

# *DIAGRAMS*

Architecture Forum | 03.14.2012



IKEA - HOMEMADE IS BEST





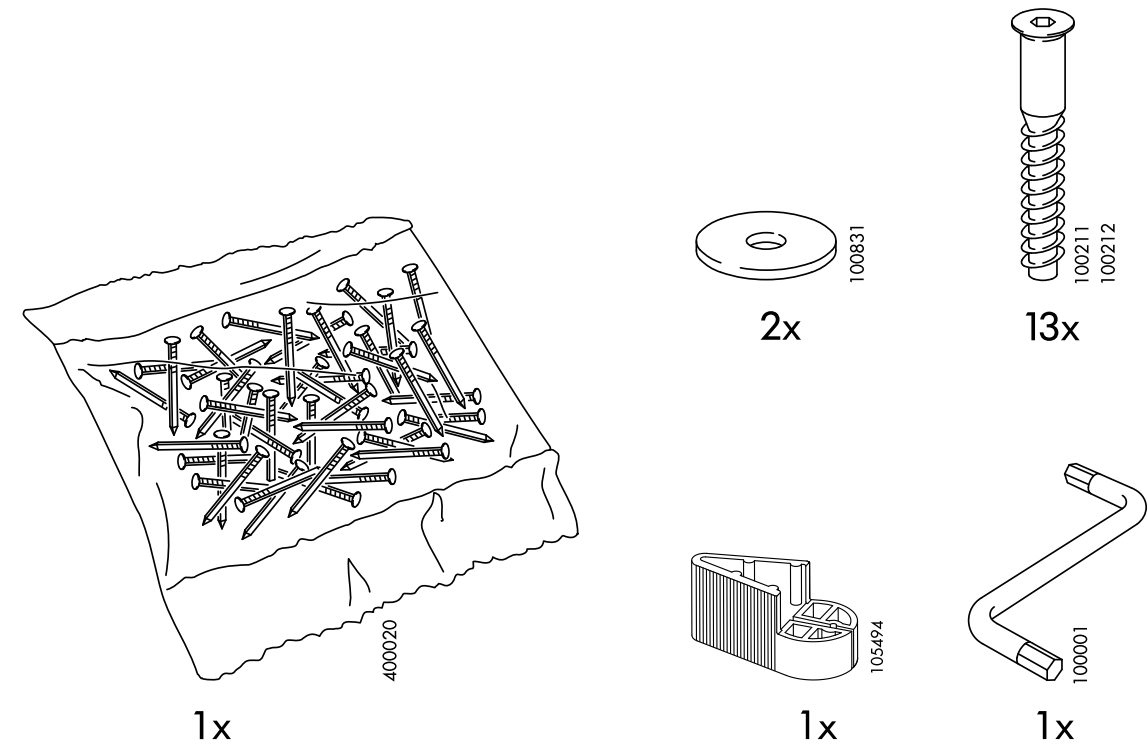
