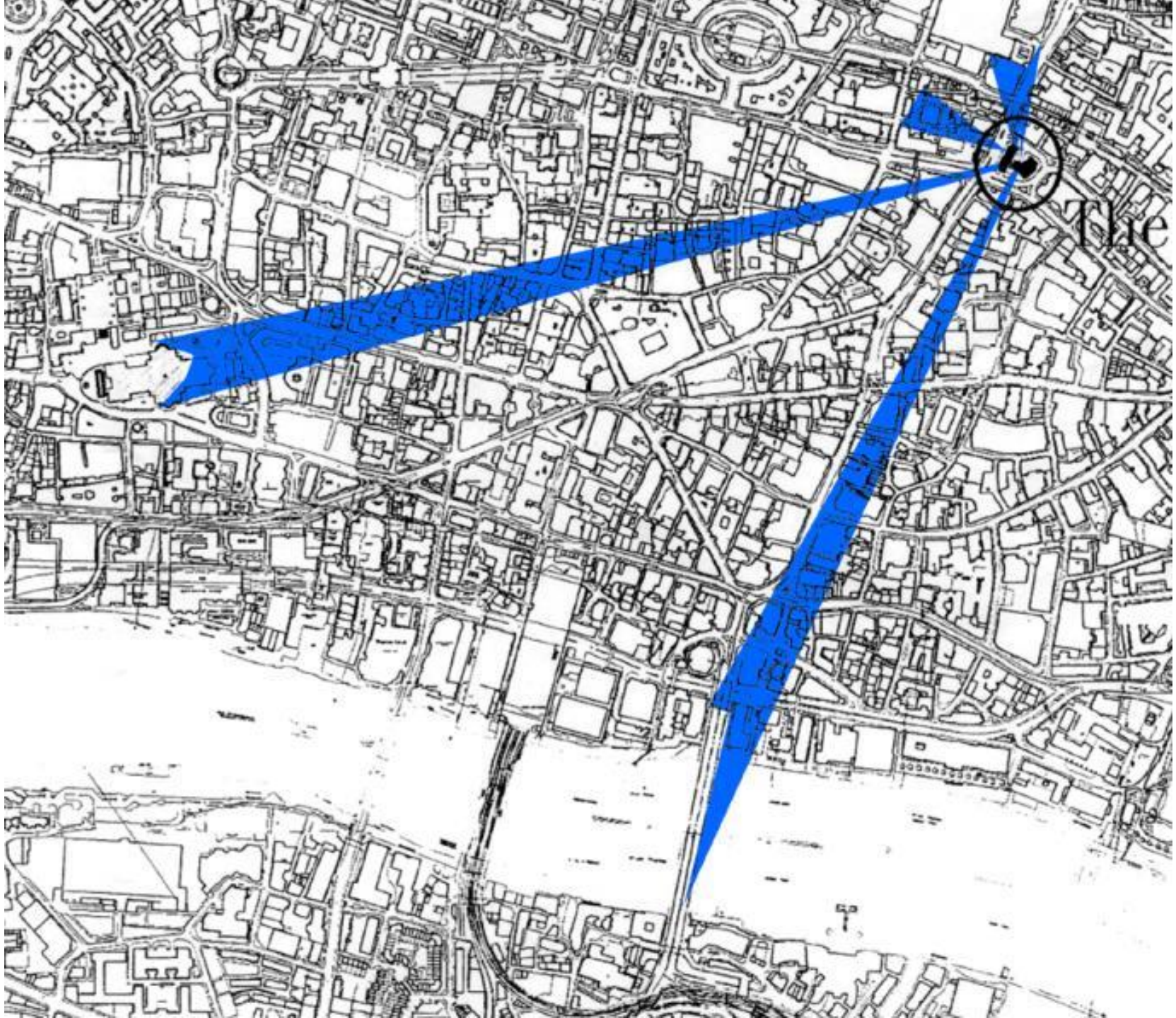
Design Principle 1:

Tall Buildings should relate to the **specific characteristics of place**; physically, environmentally and culturally

The Leadenhall Building, *London,* 2014







Pearl River Tower, *Guangzhou*
2013

Design Principle 2:

Tall Buildings should **vary with height** – in form, texture, scale (and program) – not be just vertical extrusions of an efficient floor plan

Turning Torso, *Malmo,* 2005

VIA 57 WEST, *New York City*, 2016

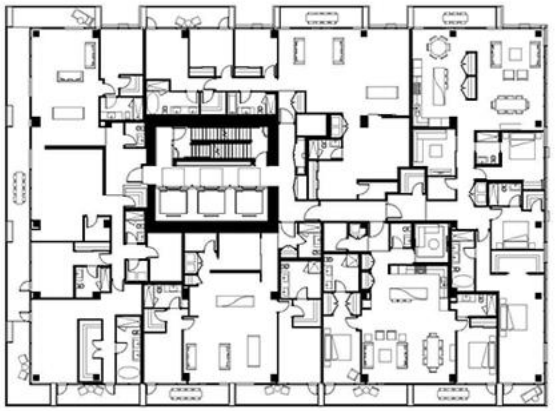
Kaktus Tower, *Copenhagen*, 2022

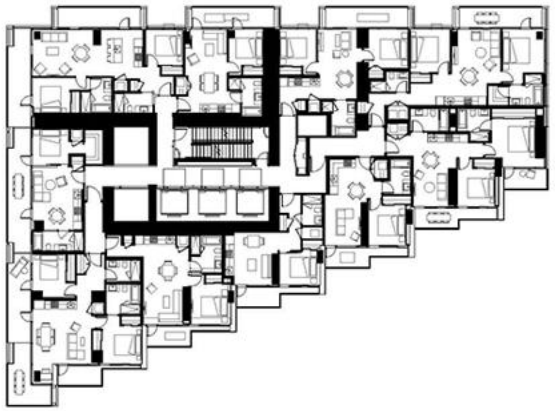
The Wave, *Vejle,* 2009

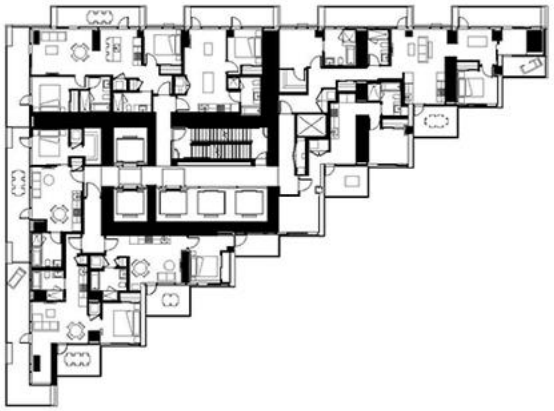
In other words……

we need to think about tall buildings in **Horizons** or **Strata**

Vancouver House
Vancouver, 2020







The environment changes with height too!

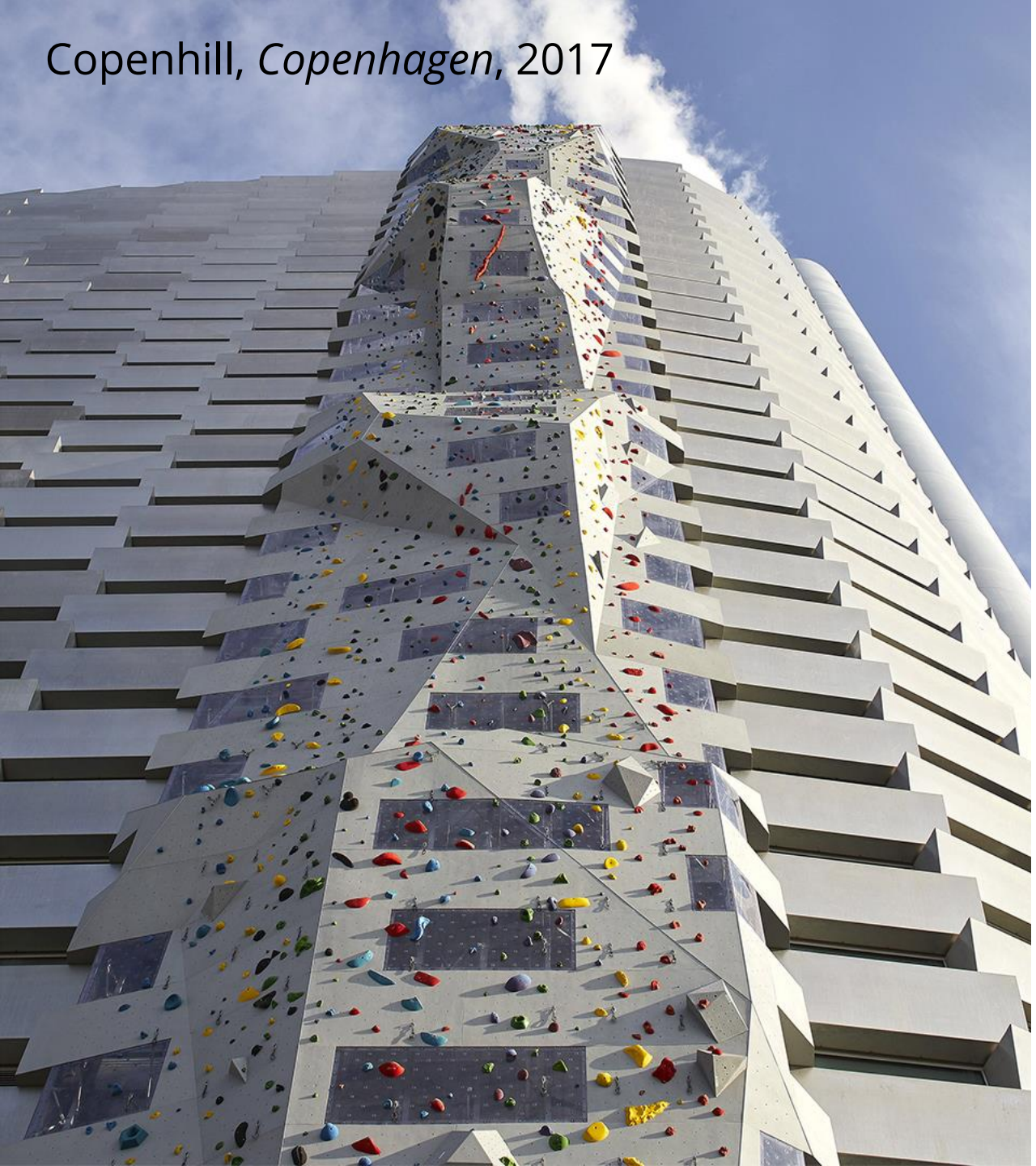
Burj Khalifa: 6-8 degrees Celsius difference in external air temperature at top of tower, compared to bottom

Burj Khalifa, *Dubai*
2010

Design Principle 3:

