LATENT CAPACITY

Advanced Housing Design - Ecologies of Inclusion

Sven Schuit 5568218

LATENT CAPACITY

Latent capacity (noun)

capacity that exists but is not currently active, expressed, or fully utilized; unrealized potential that may be developed or deployed when required.

400.000

The current **housing shortage** in The Netherlands

(ABF Research, 2024)

247.000

houses planned for **Zuid-Holland** before 2030

(Provincie Zuid-Holland, 2023)

70%

of the **excisting stock** will still be standing in 50 years

(Fisher-Gewirtzman, 2016)

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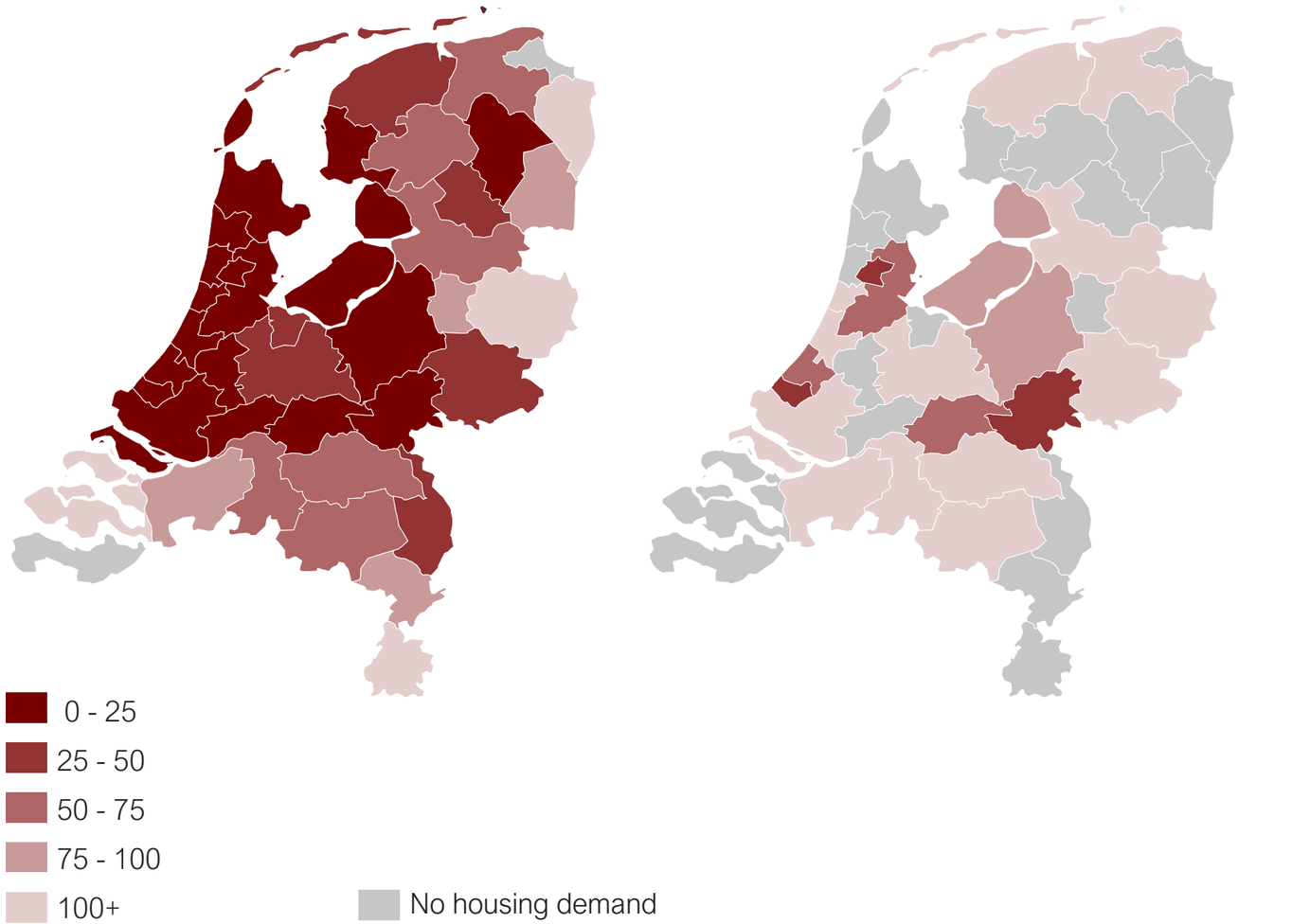
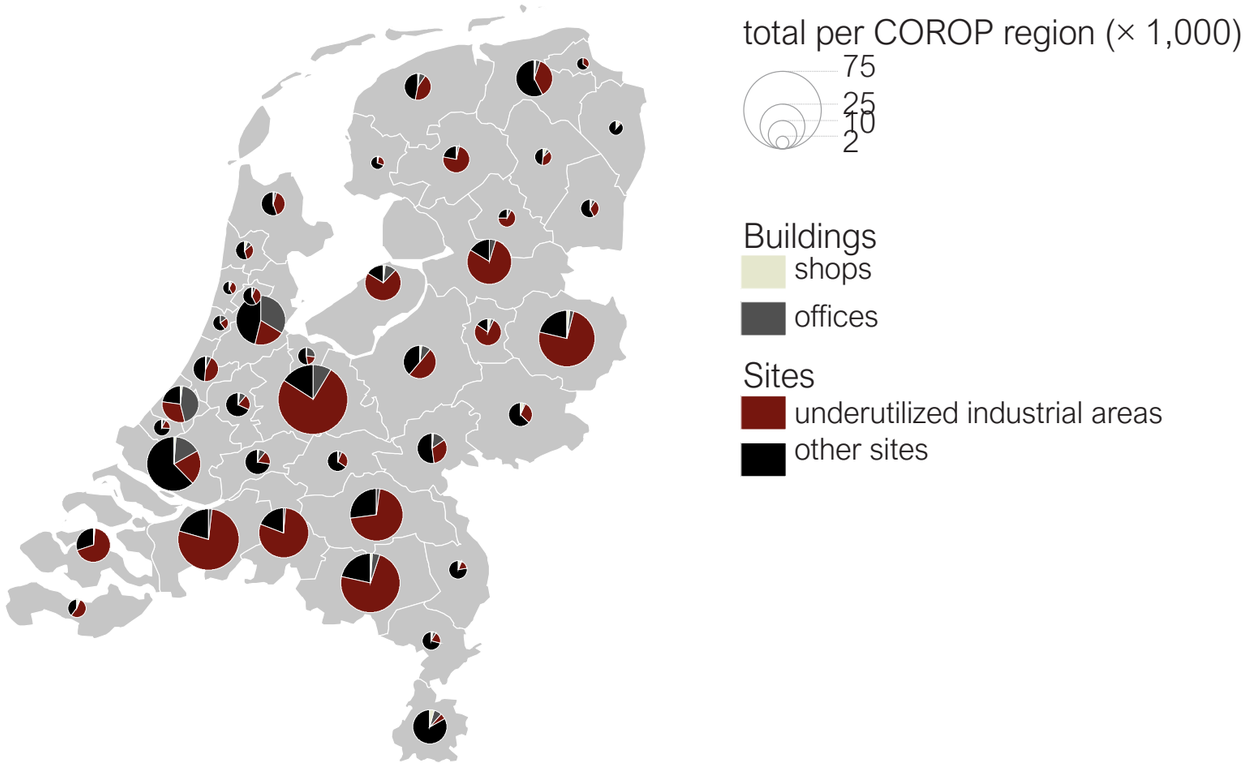
High-growth scenario

Low-growth scenario



(Planbureau voor de leefomgeving, 2016)



(Planbureau voor de leefomgeving, 2016)



Monofunctionality

(Many industrial areas are single-purpose, contributing little to urban diversity, mixed-use environments, or vibrant neighborhoods, despite growing demand for multifunctional urban spaces.)



Underutilized and Aging Building Assets

(Existing industrial buildings are often underused or outdated, leading to the loss of constructive and material value, while opportunities for circular reuse, energy transition, and sustainable building remain untapped.)