IKEA - HOMEMADE IS BEST





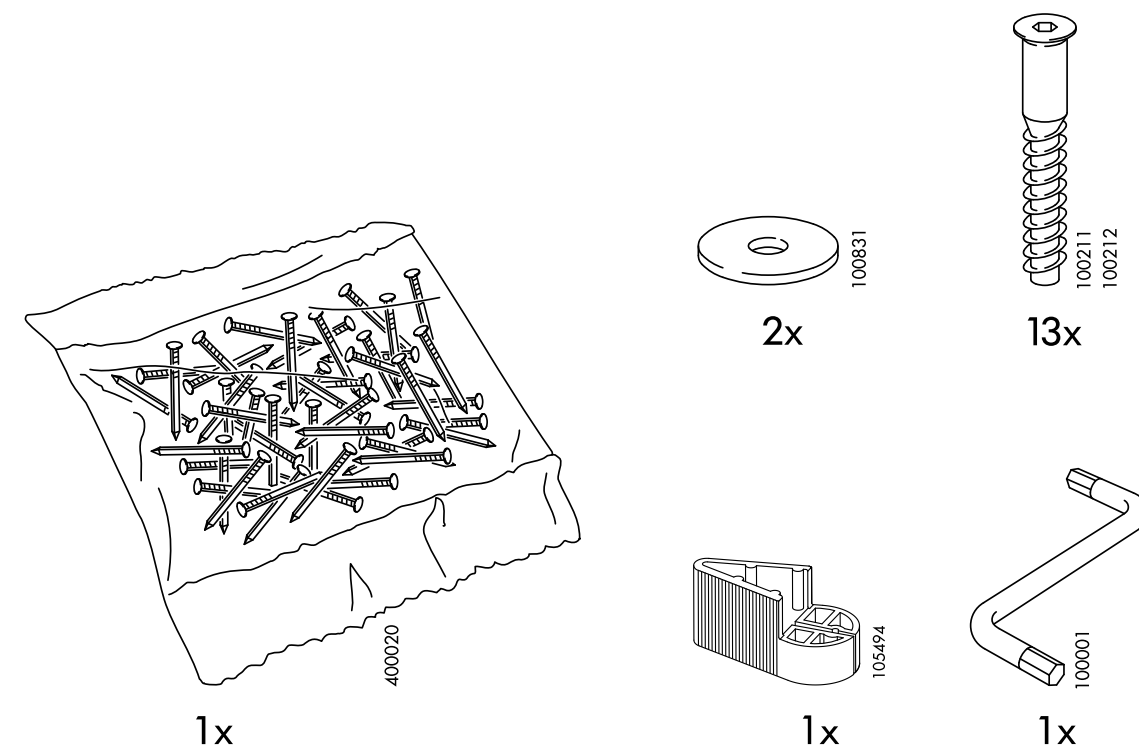
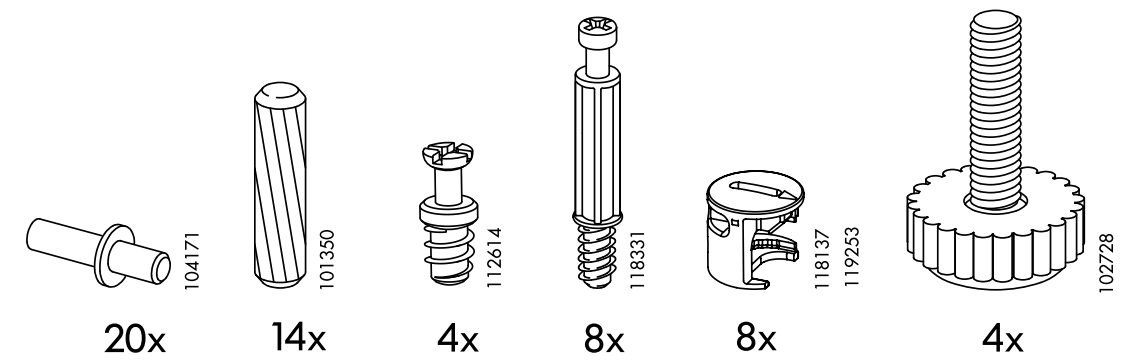
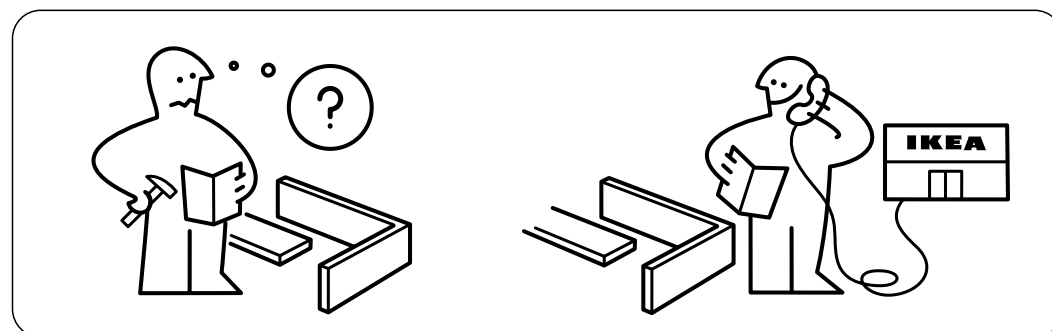