Tall Buildings should **maximize layers of usage**
on all systems and materials

Copenhill, *Copenhagen*, 2017



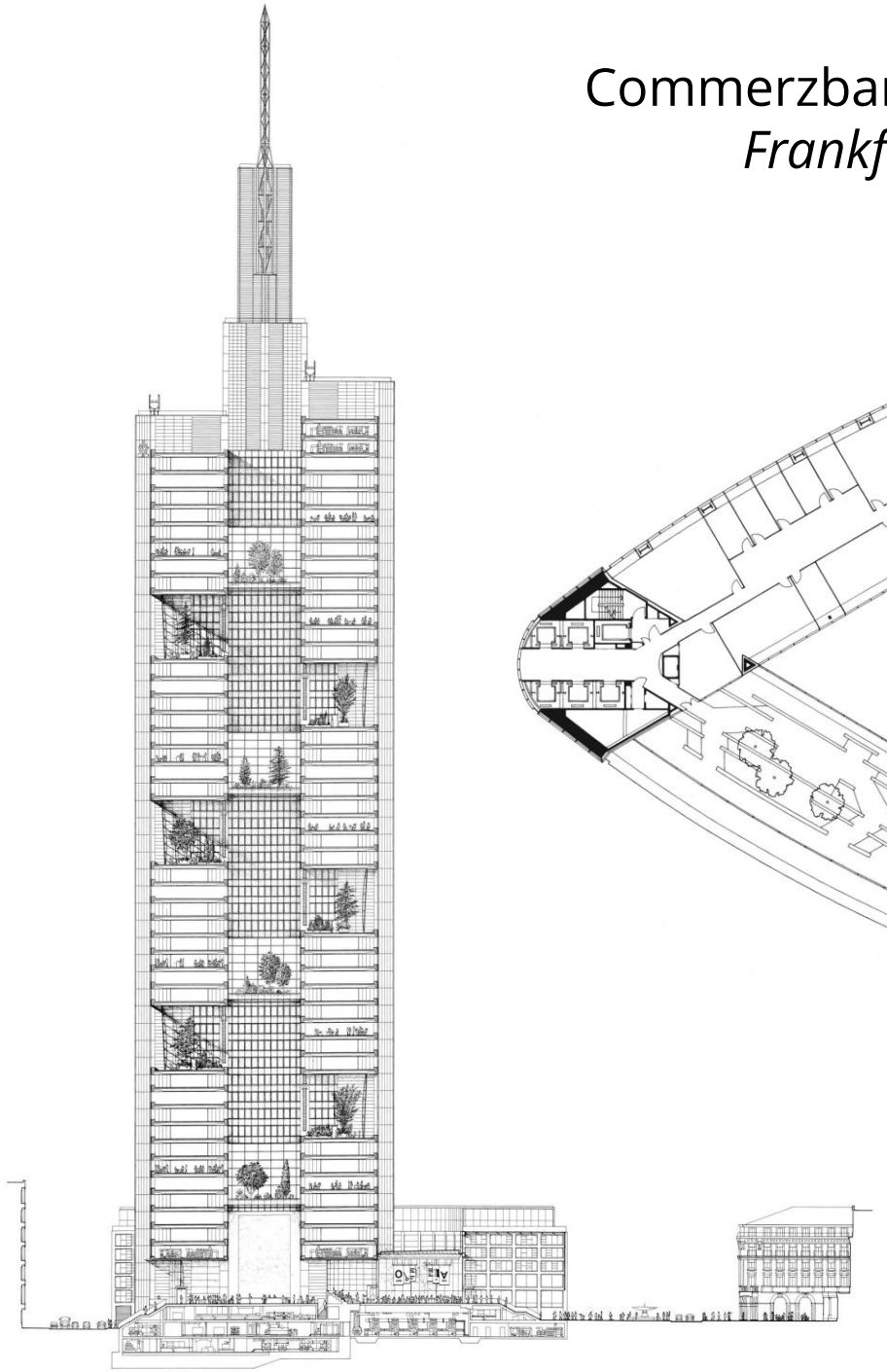
Copenhill, *Copenhagen*, 2017

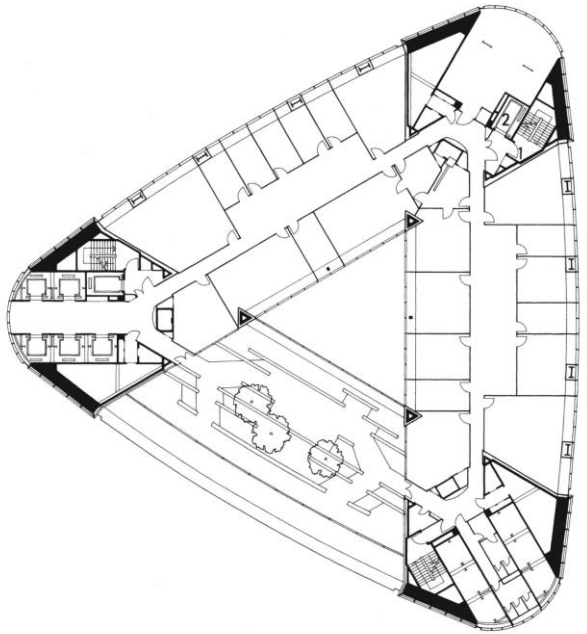
360 Ascent, *Trbovlje*, 2020

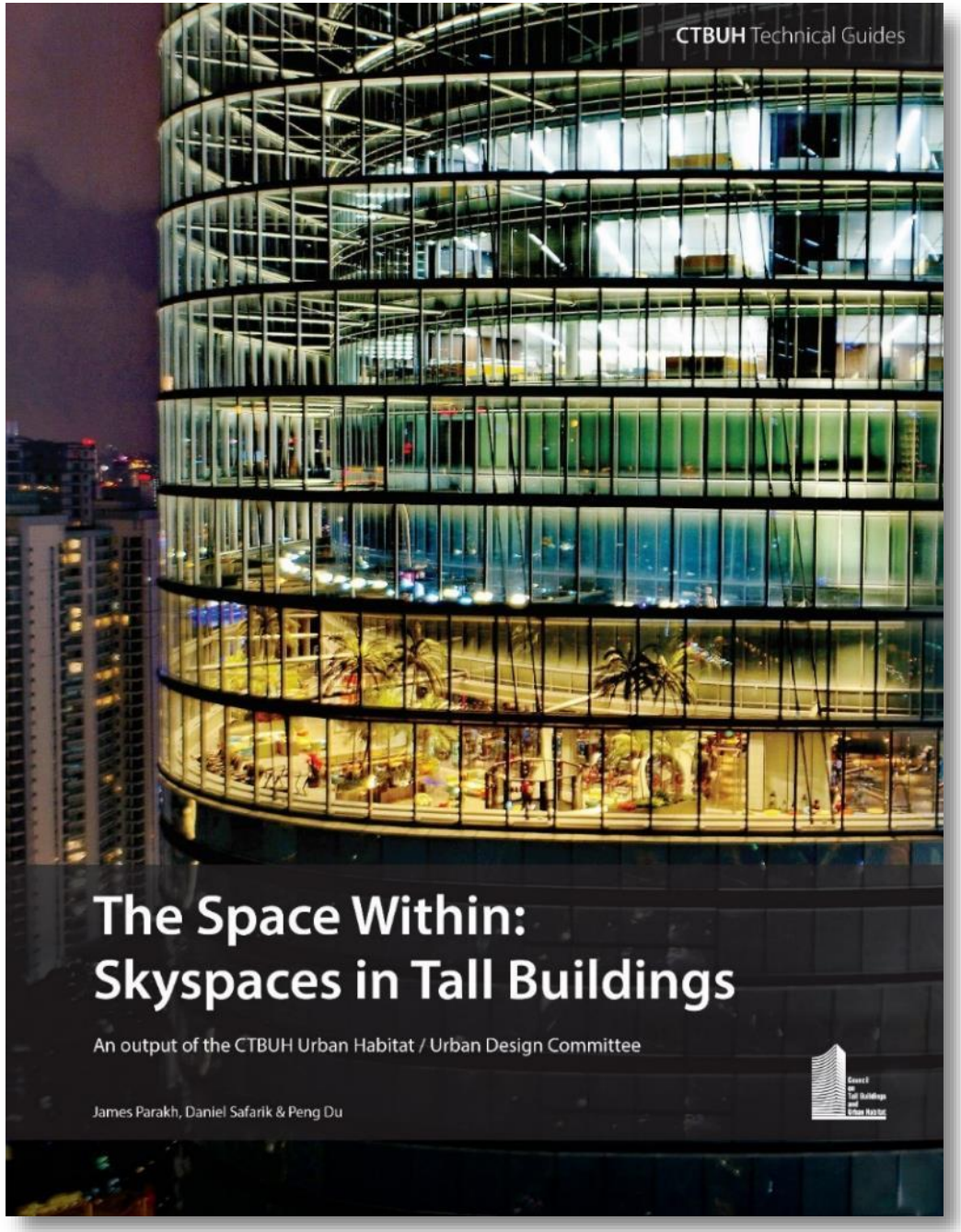
Design Principle 4:

Tall Buildings should provide **significant communal, open, recreational space**

Commerzbank Tower
Frankfurt, 1997

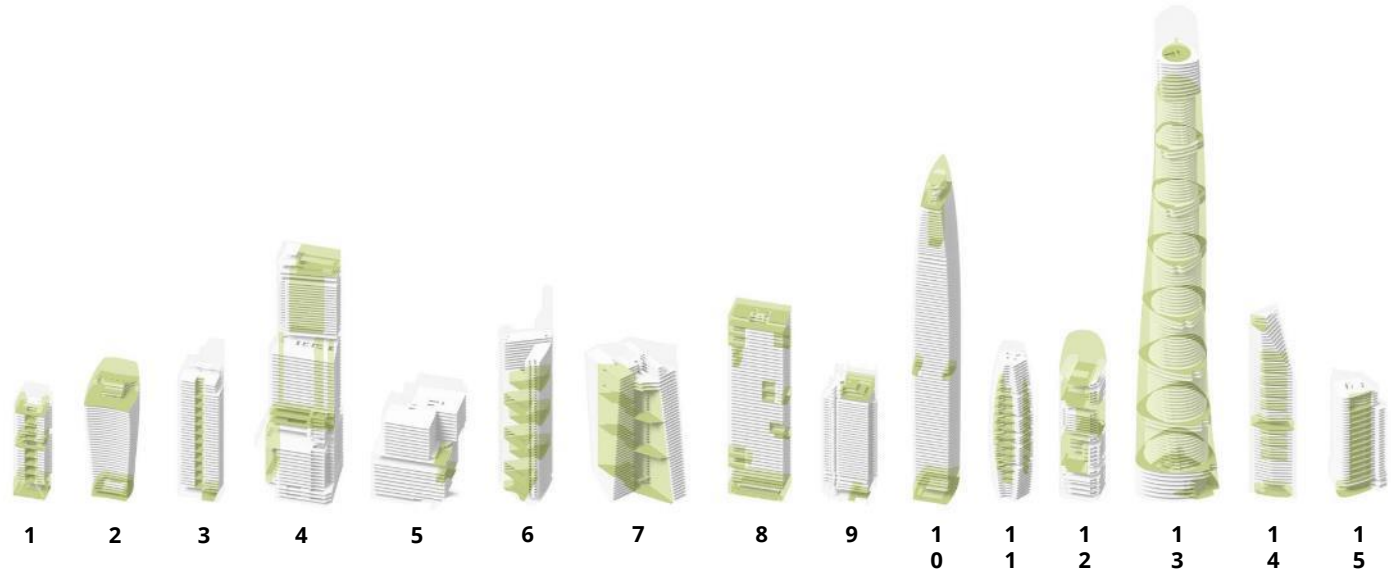






The Space Within: Skyspaces in Tall Buildings

Technical Guide, 204 pages



1. 8 CHIFLEY *Sydney*
140.5 m; 9 Skyspaces, 13.30% of TTV

2. 20 FENCHURCH *London*
160.1 m; 1 Skyspace, 14.07% of TTV

3. 110 BISHOPSGATE *London*
230.0 m; 12 Skyspaces, 3.89% of TTV

4. ABENO HARUKAS *Osaka*
300.0 m; 1 Skyspace, 2.15% of TTV

5. ANN & ROBERT H. LURIE CHILDREN'S HOSPITAL OF CHICAGO *Chicago*
136.2 m; 1 Skyspace, 0.76% of TTV

6. COMMERZBANK TOWER *Frankfurt*
259.0 m; 9 Skyspaces, 13.85% of TTV

7. EUROPEAN CENTRAL BANK *Frankfurt*
183.7 m; 2 Skyspaces, 14.21% of TTV

8. FKI TOWER *Seoul*
245.5 m; 15 Skyspaces, 7.14% of TTV

9. GRATTACIELO INTESA SANPAOLO *Turin*
166.3 m; 1 Skyspace, 4.26% of TTV

10. KK100 *Shenzhen*
441.8 m; 4 Skyspaces, 3.90% of TTV

11. MODE GAKUEN COCOON TOWER *Tokyo*
203.7 m; 36 Skyspaces, 8.56% of TTV

12. OASIA HOTEL DOWNTOWN *Singapore*
190.9 m; 4 Skyspaces, 36.04% of TTV

13. SHANGHAI TOWER *Shanghai*
632.0 m; 22 Skyspaces, 20.64% of TTV

14. THE TOWER AT PNC PLAZA *Pittsburgh*
166.0 m; 13 Skyspaces, 4.67% of TTV

15. TORRE REFORMA *Mexico City*
246.0 m; 10 Skyspaces, 7.03% of TTV

Design Principle 5:

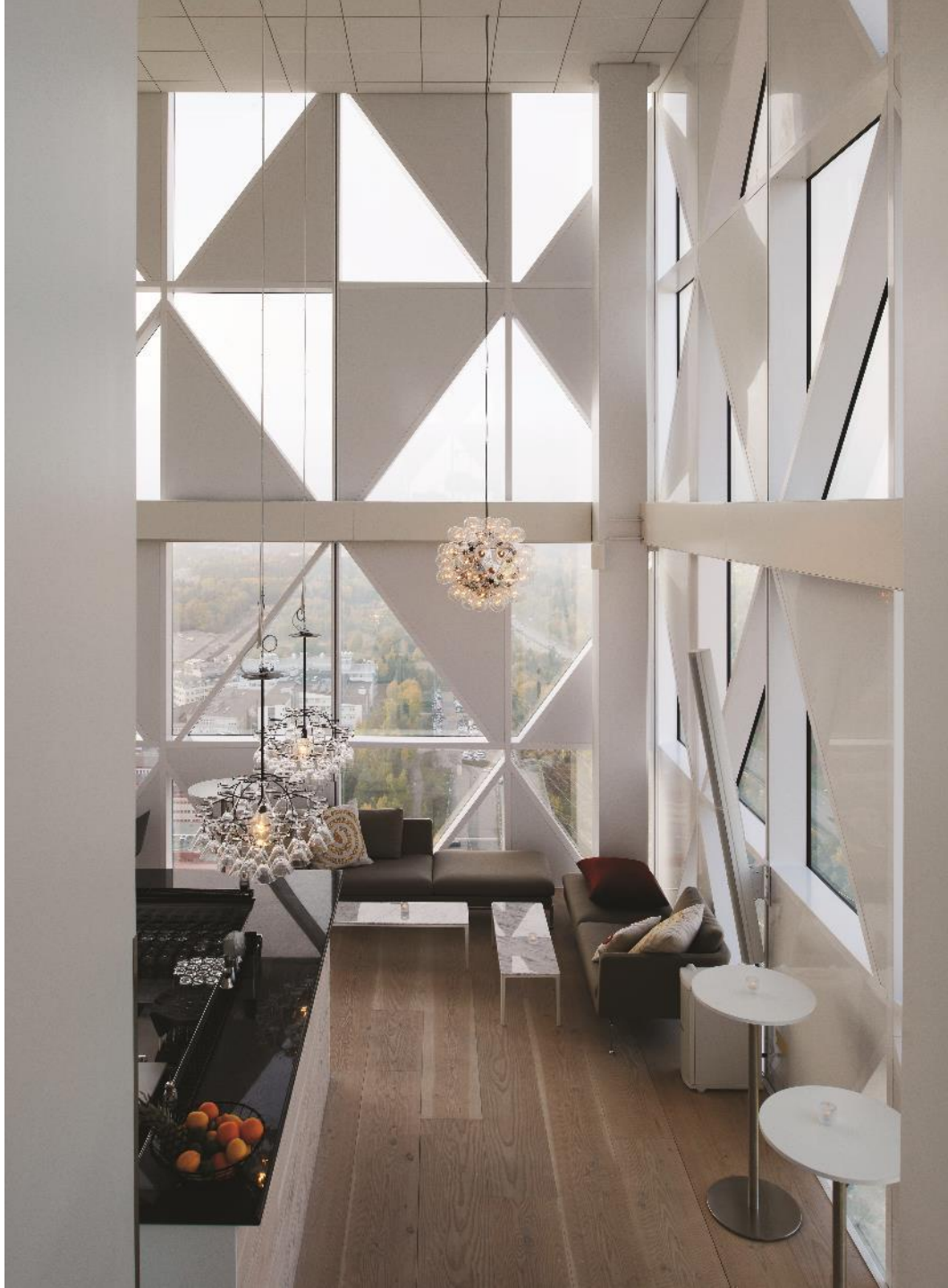
Tall Buildings should introduce more **façade opacity** (and variation / texture) in skin/envelope