Pressure on Urban Space

(Low building intensity, limited accessibility, and inefficient land use on industrial sites waste scarce urban land, while demand for housing, workplaces, and urban amenities continues to rise.)



Urban Disconnection

(Introverted industrial buildings and outdated sites create physical and social barriers, limiting interaction and economic activity, and undermining urban vitality and the quality of the living environment.)

(Planbureau voor de leefomgeving, 2016)

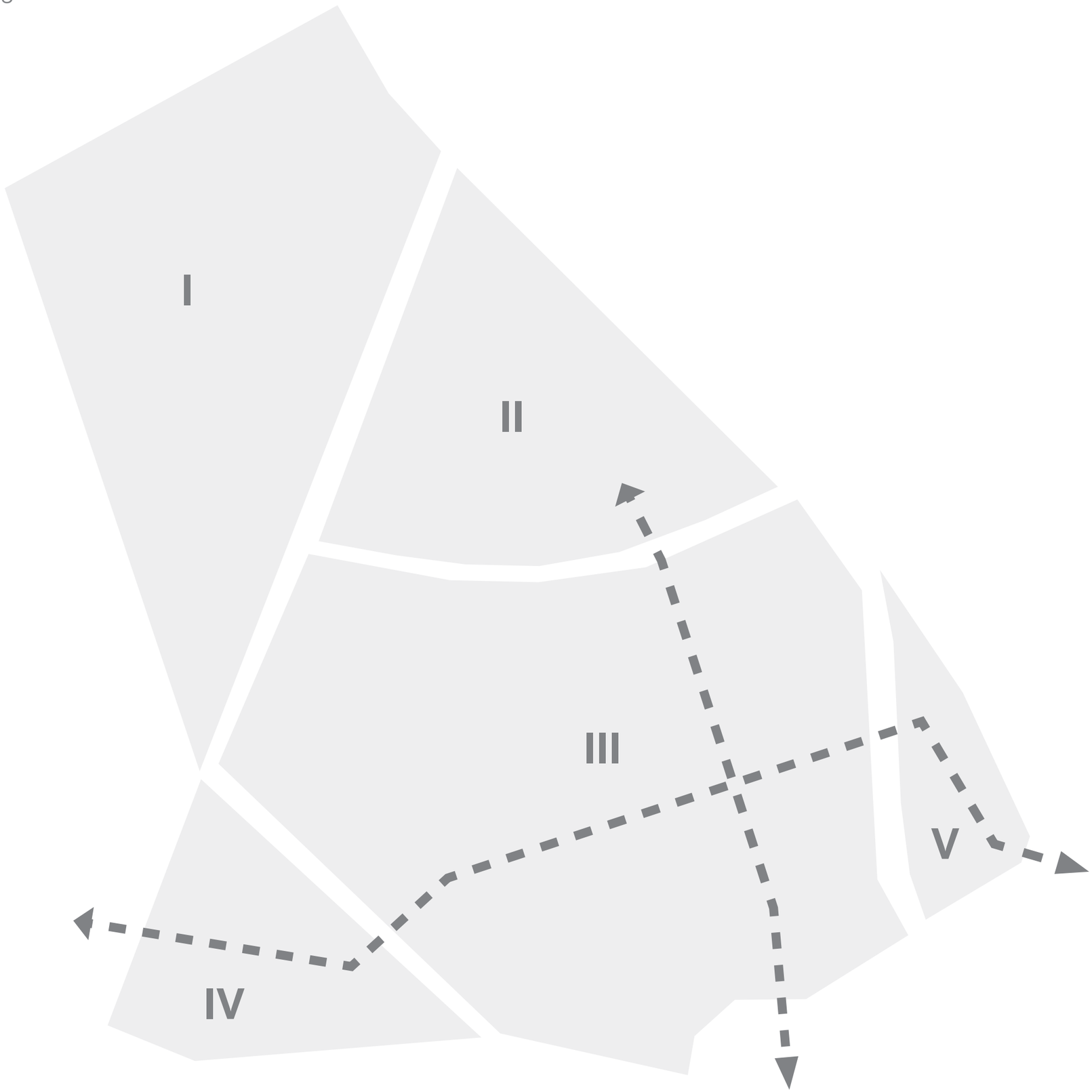


(EduGis Atlas, 2026)

Built-up area map Midden-Delfland



Vision map



Regions and Axes

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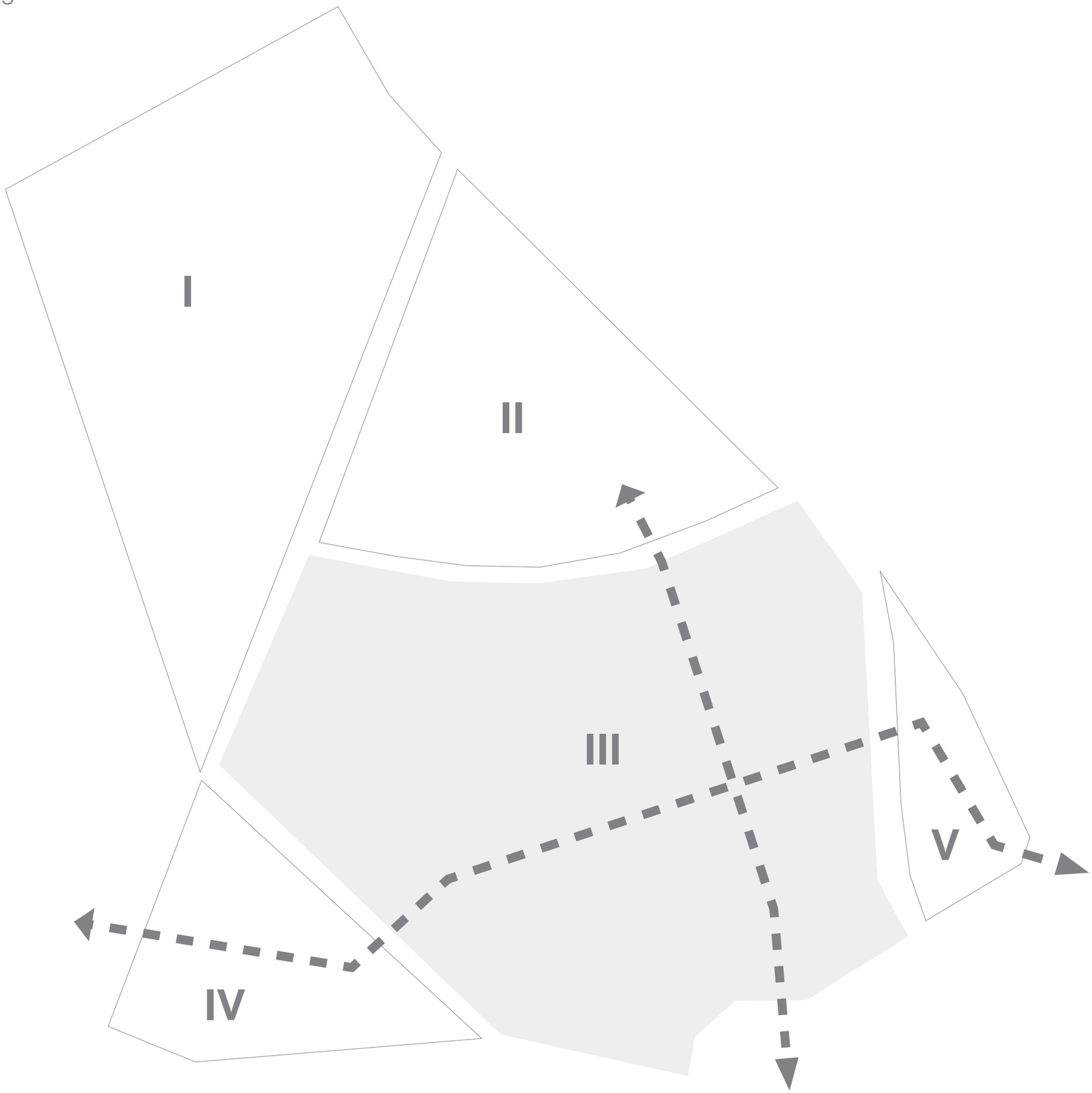