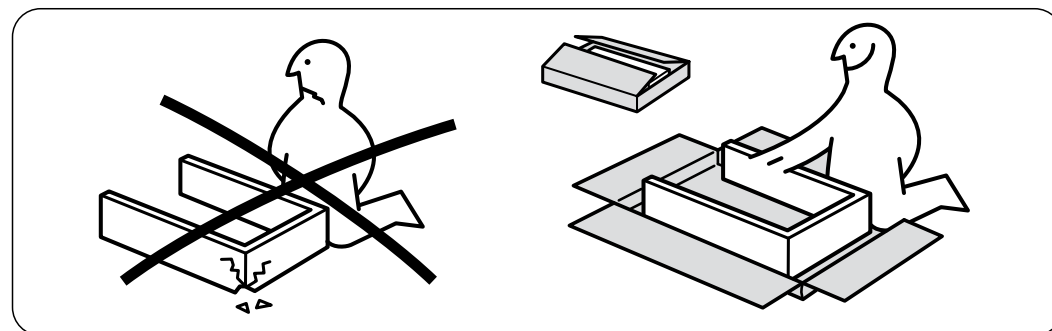
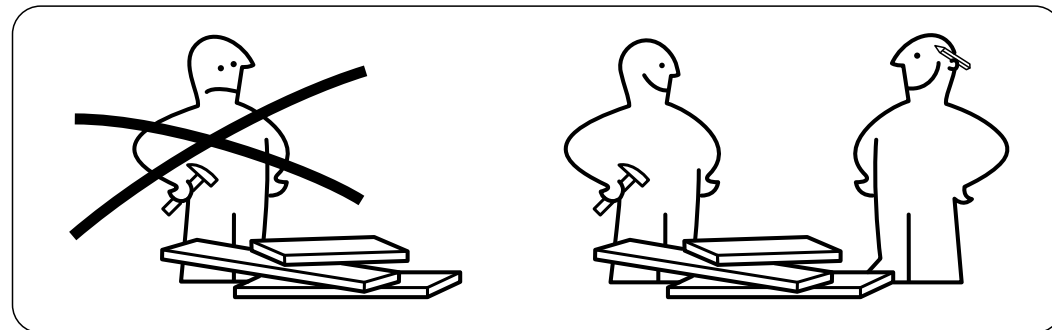
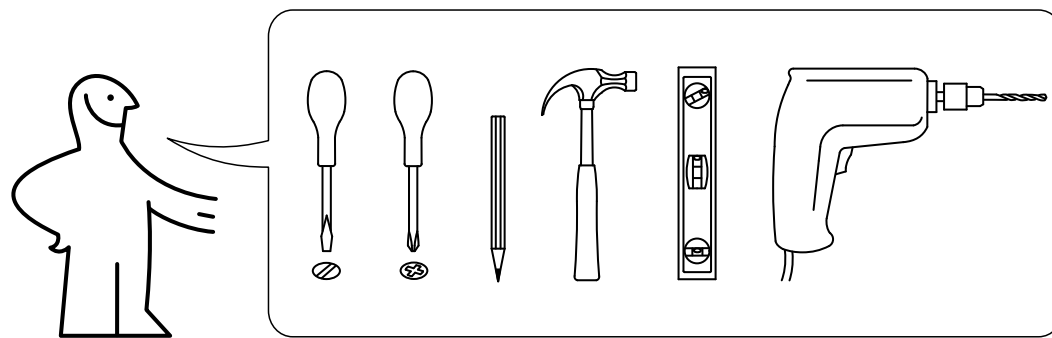