Hotel Alsik, *Sønderborg*, 2019

© Hufton + Crow

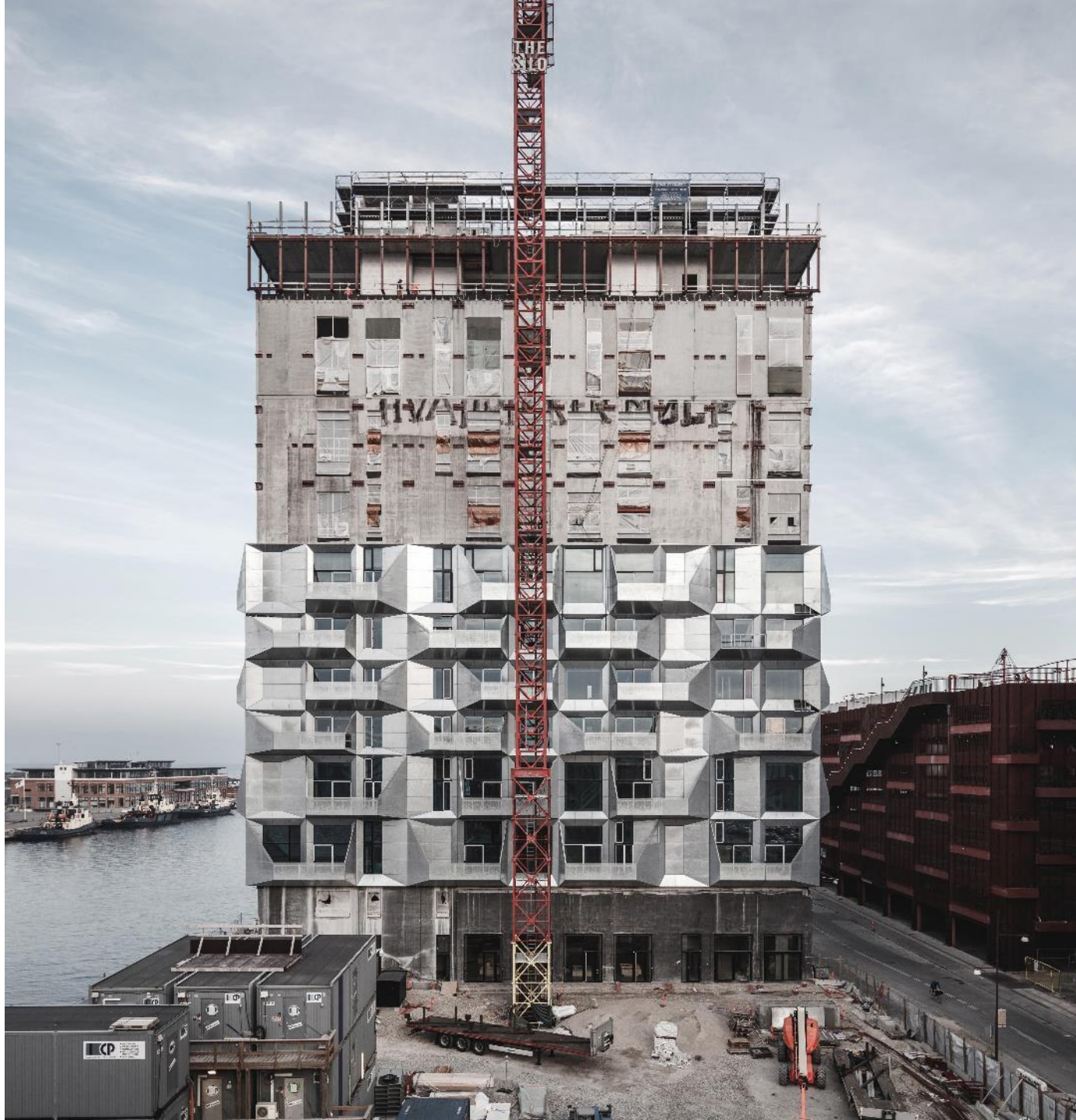
Nordbro Tower, *Copenhagen*, 2019

Victoria Tower, *Stockholm,* 2011



The Silo, *Copenhagen*, 2017

The Silo, *Copenhagen,* 2017



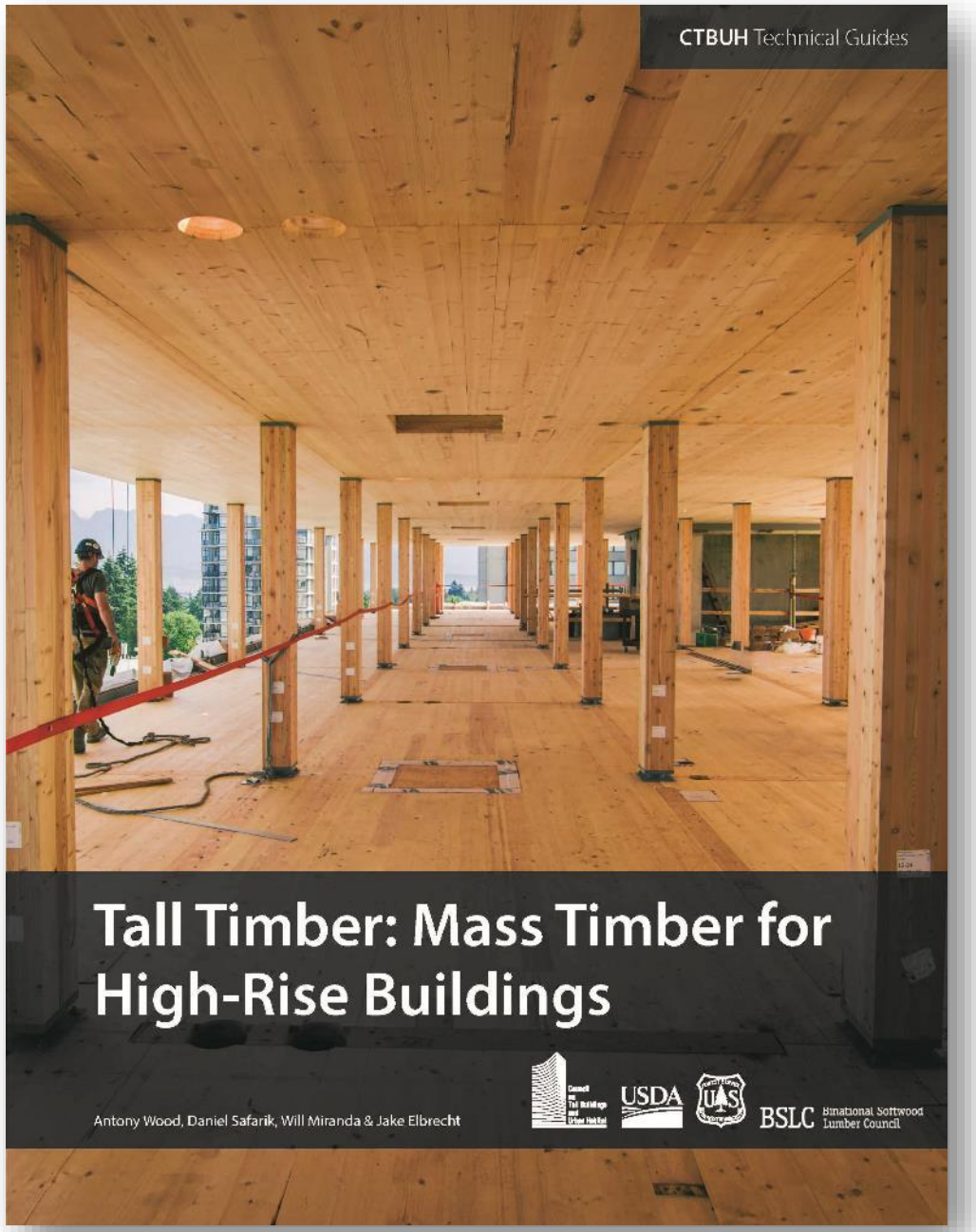
Design Principle 6:

Tall Buildings should **maximise use of timber,**
both internally and externally (facades)

Mjøstårnet, *Brumunddal*, 2019

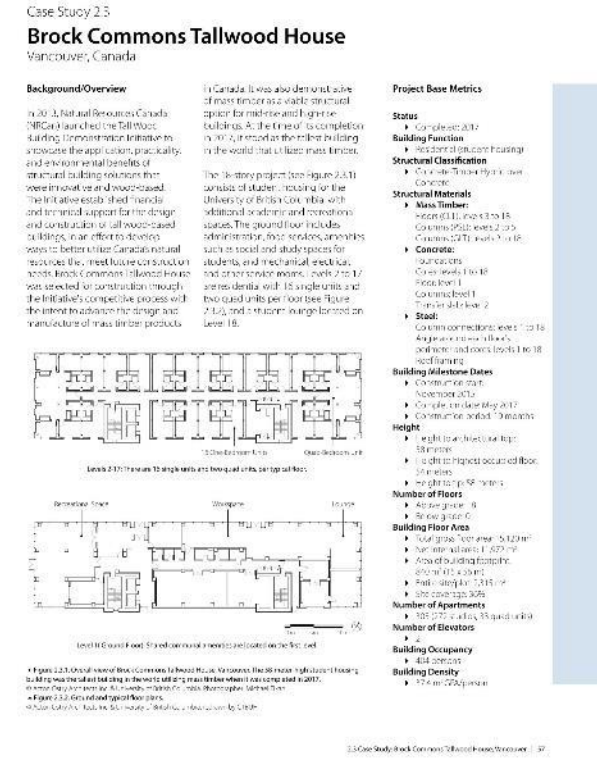
Sara Kulturhus, *Skellefteå*, 2021

© White Arkitekter



Tall Timber:
Mass Timber for High-Rise Buildings

Technical Guide, 334 pages


Case Study 2.5

Brock Commons Tallwood House

Vancouver, Canada

Background/Overview

Project Base Metrics

Status

Building Function

Structural Classification

Structural Materials

Building Milestone Dates

Height

Number of Floors

Building Floor Area

Number of Apartments

Number of Elevators

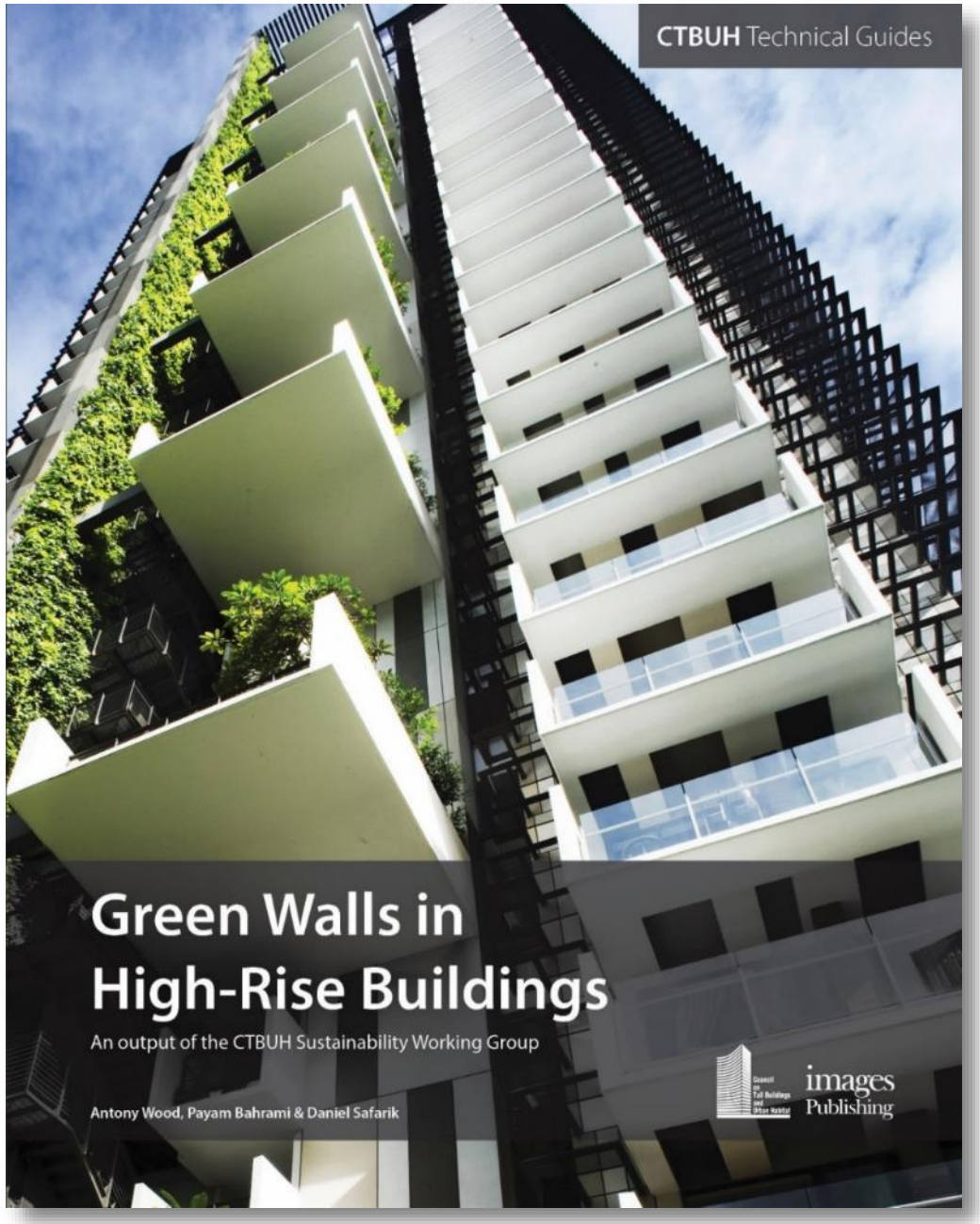
Building Occupancy

Building Density

Design Principle 7:

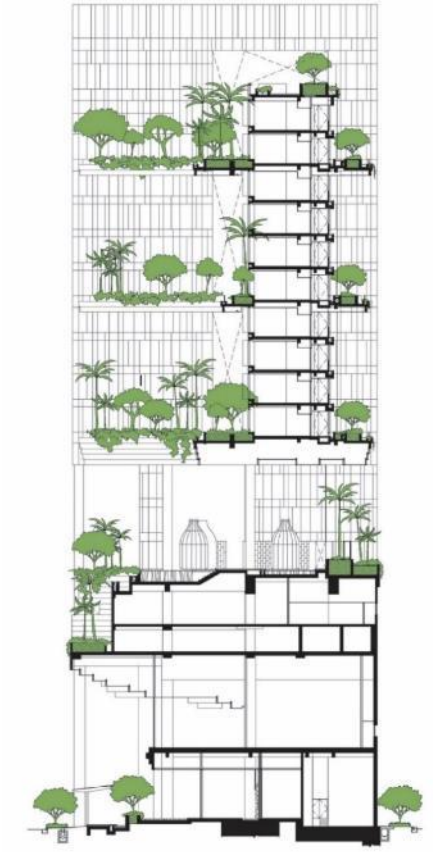
Tall Buildings should embrace **organic vegetation**
as an essential part of the material palette

Bosco Verticale, *Milan*, 2014



Green Walls in High-Rise Buildings

Technical Guide, 300 pages



Pasona Headquarters, *Tokyo*, 2011

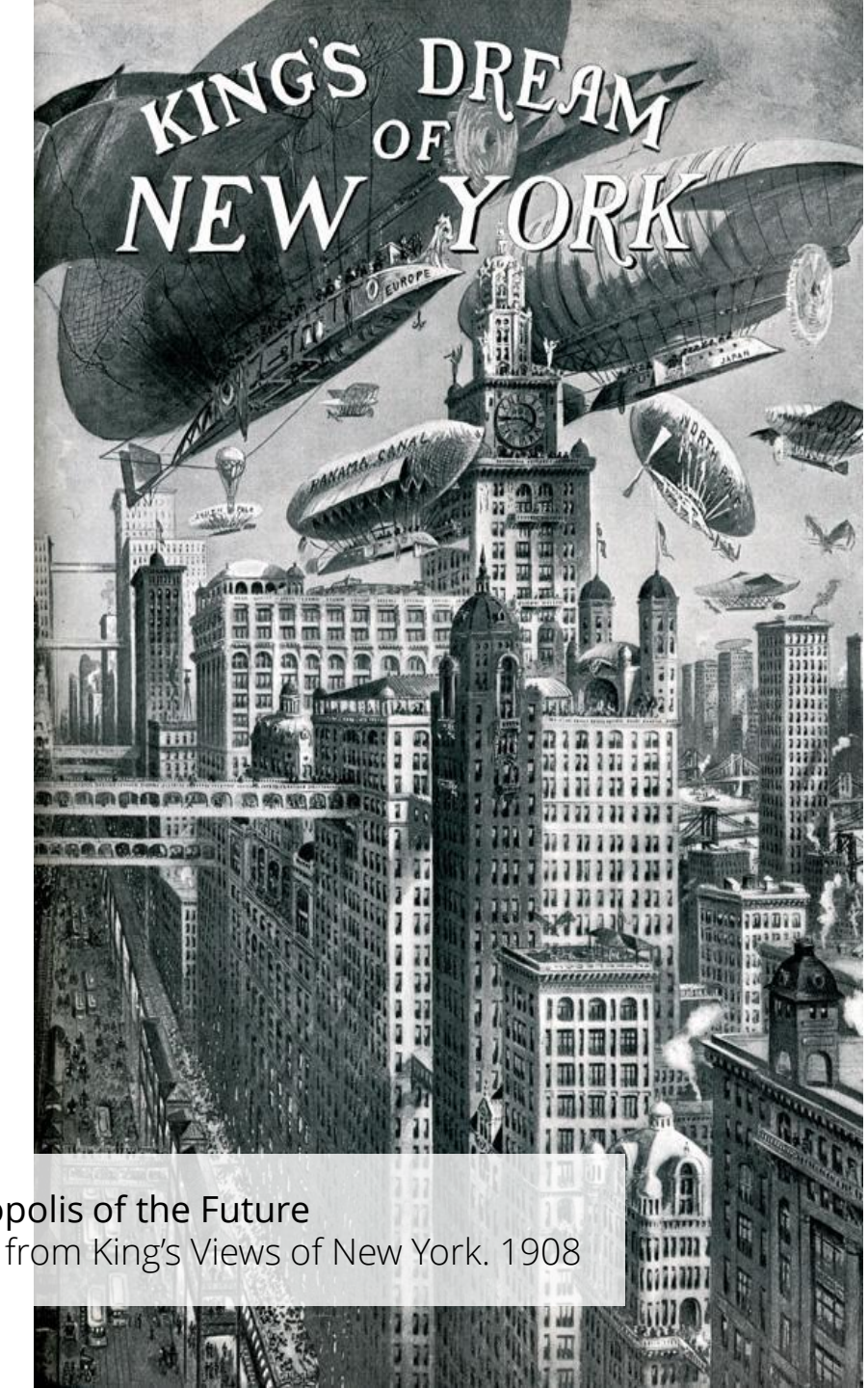
Typical Double Skin Façade

KMC Corporate Office, *Hyderabad*, 2012

Design Principle 8:

Introduce physical, circulatory and programmatic connections – **skybridges**

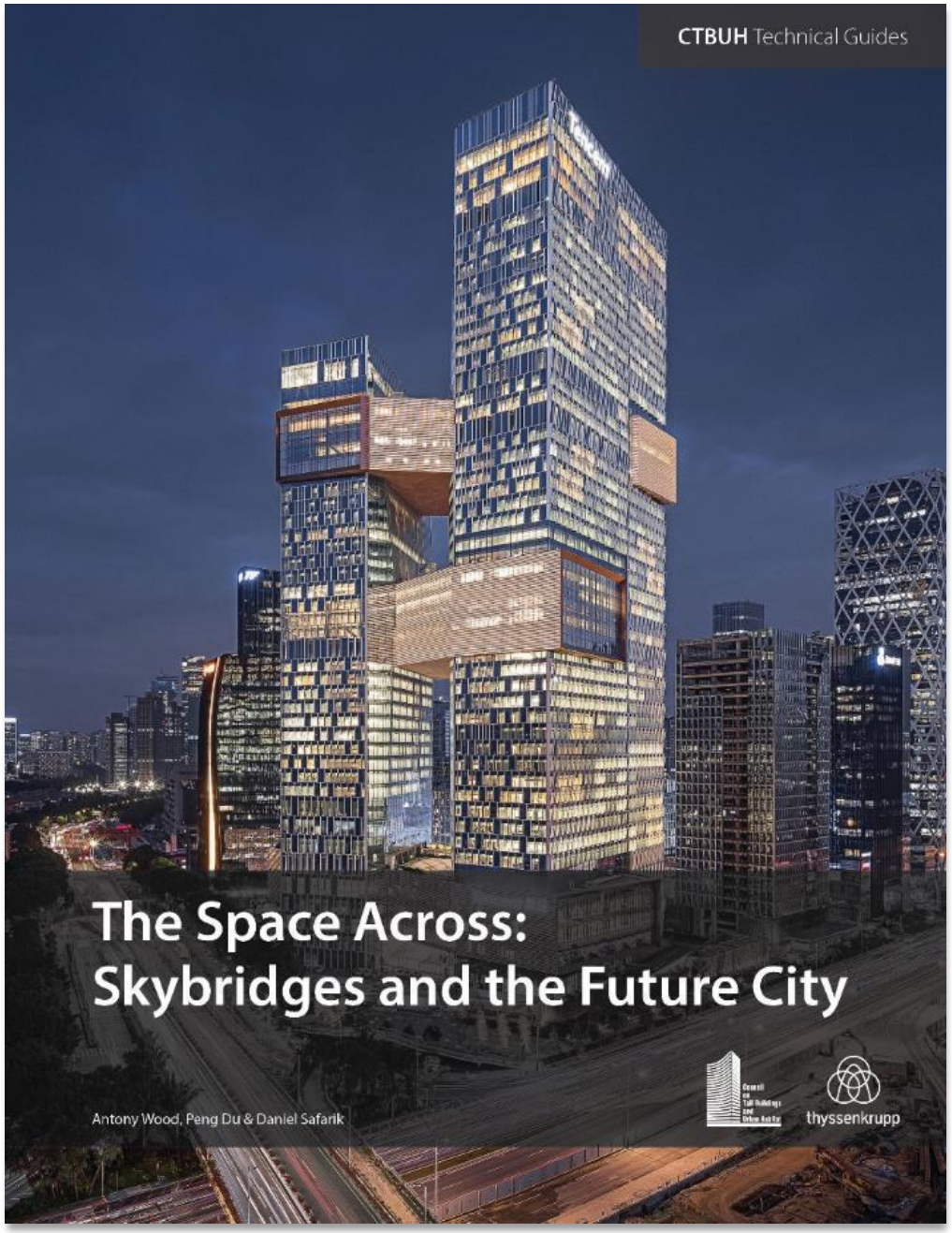
Bella Sky Hotel,
Copenhagen, 2011



The Cosmopolis of the Future
Harry Petit, from King's Views of New York. 1908

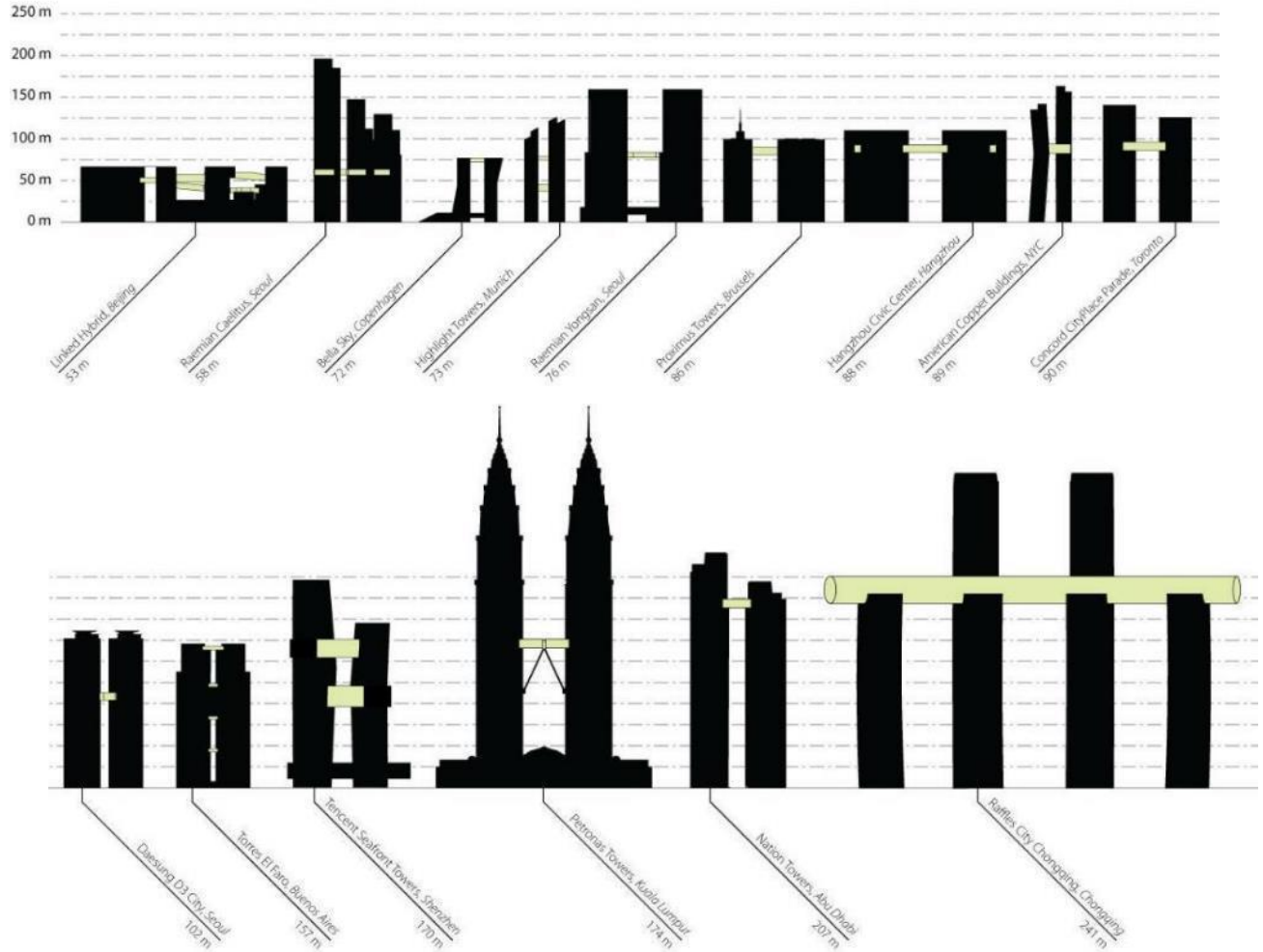
Metropolis
Erich Kettelhut, still from
Fritz Lang's film, 1927

The Fifth Element
Luc Besson, still from
the film, 1997



The Space Across: Skybridges and the Future City

Technical Guide, 300 pages



The Pinnacle@Duxton, *Singapore*, 2010

The Pinnacle@Duxton, *Singapore*, 2010

Design Principle 9:

Tall Buildings should see the **Roof Plane** as the most valuable space (and place) in the whole building

A Typical Tall Building Rooftop

Skypark, *Hong Kong*, 2016

The Pakubuwono Spring, *Jakarta,* 2018

Lighthouse 2.0, *Aarhus*, 2022

Marina Bay Sands, *Singapore*, 2010

Marina Bay Sands, *Singapore*, 2010

The Interlace, *Singapore*, 2013

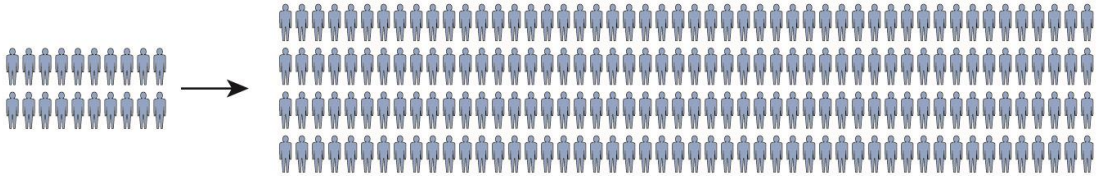

The Interlace, *Singapore*, 2013

Design Principle 10:

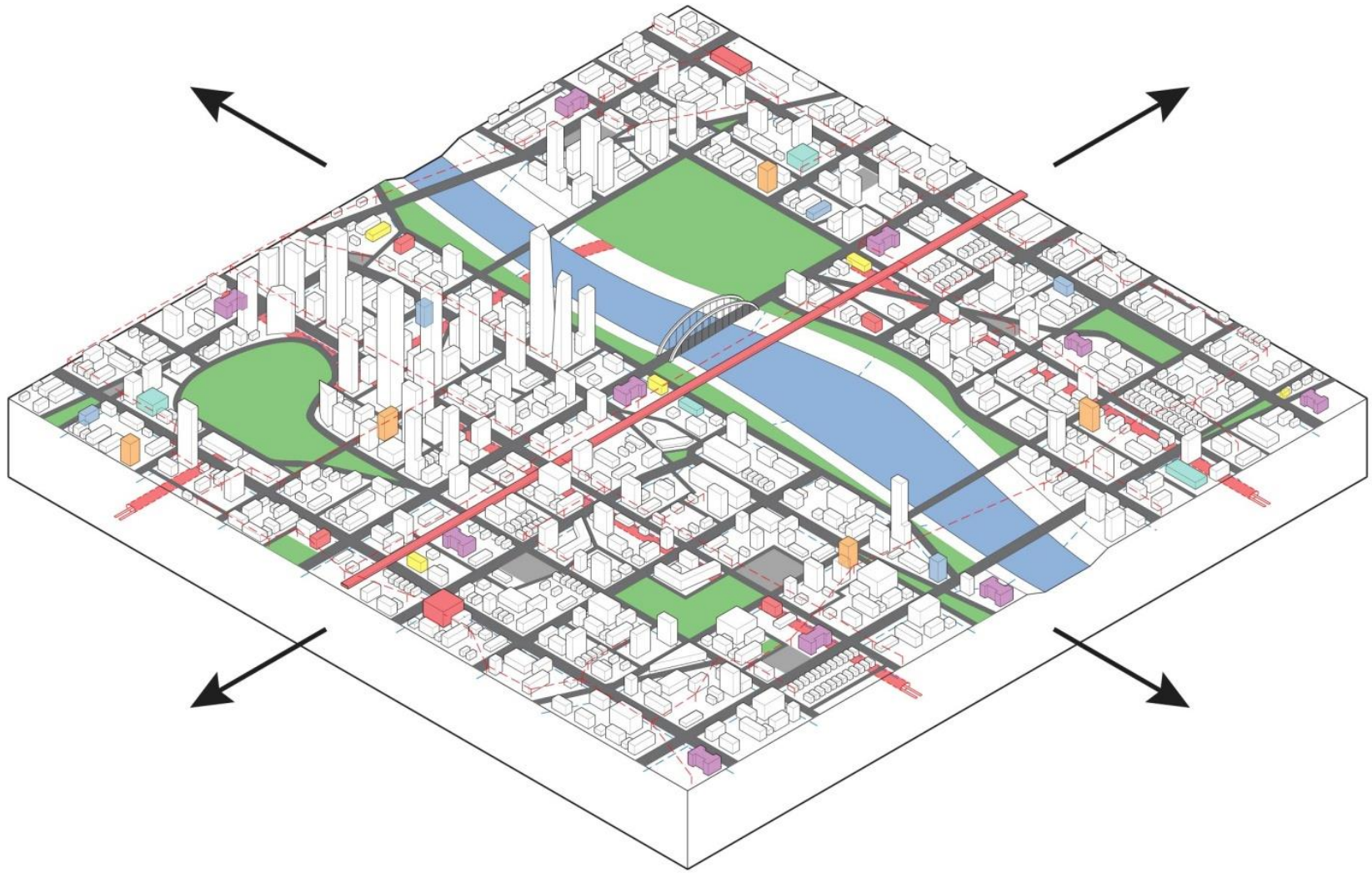
We need to challenge the conventional functions inside tall buildings and bring **ALL** aspects of the city up into the Sky