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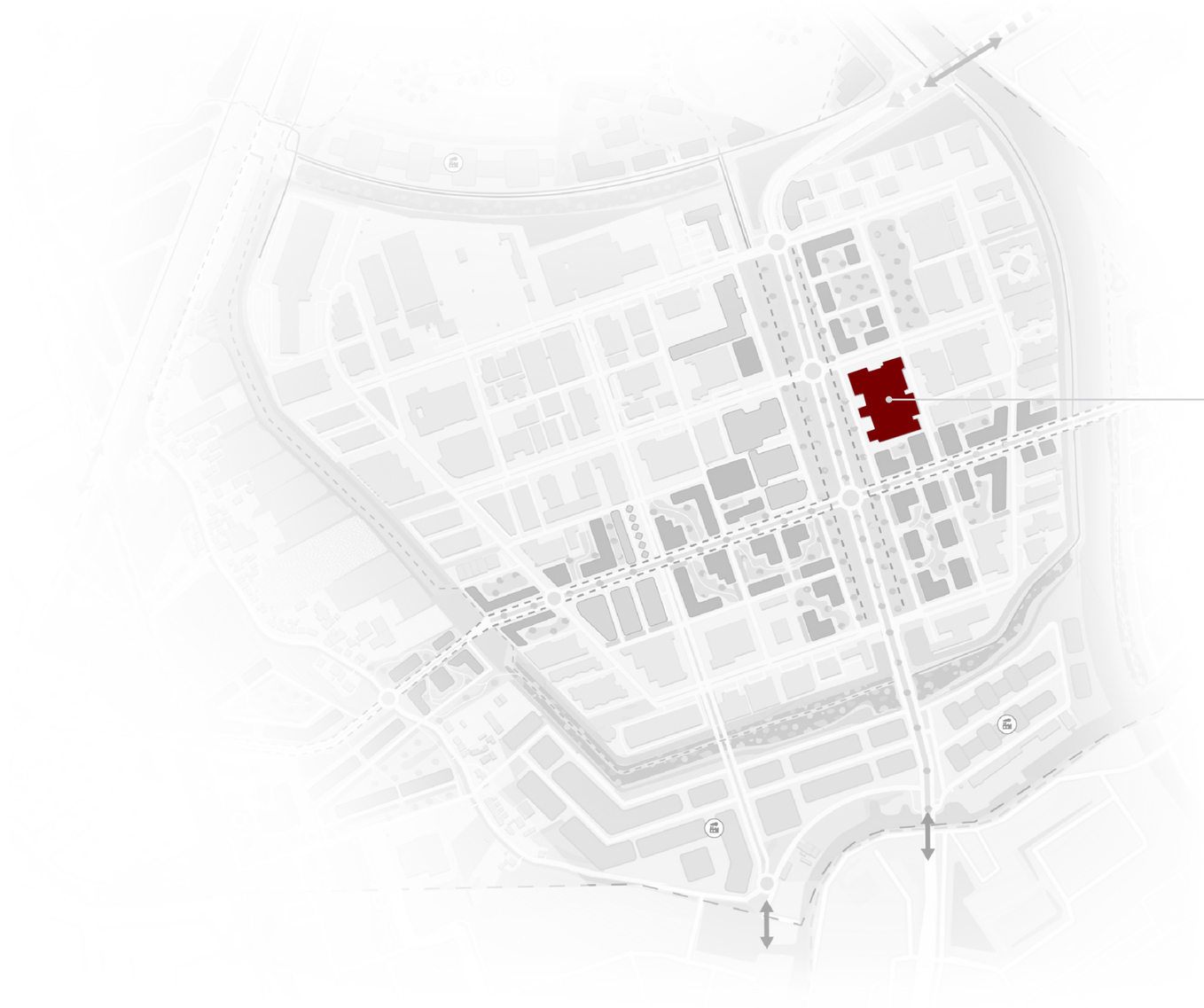
Vision map Region III



Building as Plot Foundation

(The existing structure forms the basis for the selected site, guiding spatial organization and design.)



(Google Earth, 2026)

Location within environment

?



Verzamelgebouw Zuid



Groothandelsgebouw



Van Nelle Fabriek

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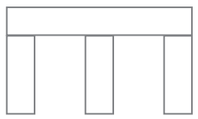
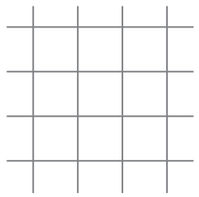


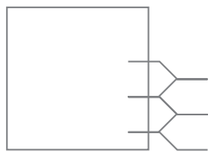
Overdimensioned structure

(Large spans, generous floor-to-floor heights, structural overcapacity by design)



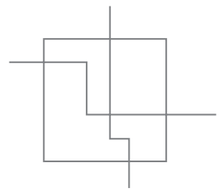
Generic and modular floorplan

(Flexible, divisible layouts organised around internal logistics and access)



External vertical circulation

(Staircases positioned at the perimeter, keeping the plan centre free and structurally unobstructed)



Collective infrastructure

(Shared entrances, facilities and internal streets connecting the whole, enabling diverse occupancy within a single structure)

EXCISTING MULTI-TENANT OFFICE BUILDING | Ambitions



Building as Resource

(The building is conceived as an integrated resource, optimizing material use, energy flows, and spatial efficiency throughout its lifecycle.)



Local Material Intelligence

(Locally sourced materials are employed to strengthen regional identity, reduce environmental impact, and embed the building within its context.)



Urban Vitality Through Integration

(Urban liveliness is enhanced by strengthening the relationship between the building and the surrounding urban fabric.)



Hybrid Performance

(Optimal performance is achieved through a hybrid structural system and a mixed-use program, enabling adaptability and intensified use.)

RESEARCH QUESTION | Subquestions

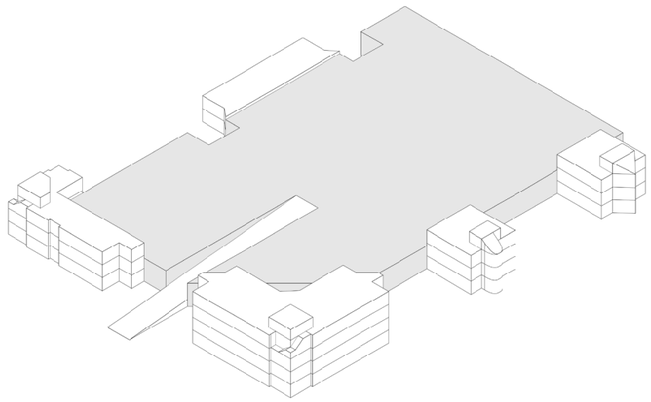
*‘‘How can the **latent** spatial and structural **capacity** of an existing **multi-tenant office building** be **activated** to support **urban vitality** within a **mixed-use environment**?’’*

Which **architectural** characteristics define the **adaptive potential** of **multi-tenant office buildings?**

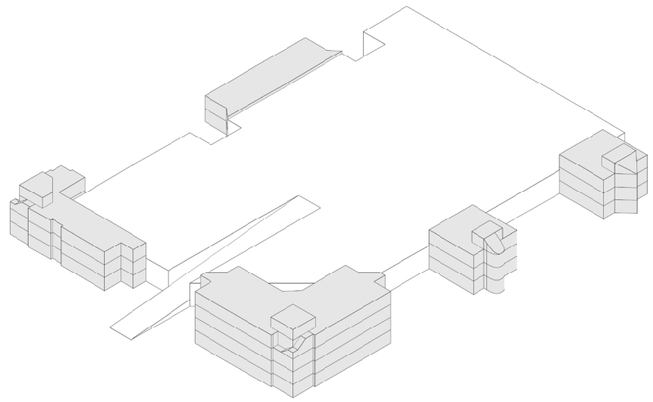
How can **programmatic organisation** enable **diverse** and **intensive use** within the **spatial** and **structural** logic of a **multi-tenant office structure?**

How can the **existing structural systems** of a **multi-tenant office building** be strategically **utilised** or **adapted** to support **vertical** and **programmatic** densification?