IKEA - HOMEMADE IS BEST



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IKEA - HOMEMADE IS BEST

# *DIAGRAMS*

ABSTRACT MEANS FOR EXPLORING ORGANIZATION



Abstraction is achieved by  
intentionally leaving out  
irrelevant information to focus

on what is relevant is your **concept**





# *PREMISE:*

INTEGRATING DESIGN DIAGRAMMING INTO OUR PROCESS WILL  
COMPEL US TO PRODUCE **BETTER ARCHITECTURE**

*MORE CLARITY*

*MORE INSIGHT*

*MORE HONEST*

*MORE APPROPRIATE*

*MORE UNEXPECTED*

*MORE PURPOSEFUL*

*MORE THOUGHTFUL*

*MORE ORGANIZED*

*MORE INTEGRATED*

# *DIAGRAMS:*

REPRESENT COMPLEX IDEAS, SIMPLY

ALLOW YOU TO STUDY MANY IDEAS QUICKLY

CREATE A PLATFORM FOR DIALOGUE

ARE DEMOCRATIC

EMBODY OPPORTUNITY

FORCE DECISION MAKING

MOMENTS OF FOCUS PROVIDING PLATFORMS FOR INQUIRY

RECORD THE DESIGN PROCESS

MANY CAN MAKE UP A SINGLE BUILDING



# *DIAGRAMS:*

*CLARITY* REPRESENT COMPLEX IDEAS, SIMPLY

*INSIGHT* ALLOW YOU TO STUDY MANY IDEAS QUICKLY

*HONEST* CREATE A PLATFORM FOR DIALOGUE

*APPROPRIATE* ARE DEMOCRATIC

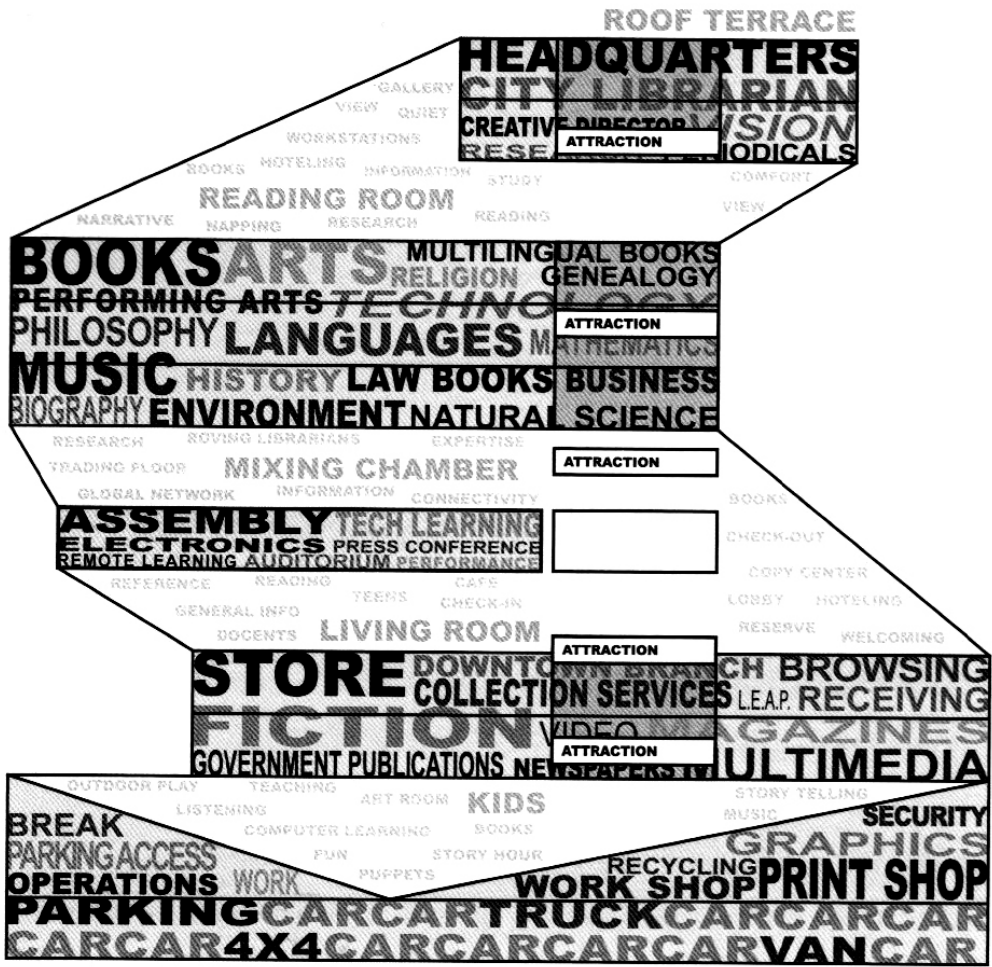
*UNEXPECTED* EMBODY OPPORTUNITY

*PURPOSEFUL* FORCE DECISION MAKING

*THOUGHTFUL* MOMENTS OF FOCUS PROVIDING PLATFORMS FOR INQUIRY

*ORGANIZED* RECORD THE DESIGN PROCESS

*COHESIVE* MANY CAN MAKE UP A SINGLE BUILDING



*Not that I have a particularly high regard for diagrams, but this one is simply an illustration to enable others to understand our process. It's not at all a diagram, but a drawing that came after the fact. Hidden in it is a more simple reading of which elements of a particular kind of building can be stable, and which have to remain volatile. **This is simply an end product, a retroactive illustration of what, in a more private sense, is a way of thinking.***

***The real diagram is the one that addresses stability and instability. In other projects there were diagrams, barcodes of stability and instability, or defined and undefined spaces.***