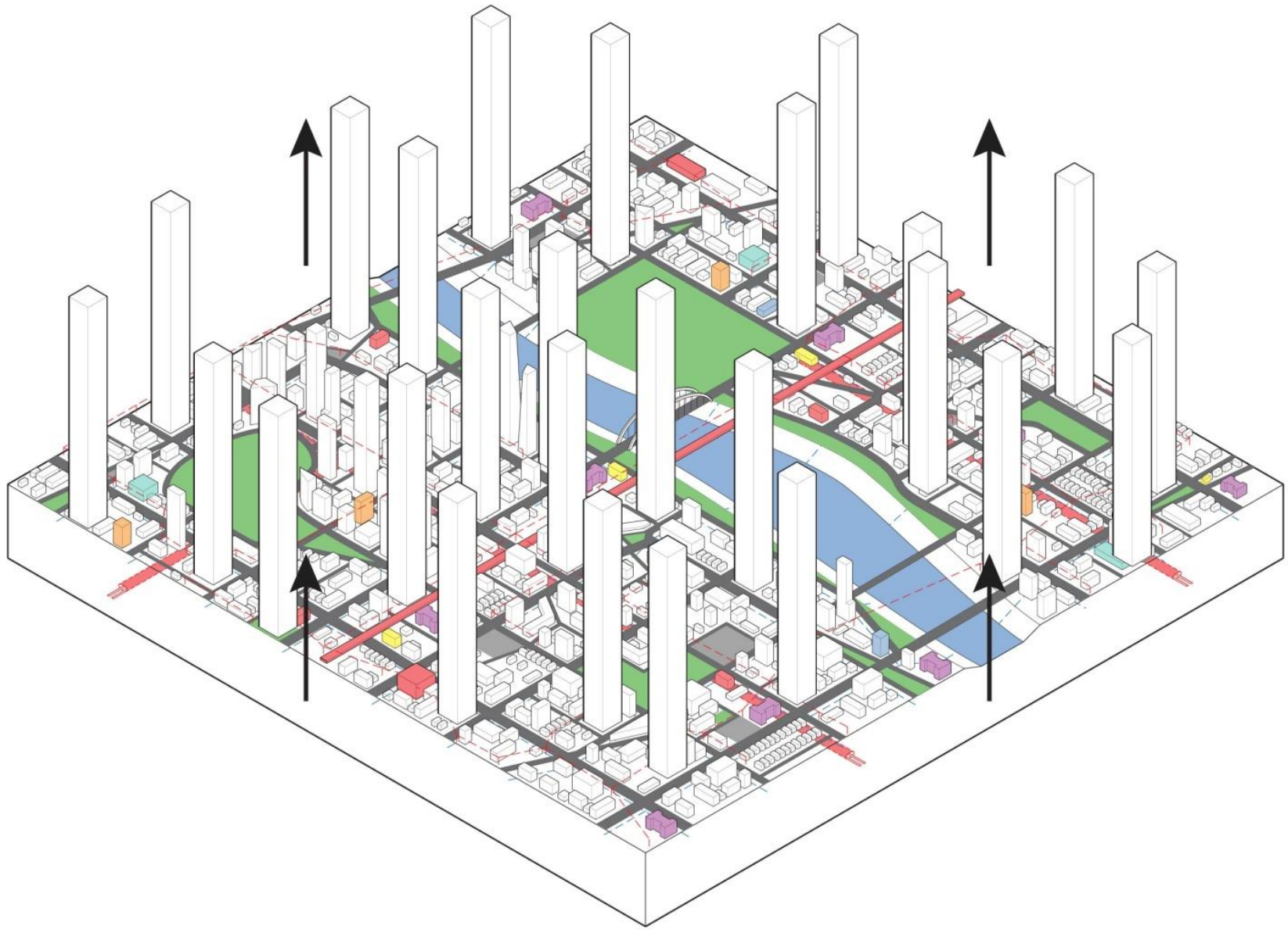
1 million

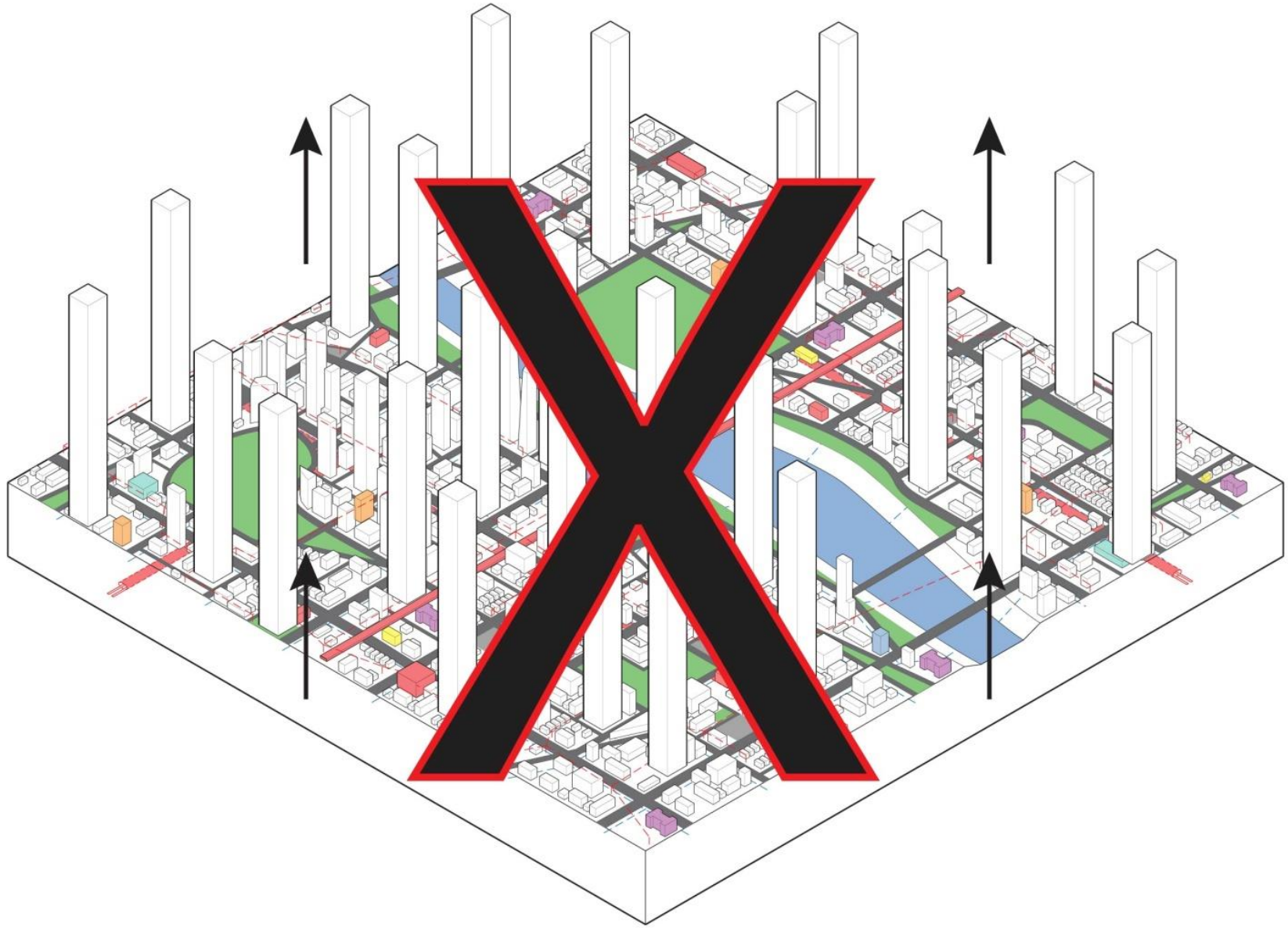
1 million

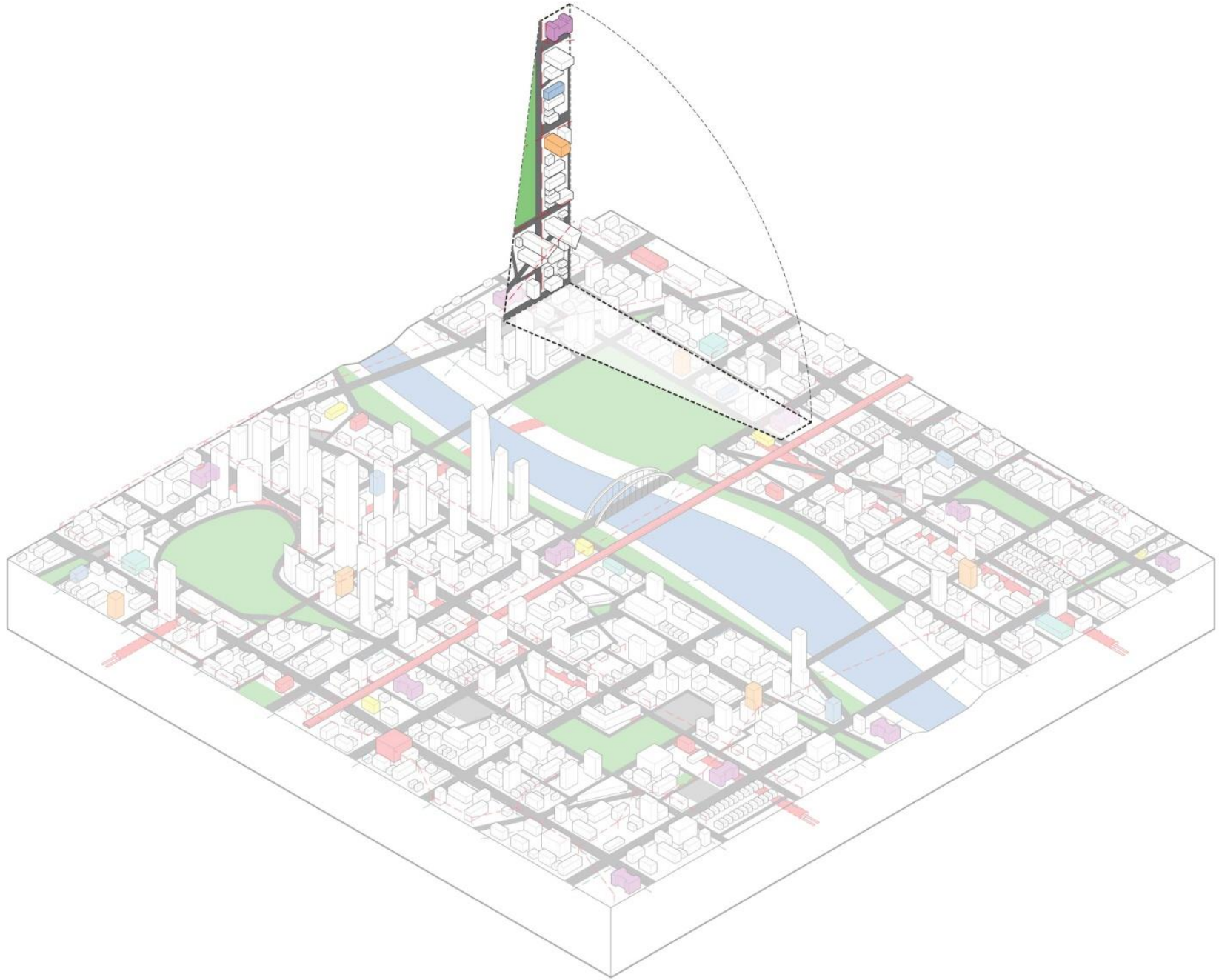


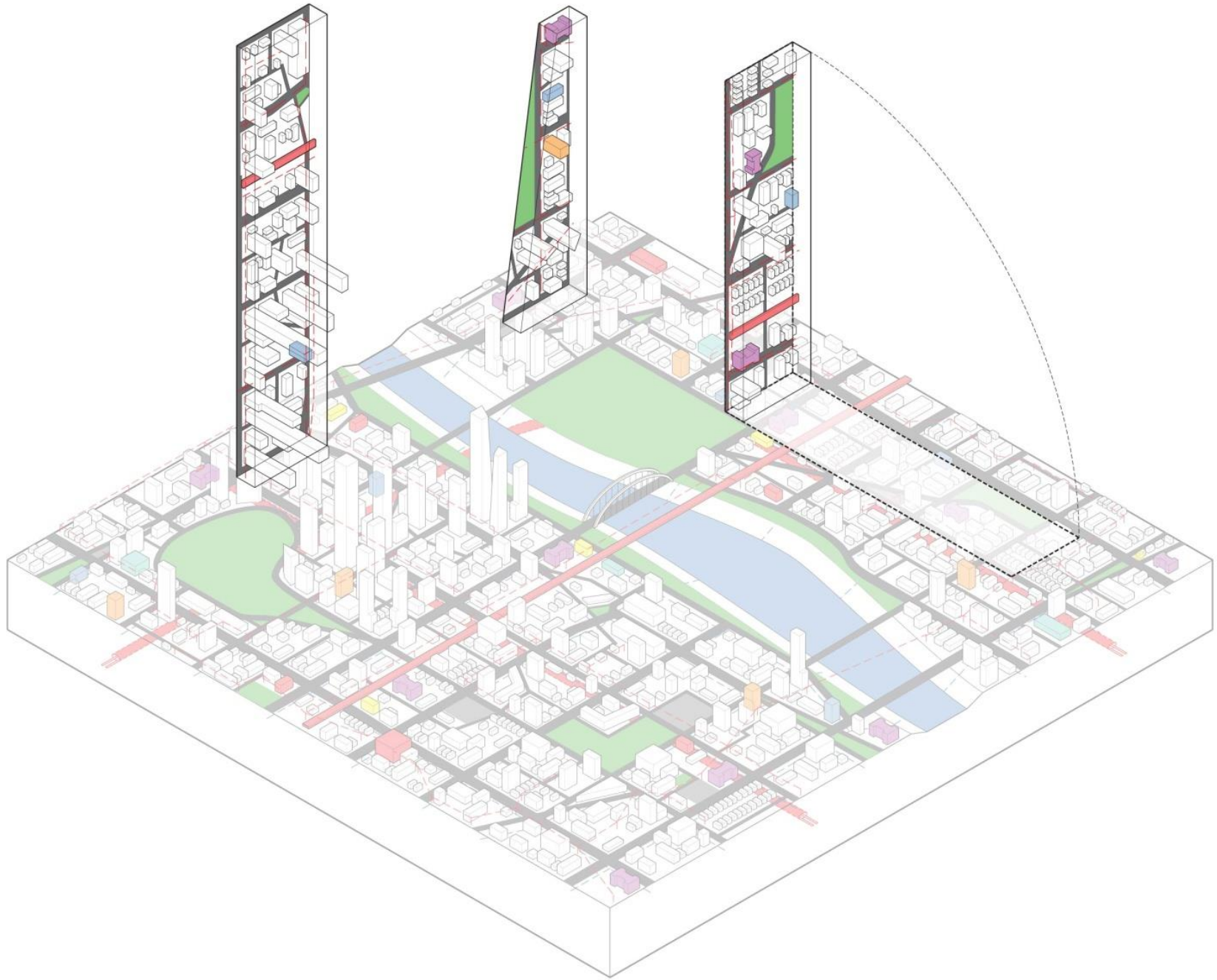
10 million

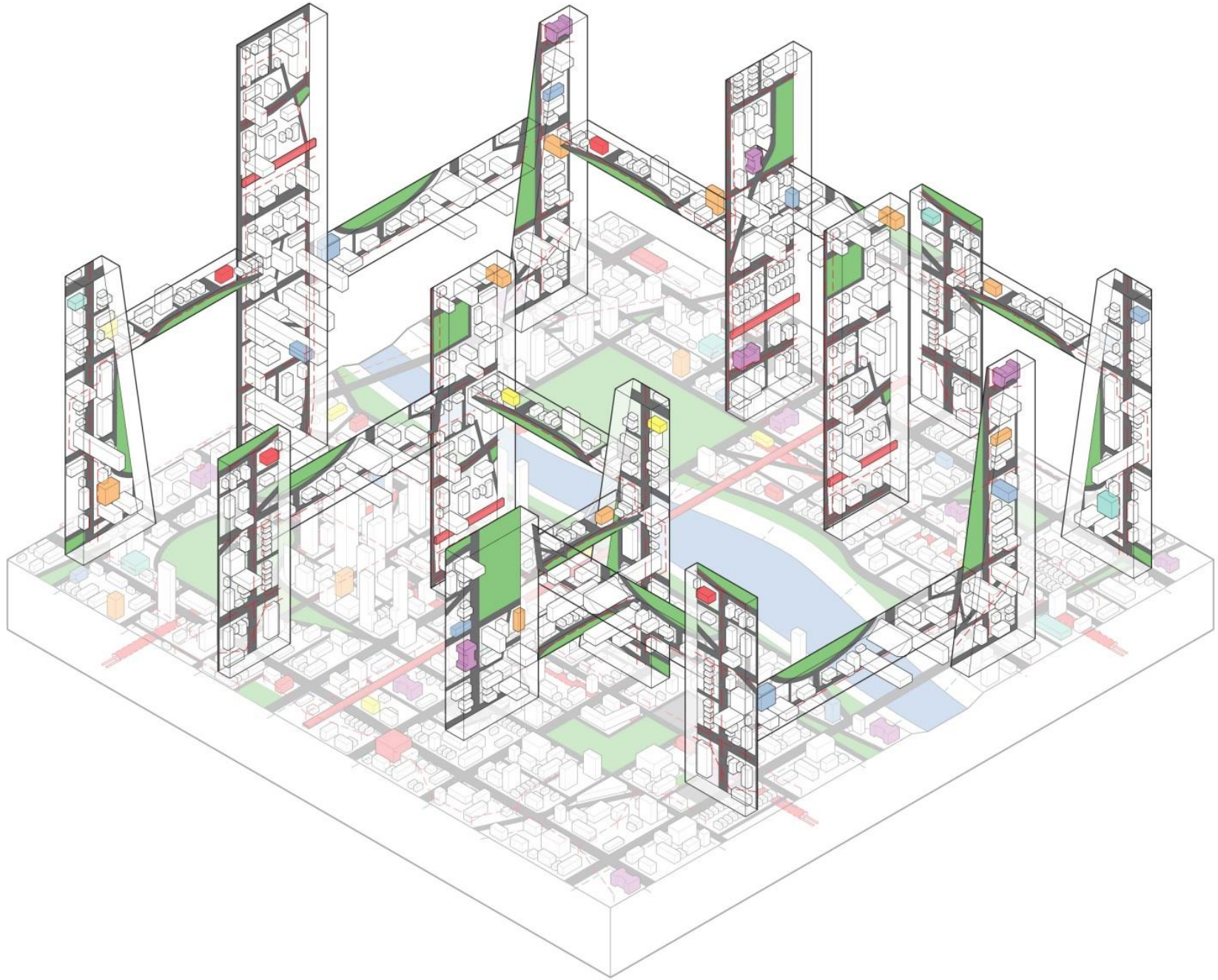


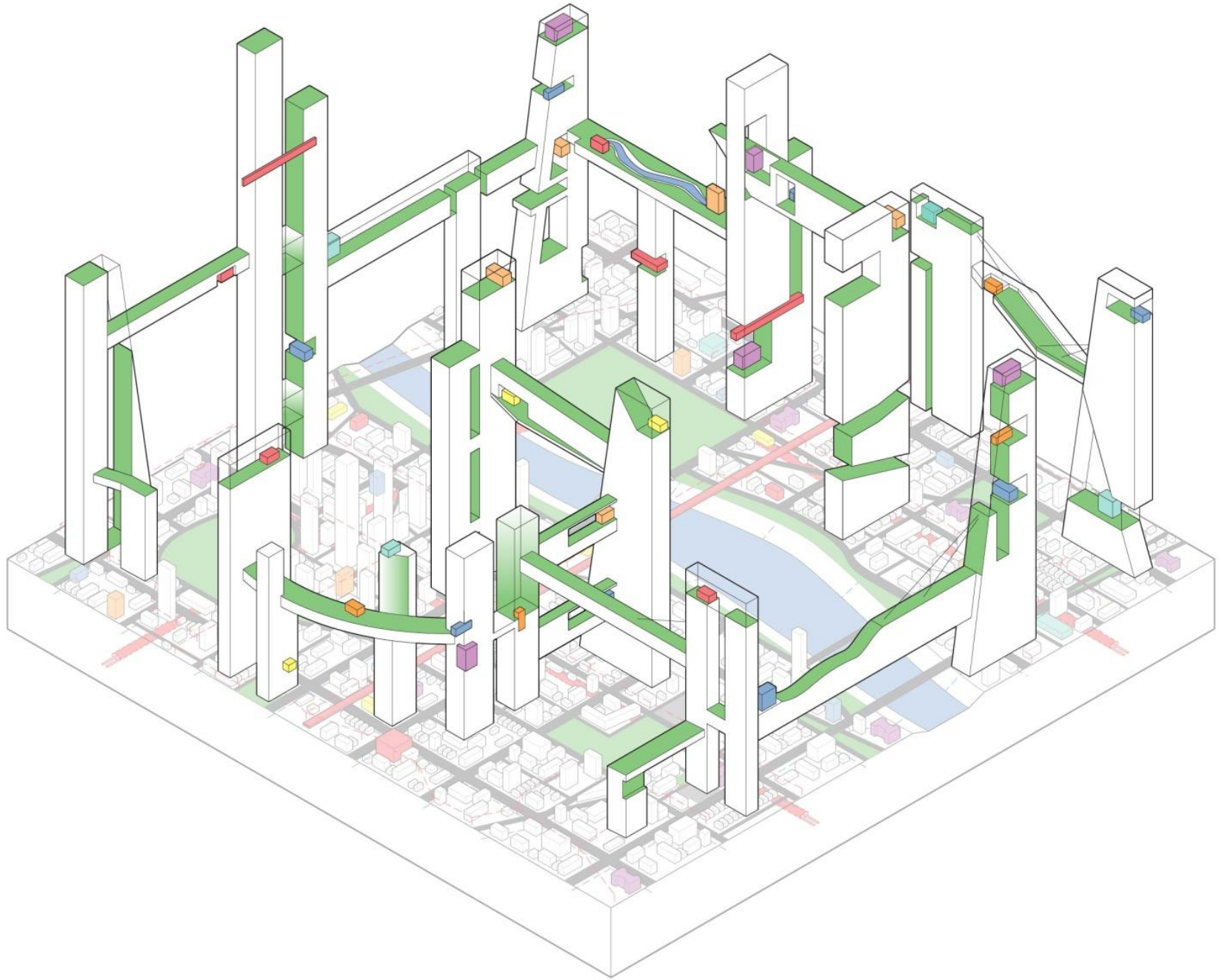












Introducing the CTBUH

CTBUH

ADVANCING SUSTAINABLE VERTICAL URBANISM....

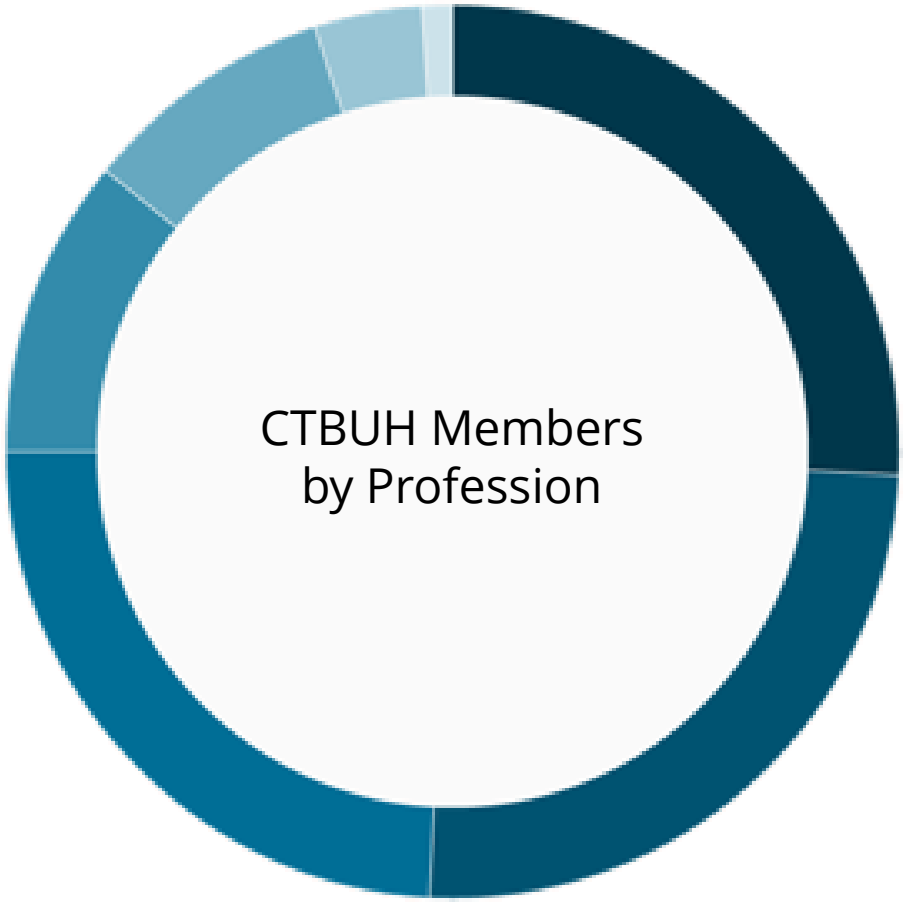
Founded in 1969.

Non-profit, multi-disciplinary, worldwide association focused on tall buildings and sustainable cities.