Which **spatial relationships** between the transformed building and its **urban context** are critical for fostering **urban vitality?**



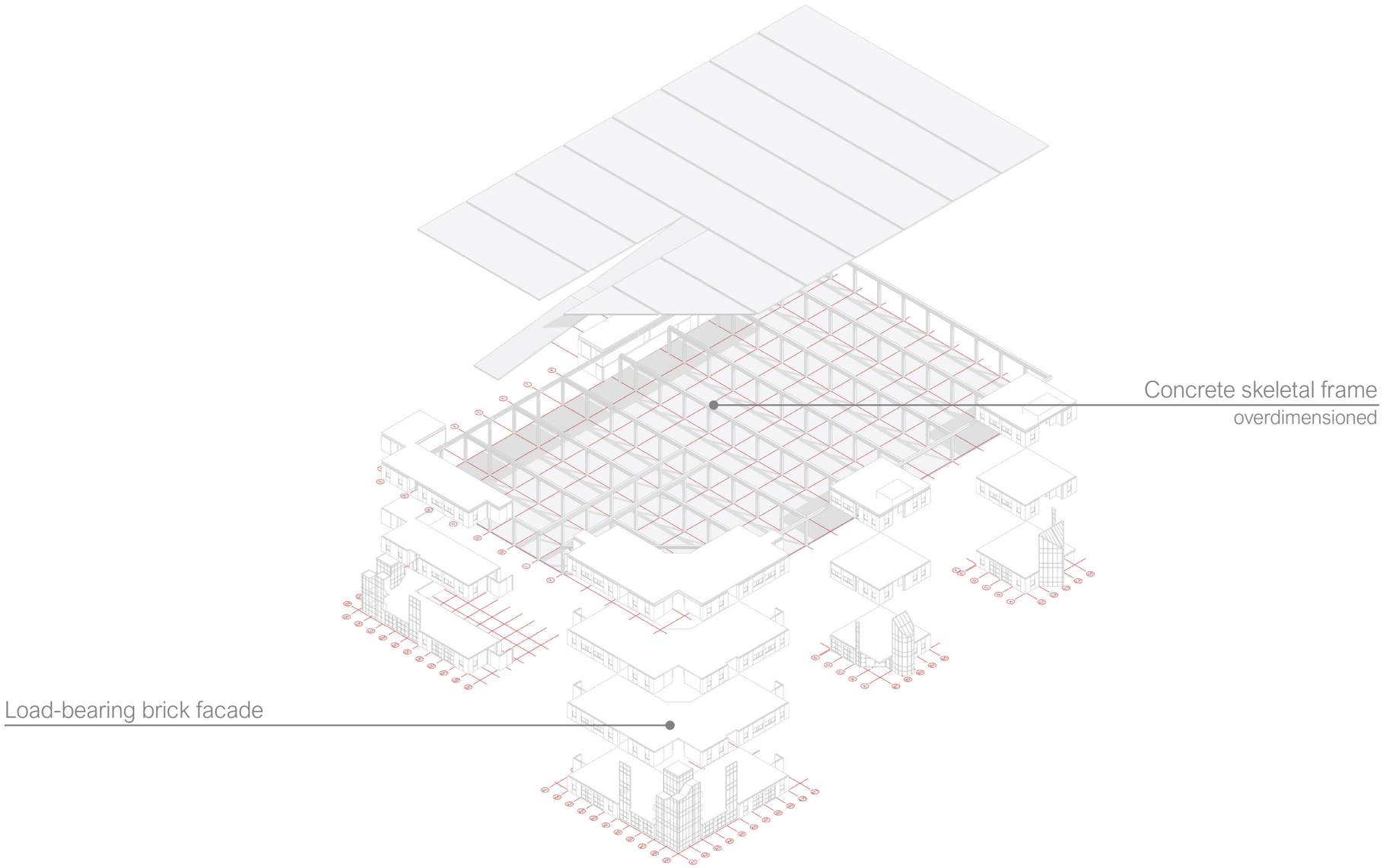
Hall A



Office blocks

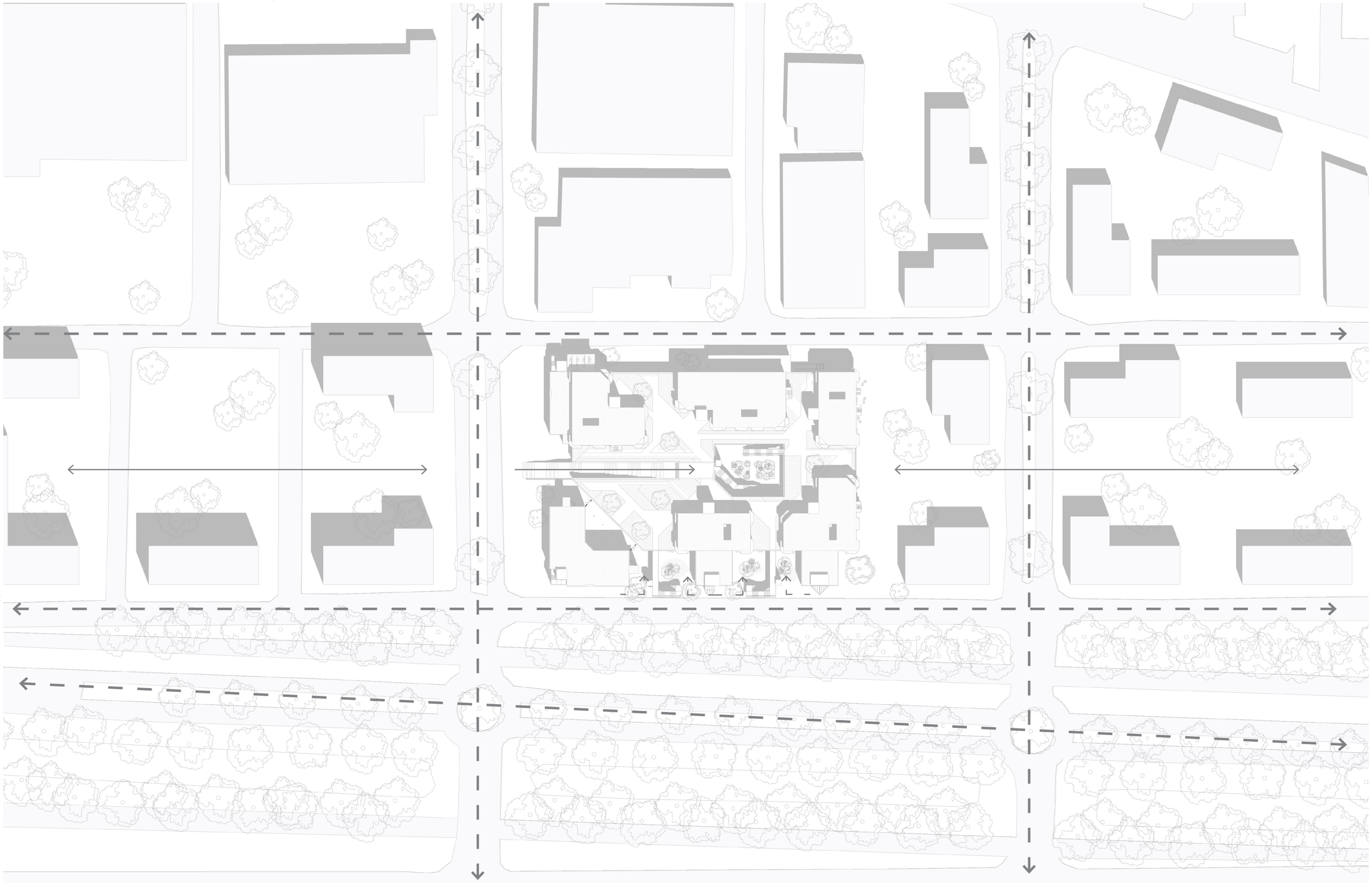
Simplified structure

BUILDING ANALYSIS | Two structural conditions, one transformation logic



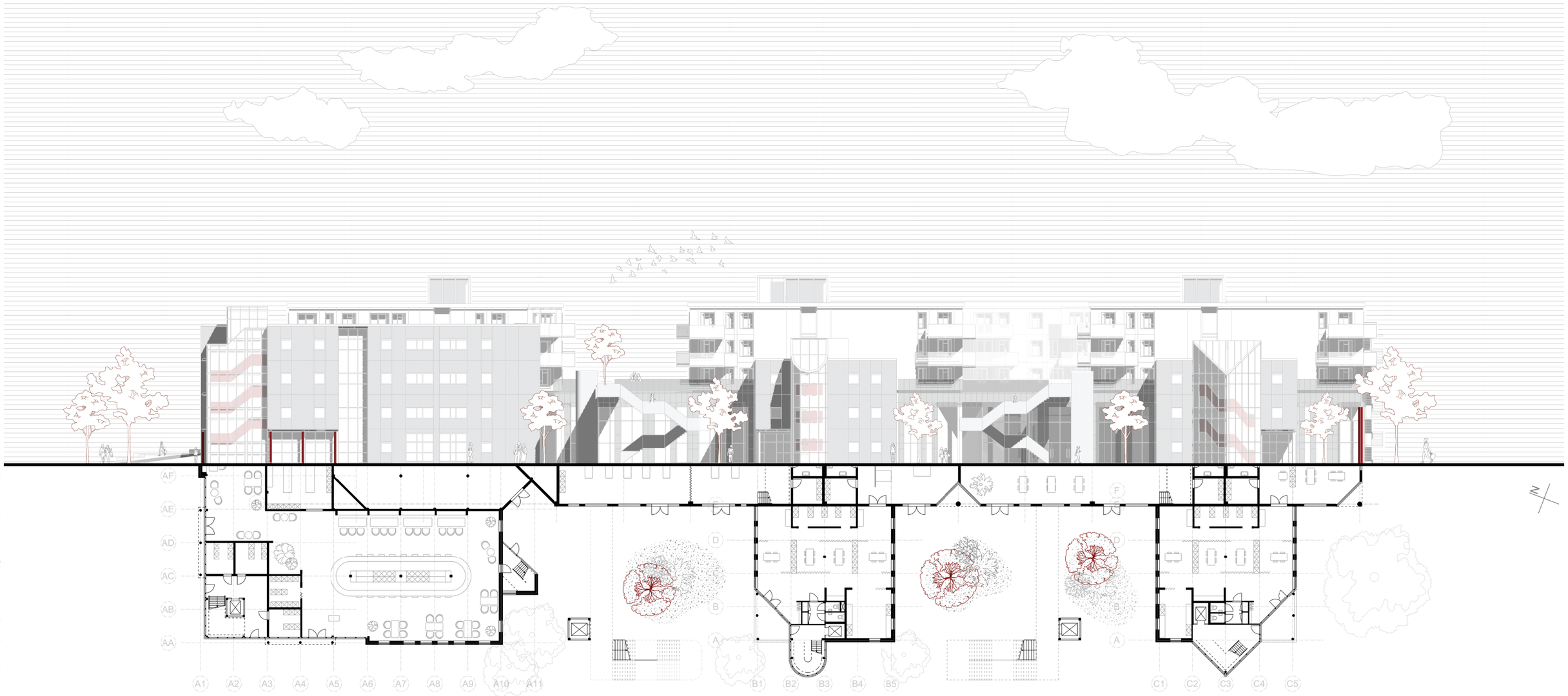