# REM KOOLHAAS



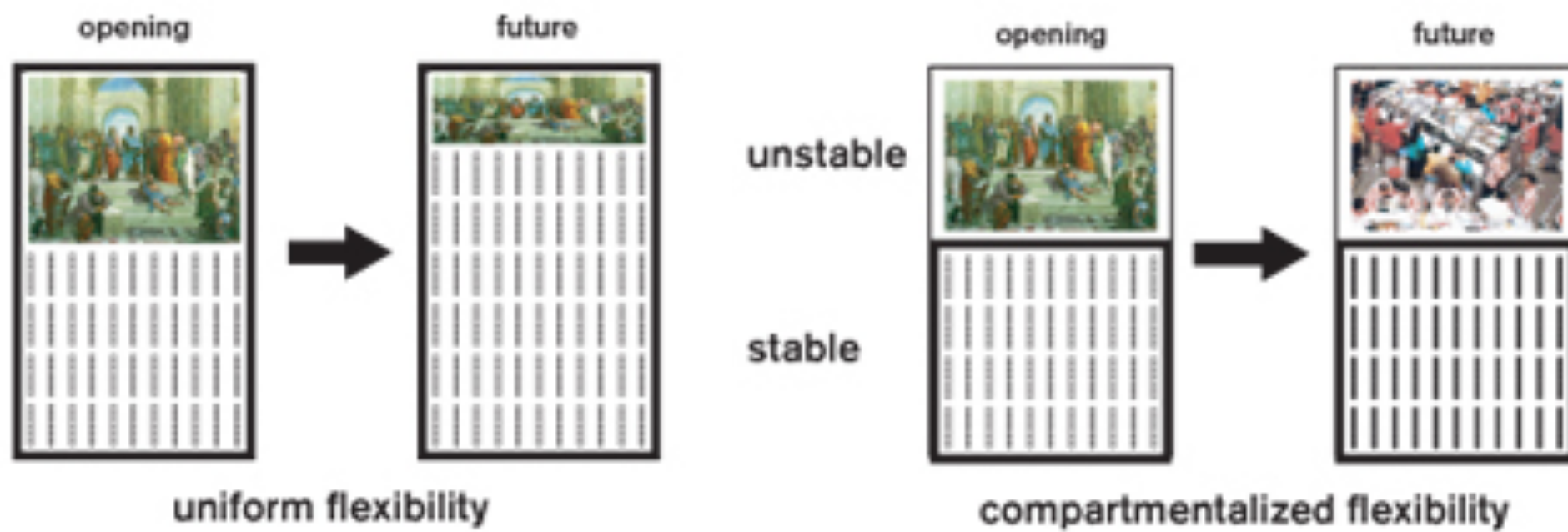