> The CTBUH organizational member network embraces over **2 million** individuals working in **10,000+** offices in more than **100** countries around the world.

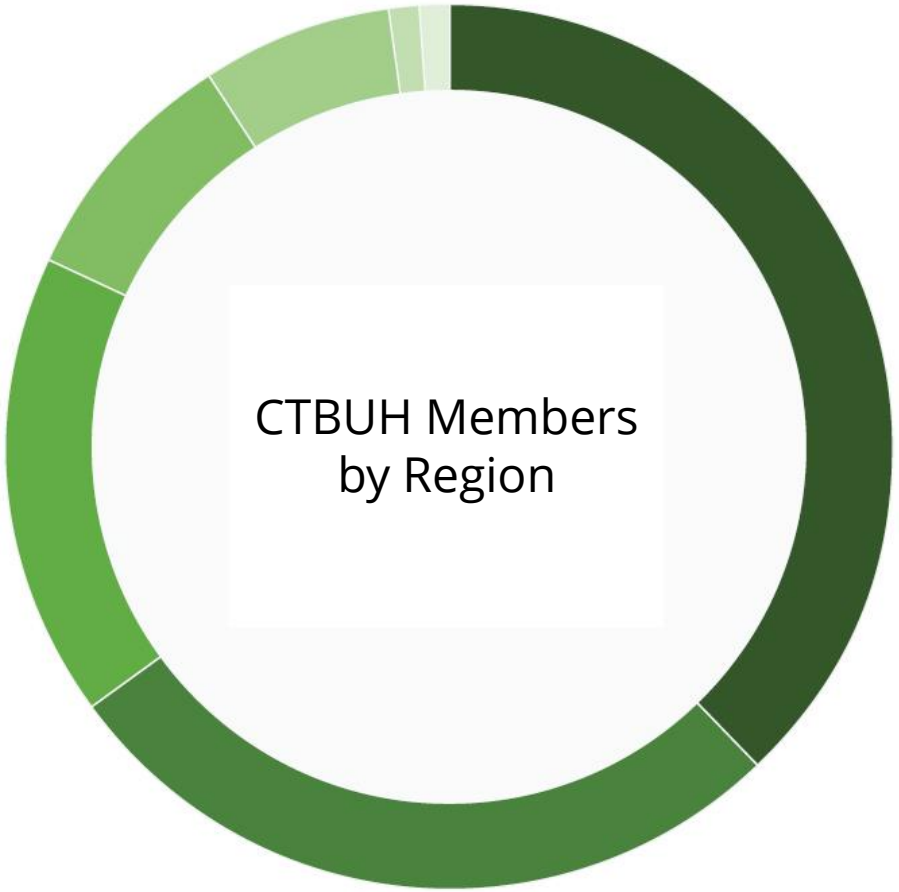
Council on Tall Buildings and Urban Habitat

Membership By Discipline



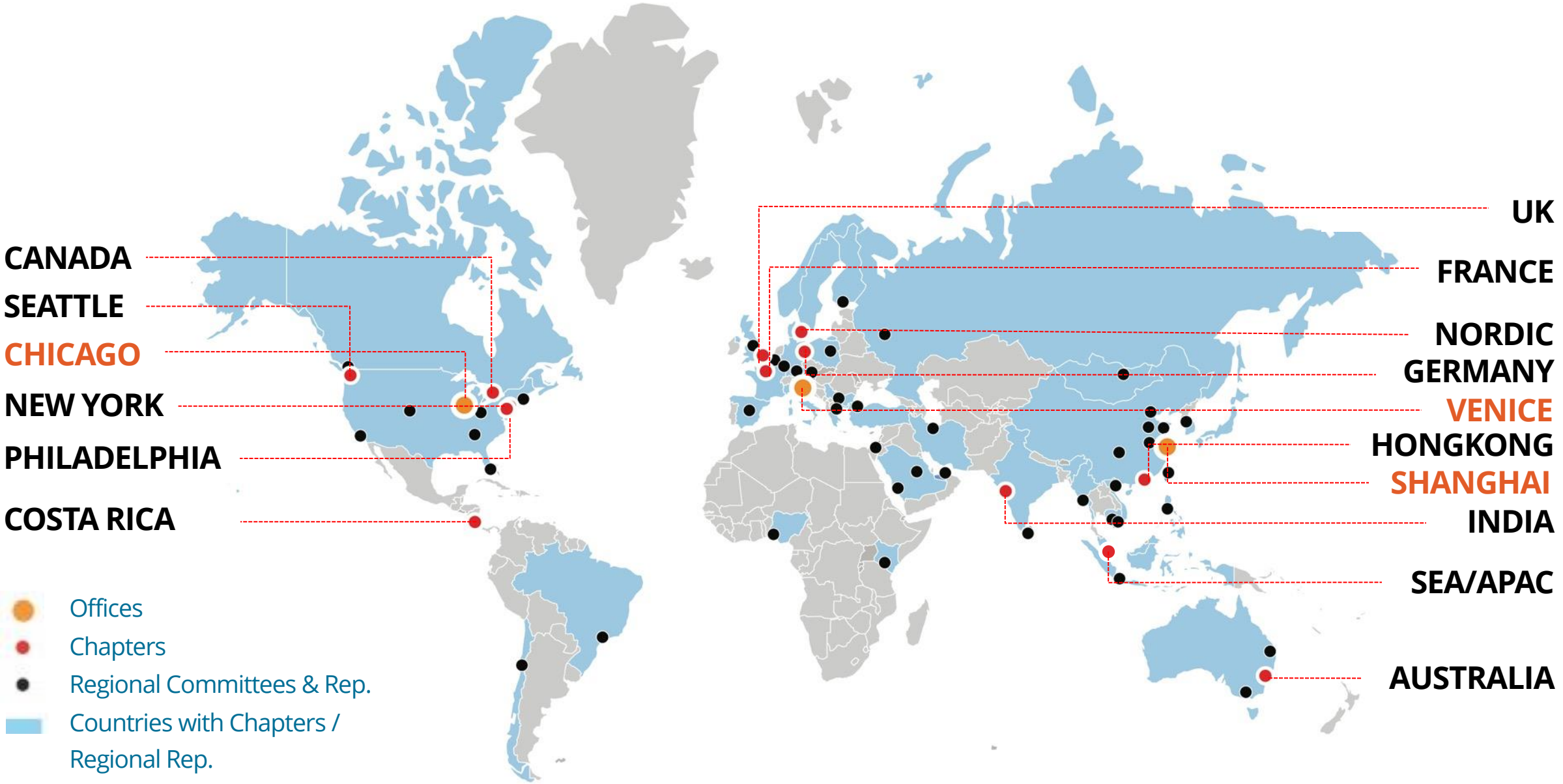
- **26%** Owner/Developer/Funder/Occupier
- **25%** Engineering (all types)
- **24%** Architecture/Urban/Interiors
- **11%** Construction/Project Management
- **9%** Materials/System Supplier
- **5%** Association/Government/University