"The structural layer is the most permanent and defining component of a building - any intervention strategy should depart from and respect this fact." Brand (1994)

DIRECT SURROUNDINGS | Situation



Situation 1:1000 (scaled)

ACTIVATING THE PLINTH | Soft edges



Elevation 1:200 (scaled)

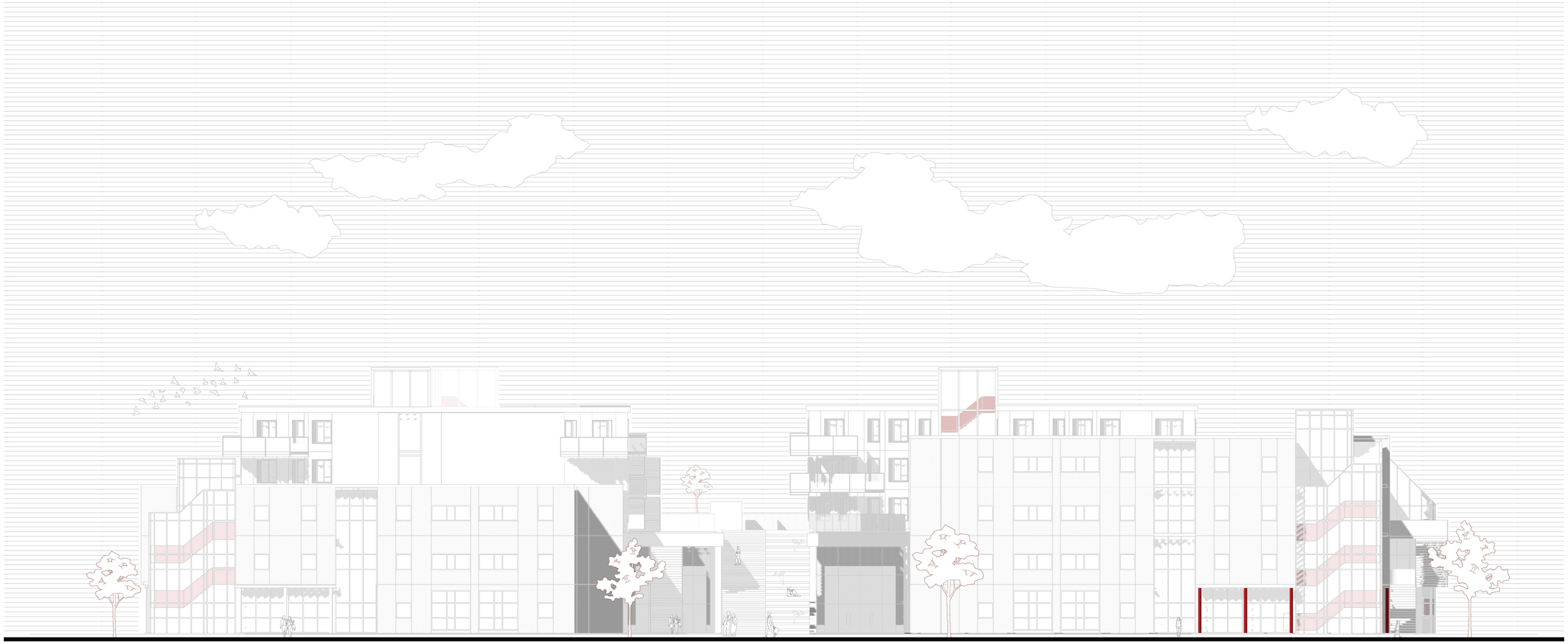
"If the edge fails, then the space never becomes lively."
Alexander via Gehl (1971, p. 144)

ACTIVATING THE PLINTH | Soft edges

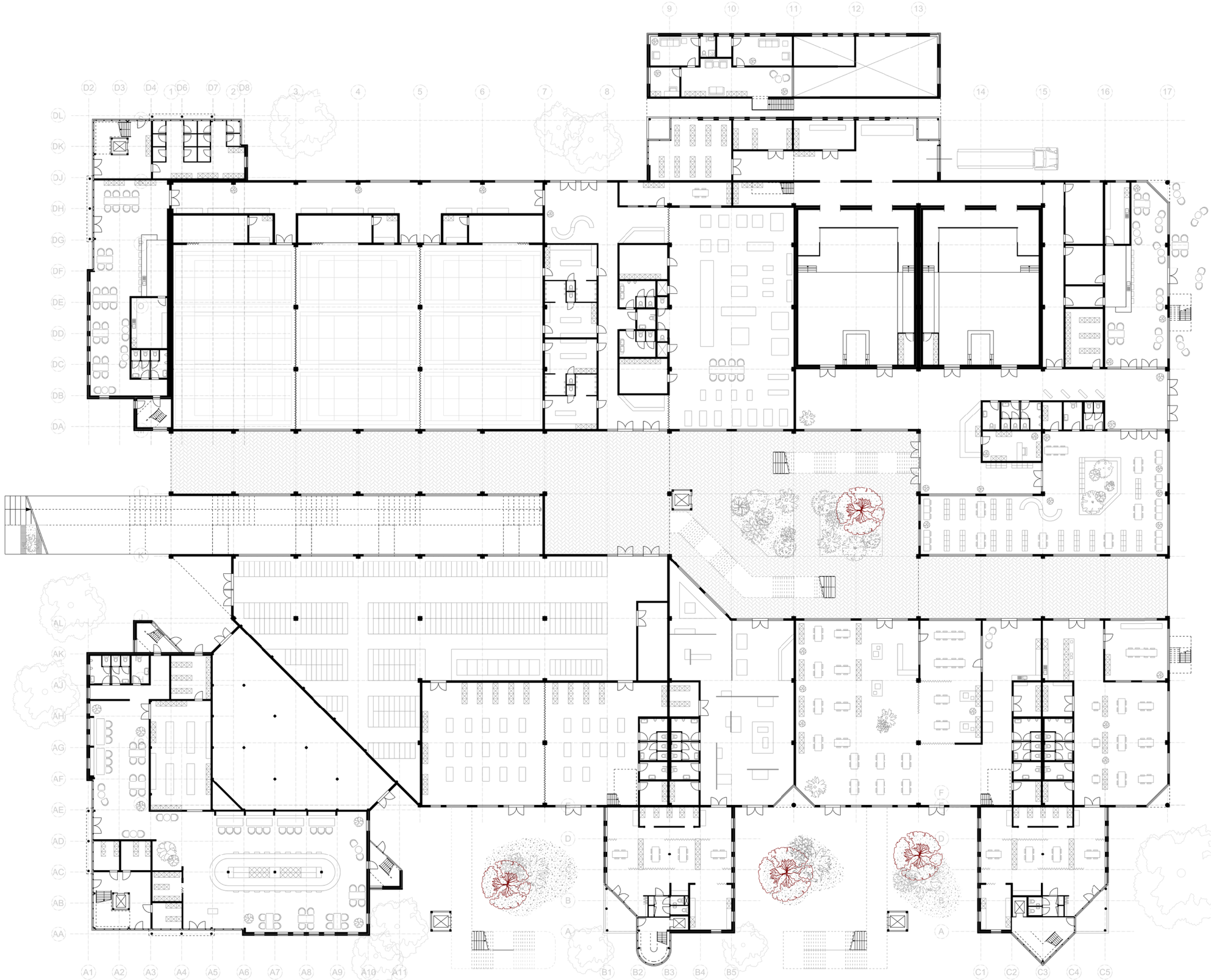


Axonometric

ENTERING THE BUILDING | The passage as spatial backbone



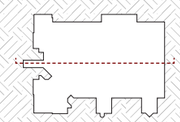
Elevation North 1:200 (scaled)



Ground Floor 1:200 (scaled)

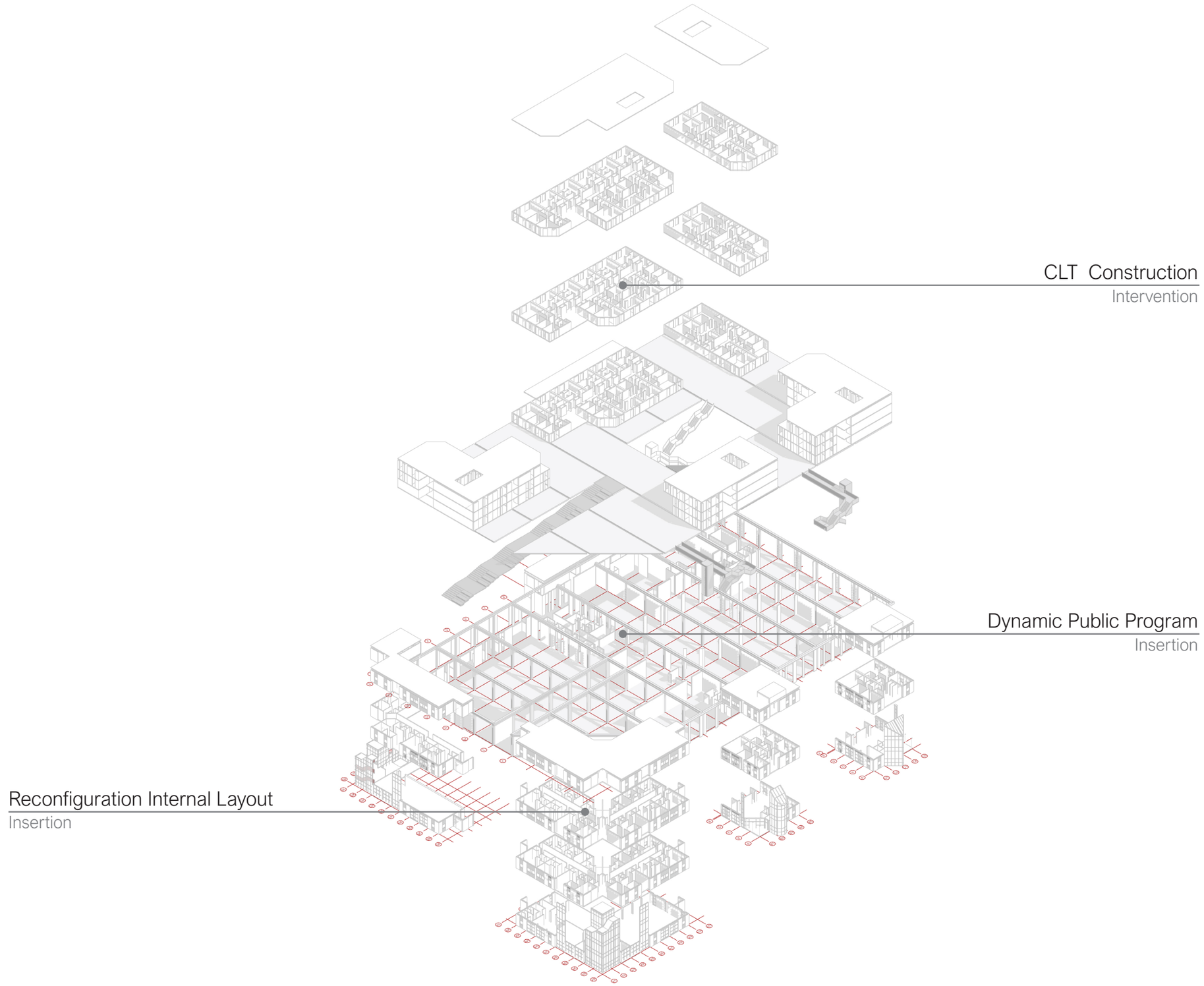
MOVING UPWARDS | The atrium as vertical hinge