Membership By Region

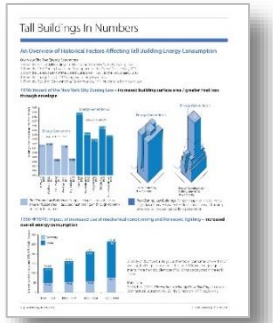


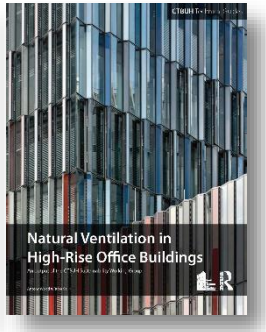
38%	North America
27%	Asia
17%	Europe
9%	Middle East
7%	Australia
1%	Africa
1%	Central/South America

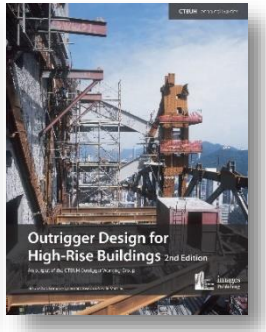
CTBUH Global Representation. Offices, Chapters & Representatives

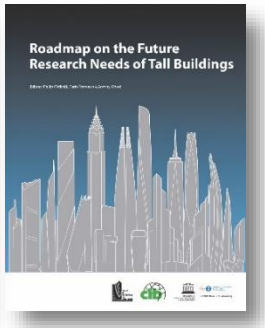


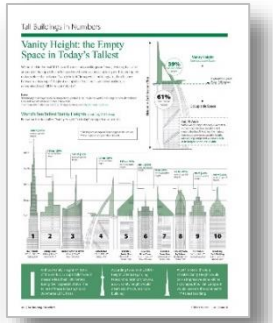
Recent Research Outputs / Publications

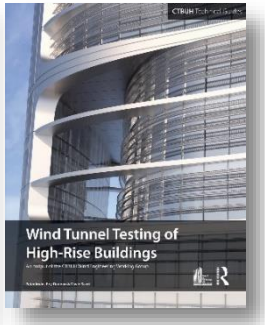


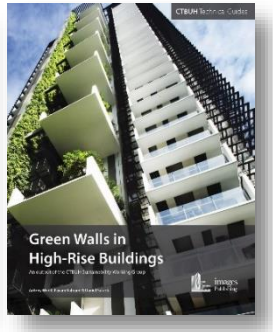


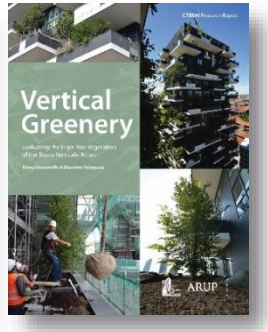


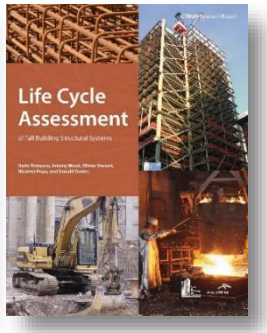


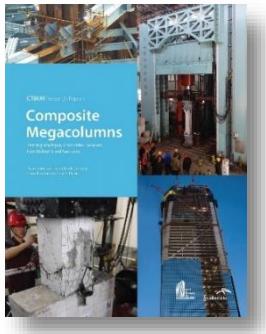


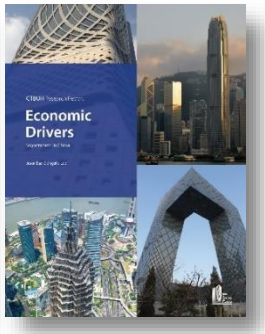


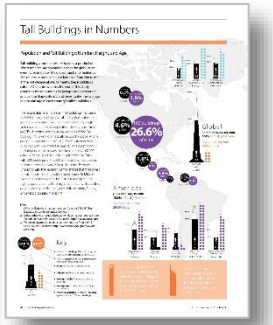


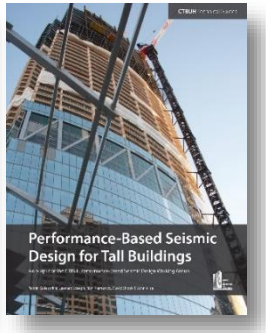


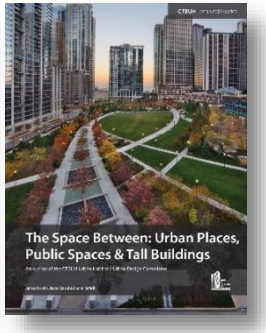


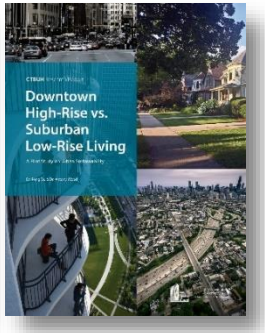


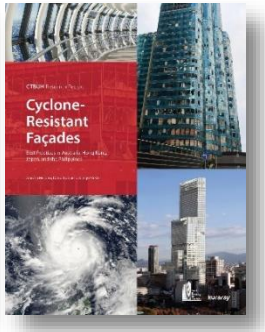


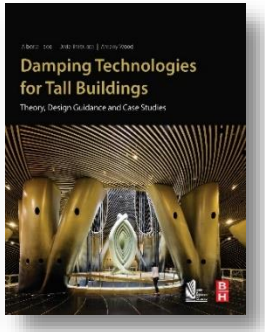


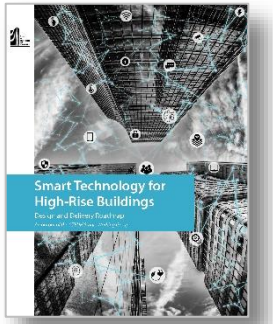


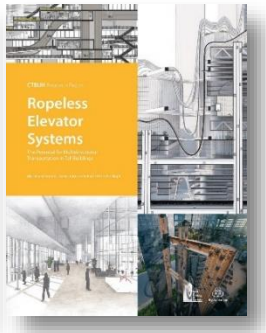


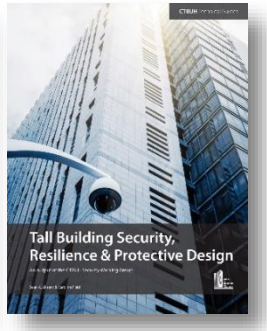


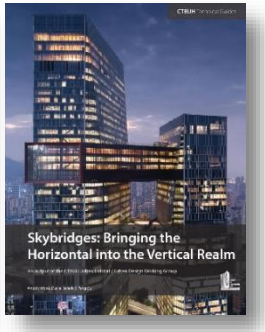


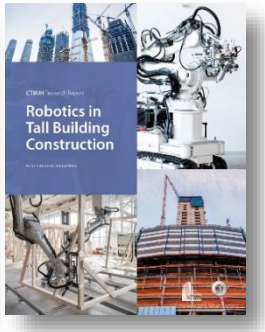


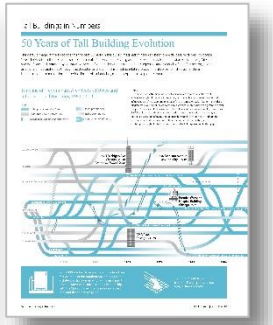




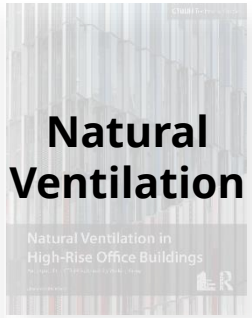


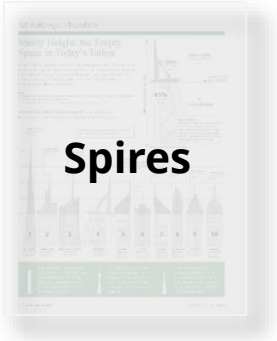


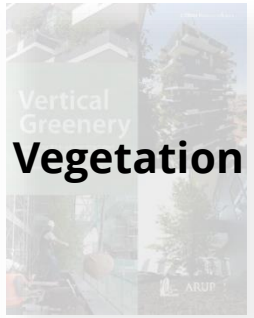


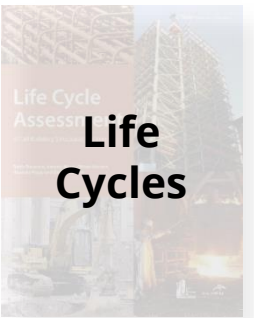


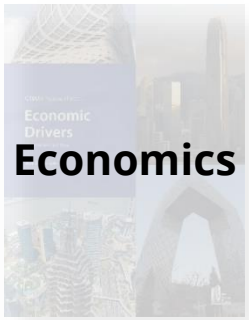
Recent Research Outputs / Publications

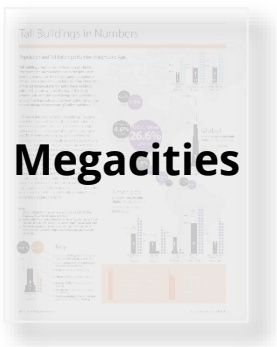


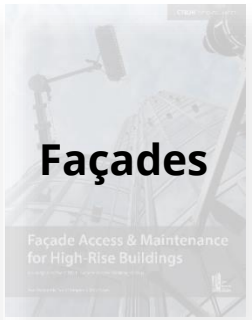


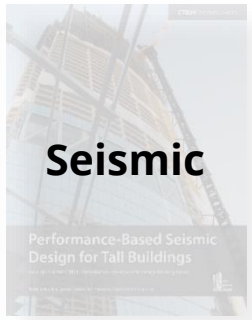


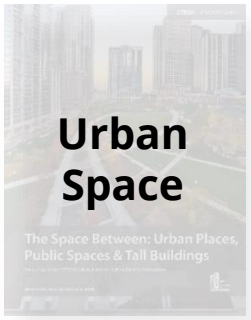


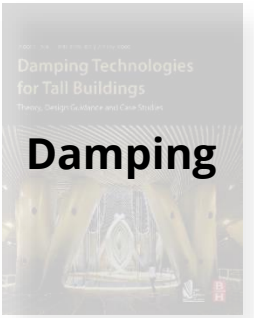


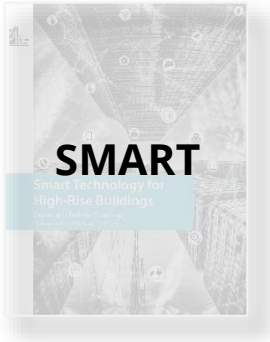


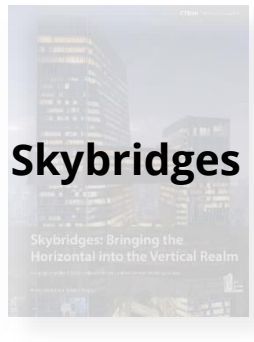


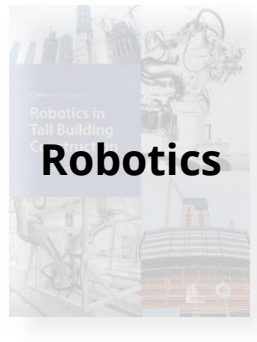


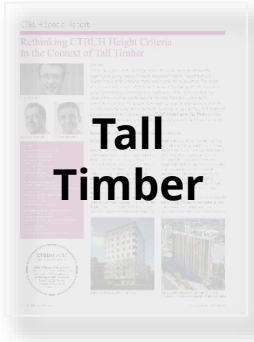






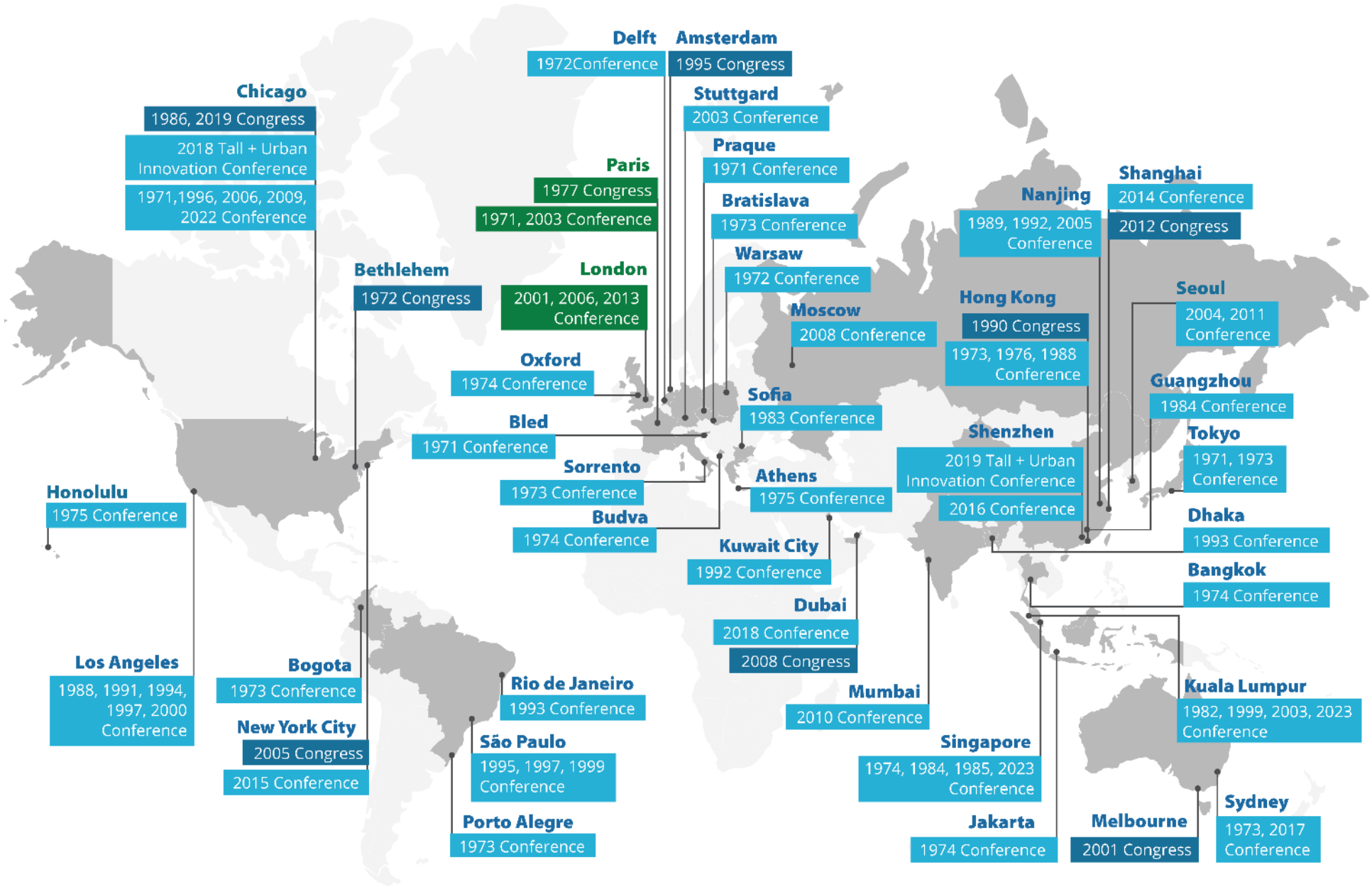




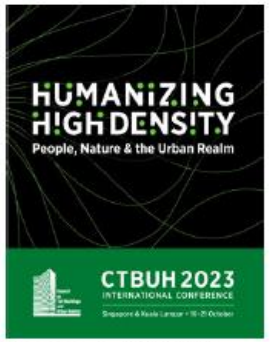


Introducing the CTBUH 2024 London & Paris Conference

50+ Years of CTBUH Conferences



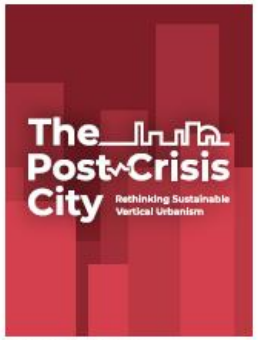
50+ Years of CTBUH Conferences



Singapore & Kuala Lumpur, 2023

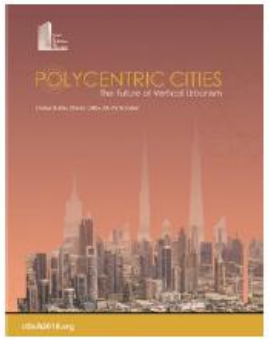
Chicago, 2022

Global, 2021

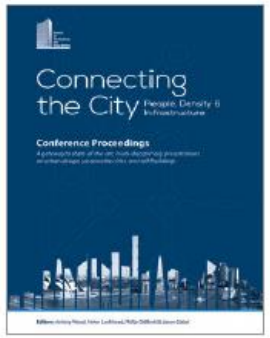


Virtual, 2020

Chicago, 2019



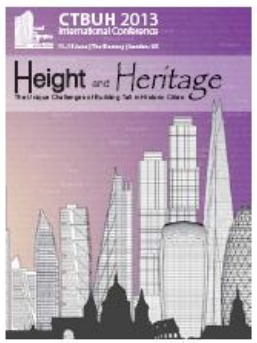
Dubai & Abu Dhabi, 2018



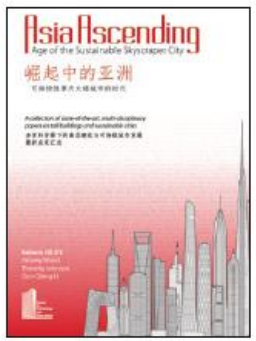
Sydney, Melbourne & Brisbane, 2017

Shenzhen, Guangzhou & Hong Kong, 2016

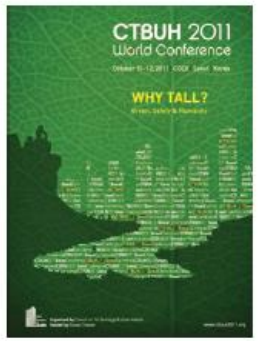
New York, 2015



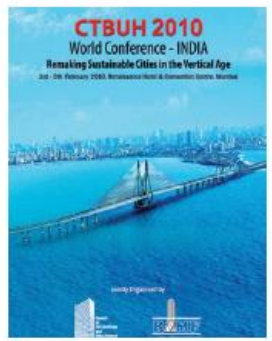
London, 2013



Shanghai, 2012