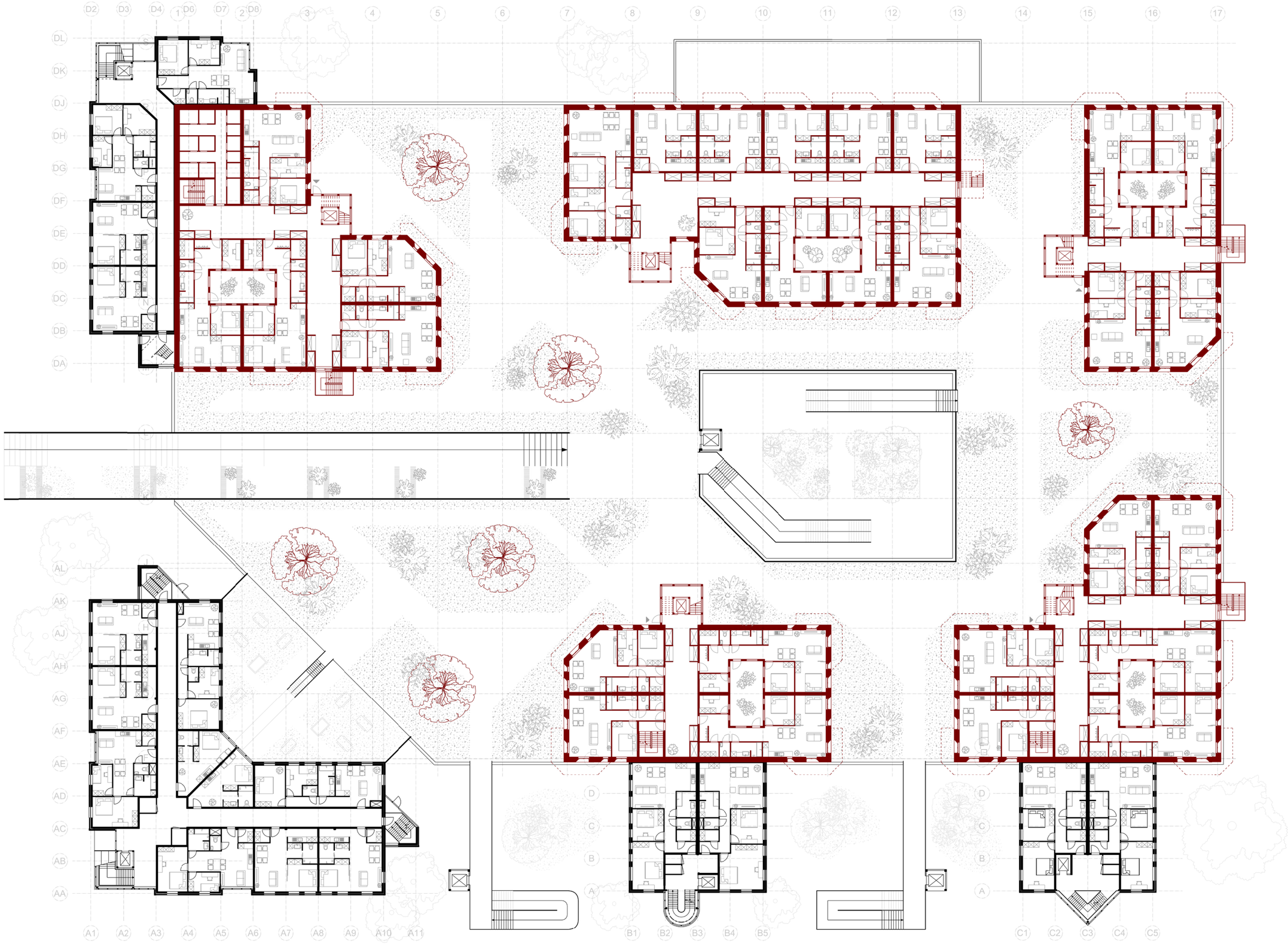


Section 1:200 (scaled)




CLT Construction
Intervention
Dynamic Public Program
Insertion
Reconfiguration Internal Layout
Insertion

COLLECTIVE ROOF | A shared elevated landscape



Roof 1:200 (scaled)

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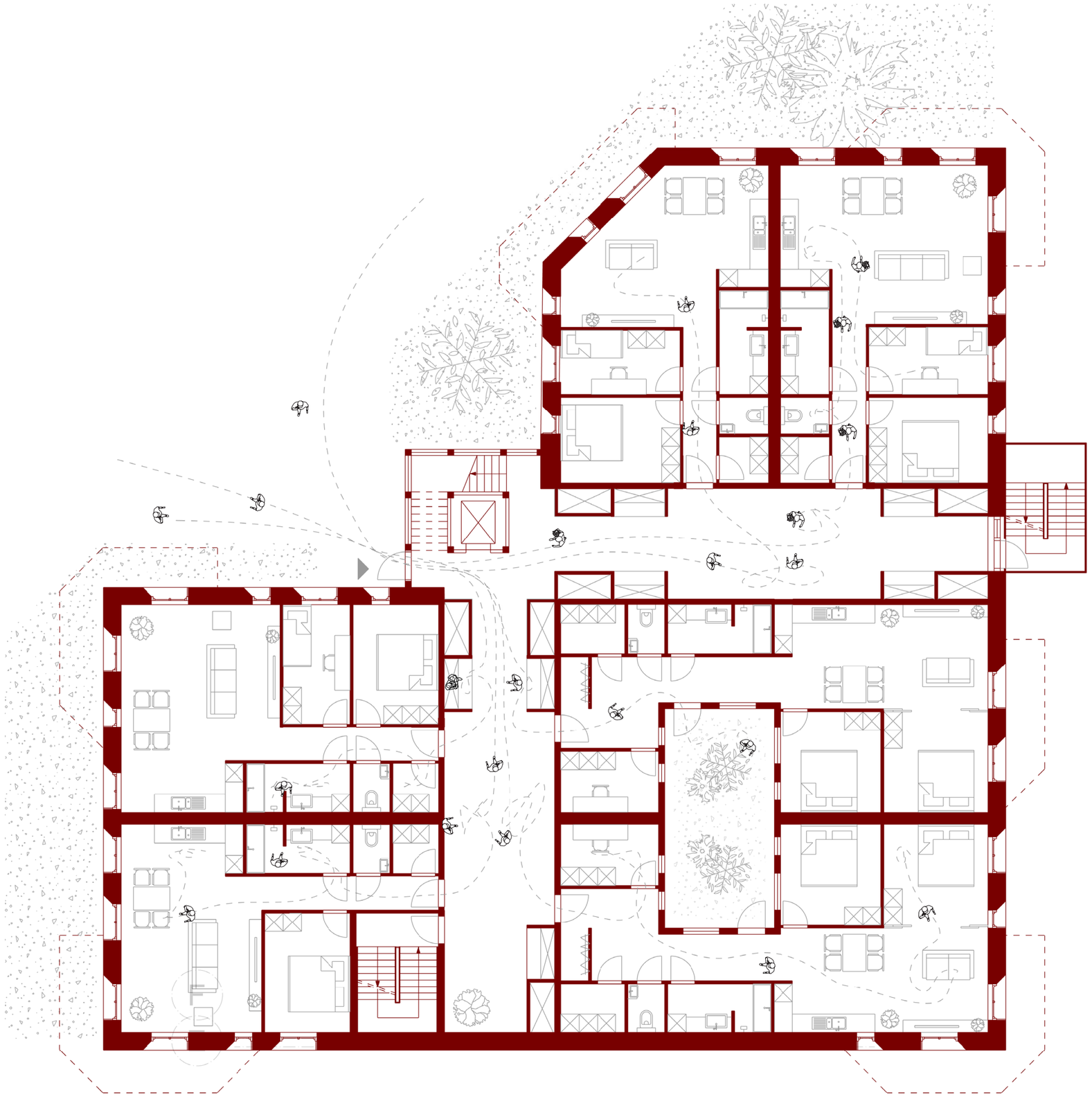
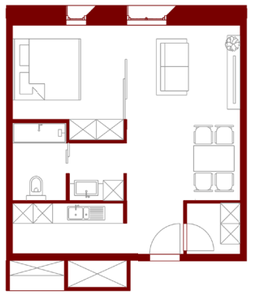


Groundfloor 1:100 (scaled)

Gehl emphasises the preference for edge and sheltered positions in public space, where people feel both protected and visually connected to their surroundings (Gehl, 2011)

15X

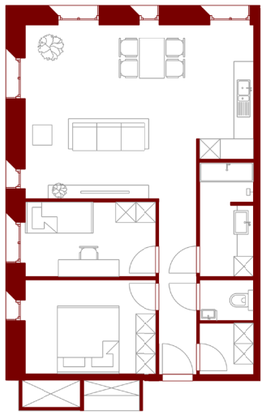


Compact Urban Studio
45m2

TARGET GROUPS

young professionals
starters
students/creative

25X

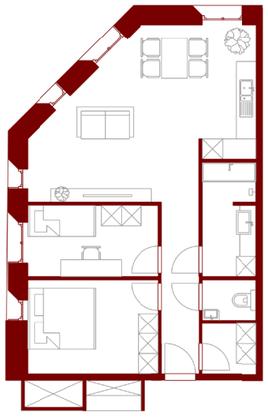


Standard City Apartment
70m2

TARGET GROUPS

young couples
small households
first-time buyers

16X

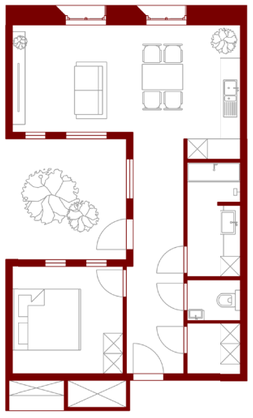


Corner Cut Apartment
65m2

TARGET GROUPS

young couples
small households
first-time buyers

6X

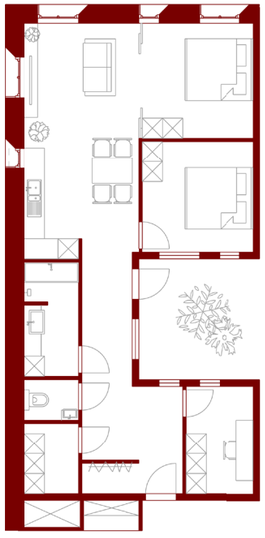


Patio Apartment
55m2

TARGET GROUPS

singles/couples
people working from home
residents valuing outdoor space

24X

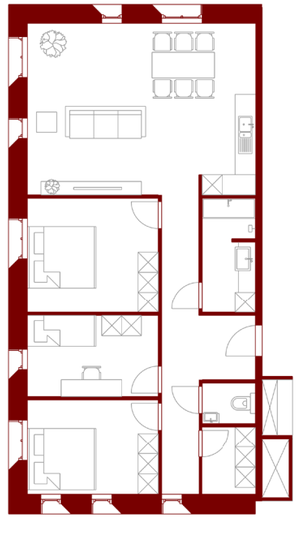


Patio Family Apartment
80m2

TARGET GROUPS

couples
small families
people upgrading from smaller unit

3X



Spacious Familiy Apartment
95m2

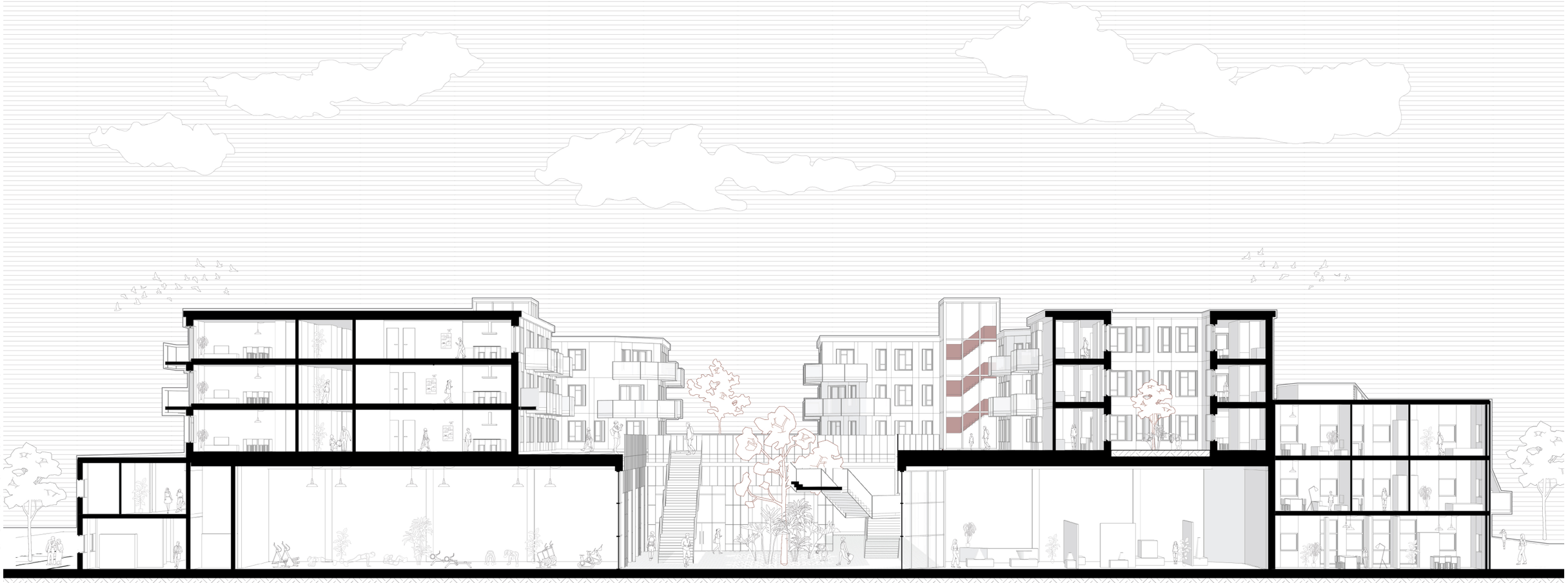
TARGET GROUPS

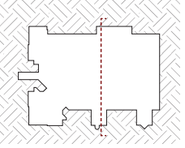
families
higher-income households
long-term residents

Typologies 1:100 (Scaled)

"A building that houses only one kind of resident produces an environment that is spatially complete but socially static."
(Sennett, 2018)

DWELLING AND COLLECTIVE LIFE | Atrium as vertical hinge

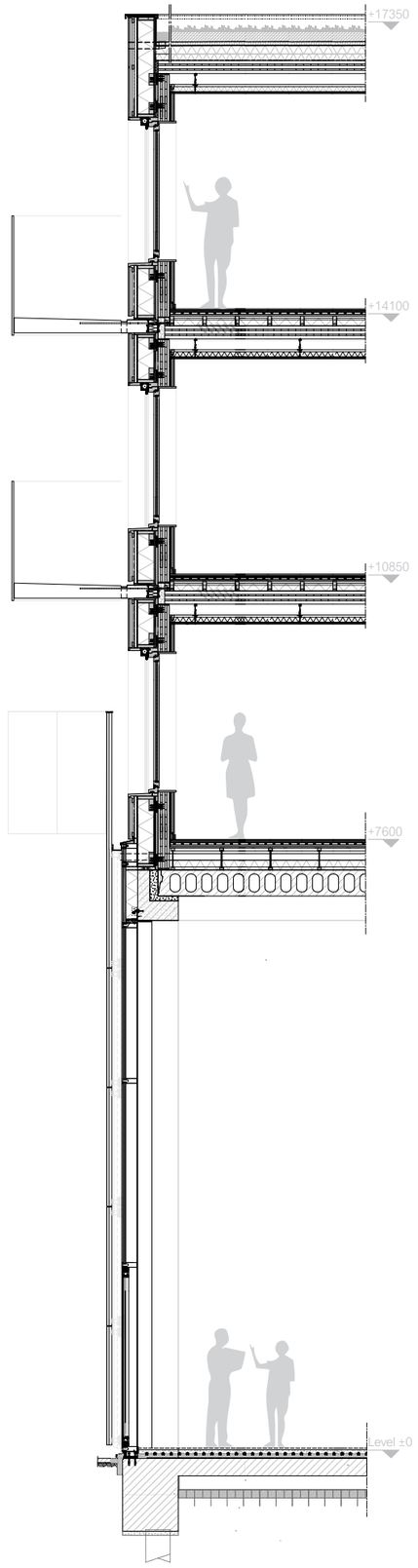




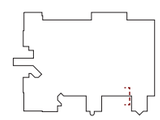
Section 1:200 (Scaled)

MATERIALITY | Facade fragment





Facade fragment 1:20 (scaled)

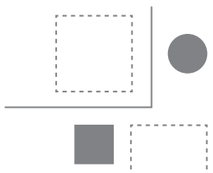




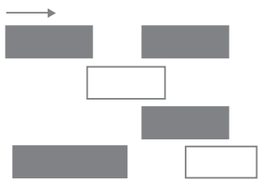
Structural **overcapacity** as design resource



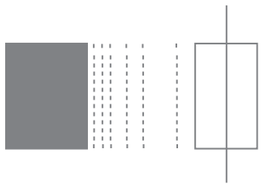
Differential **strategy** per structural condition



Existing **organisational** logic as spatial generator



Programmatic **diversity** as temporal vitality



Plinth and passage as **urban** interface