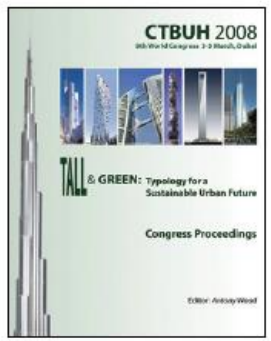


Seoul, 2011



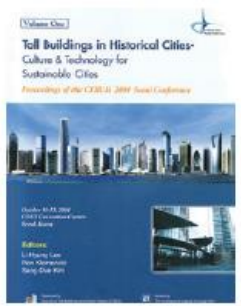
Mumbai, 2010

Chicago, 2009



Dubai, 2008

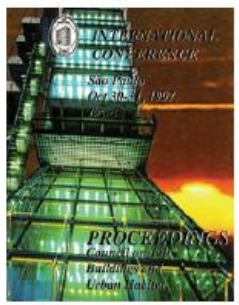
New York, 2005



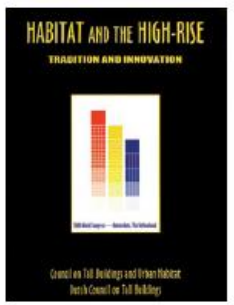
Seoul, 2004

Kuala Lumpur, 2003

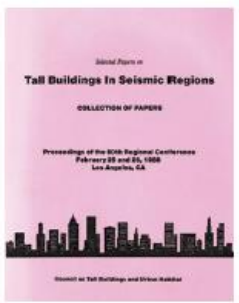
Melbourne, 2001



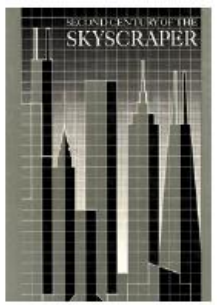
Sao Paulo, 1997



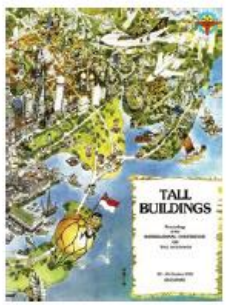
Amsterdam, 1995



Los Angeles, 1988



Chicago, 1986



Singapore, 1984


Paris, 1977

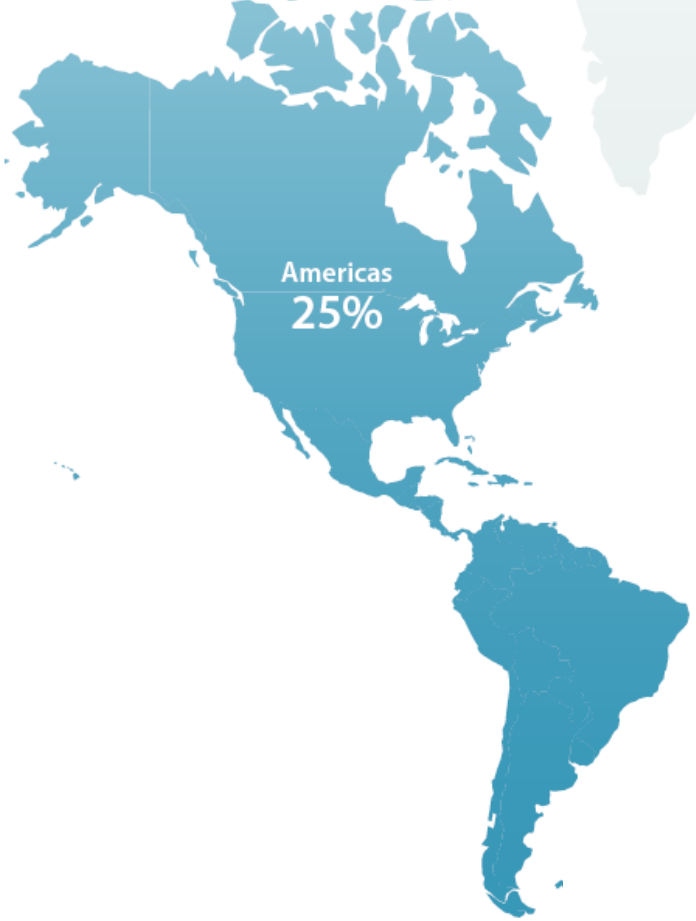

NEW OR RENEW
ADDRESSING THE DENSITY DILEMMA
Council on Tall Buildings and Urban Habitat
CTBUH 2024
INTERNATIONAL CONFERENCE
London & Paris • 23–27 September
2024.ctbuhconference.com

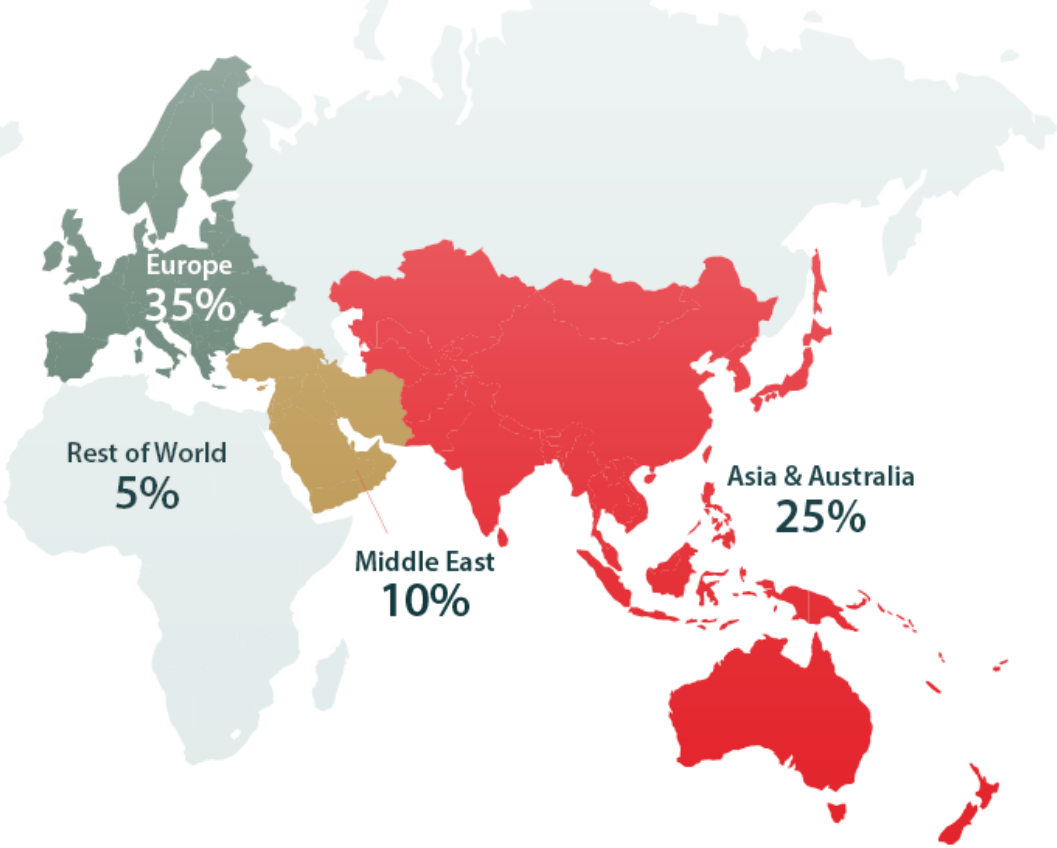
London Core Conference Venue

Days 1-3: Monday 23 – Wednesday 25 September
@ The Barbican Centre, London

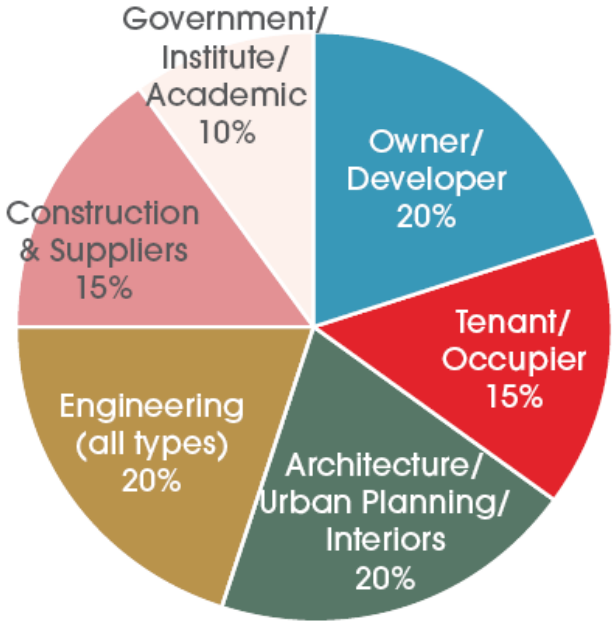
Attendance by Region

1200+ Delegates
50+ Countries
(see Regional Attendace at right)





Attendance by Profession



Expected Attendance

1200+	200	50+	9	4	1
DELEGATES	SPEAKERS	COUNTRIES	TRACKS	Evenings of Social Events	GREAT CONFERENCE!

Program Overview

Awards Ceremony & Dinner: Award Categories

Deadline for Submissions: 9 February 2024

PROJECT

Best Tall Building Awards

By Height
Under 100 Meters
100–199 Meters
200–299 Meters
300–399 Meters
400 Meters & Above

By Region
Americas
Asia
Australia
Europe
Middle East & Africa

Best Tall Building Worldwide

Best Tall Non-Building Award

Urban Habitat Award

Future Project Award

10 Year Award

PROCESS

Construction Award

Repositioning Award

COMPONENT

Innovation Award

Structure Award

Systems Award

Space Within Award

PEOPLE

Lifetime Achievement Awards

Lynn S. Beedle Lifetime Achievement Award

Fazlur R. Khan Lifetime Achievement Award

Equity, Diversity & Inclusion

CTBUH Fellows

How to Get Involved

SPEAK

Abstract submission deadline:
31 January 2024

SPONSOR

Exclusive sponsorships are available to promote your company and expertise internationally

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Get involved in the local organizing committee and help steer the event

48 Confirmed Sponsors

(as of 16 January 2024)

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GP GOETTSCH PARTNERS

HARIRI PONTARINI ARCHITECTS

Hongkong Land

killa design

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RHODE : PARTNERS

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Büro Ole Scheeren

CPP WIND ENGINEERING CONSULTANTS

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