# *BUILDING DIAGRAMS*

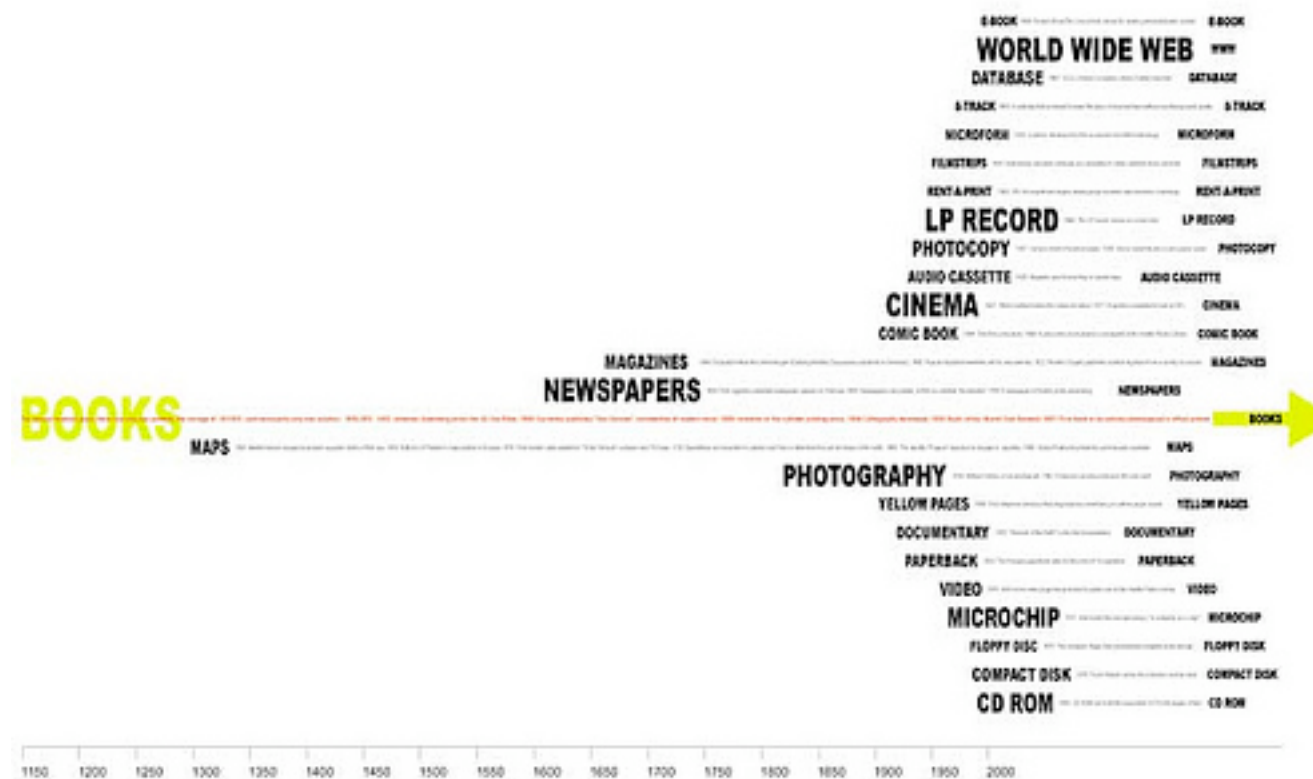
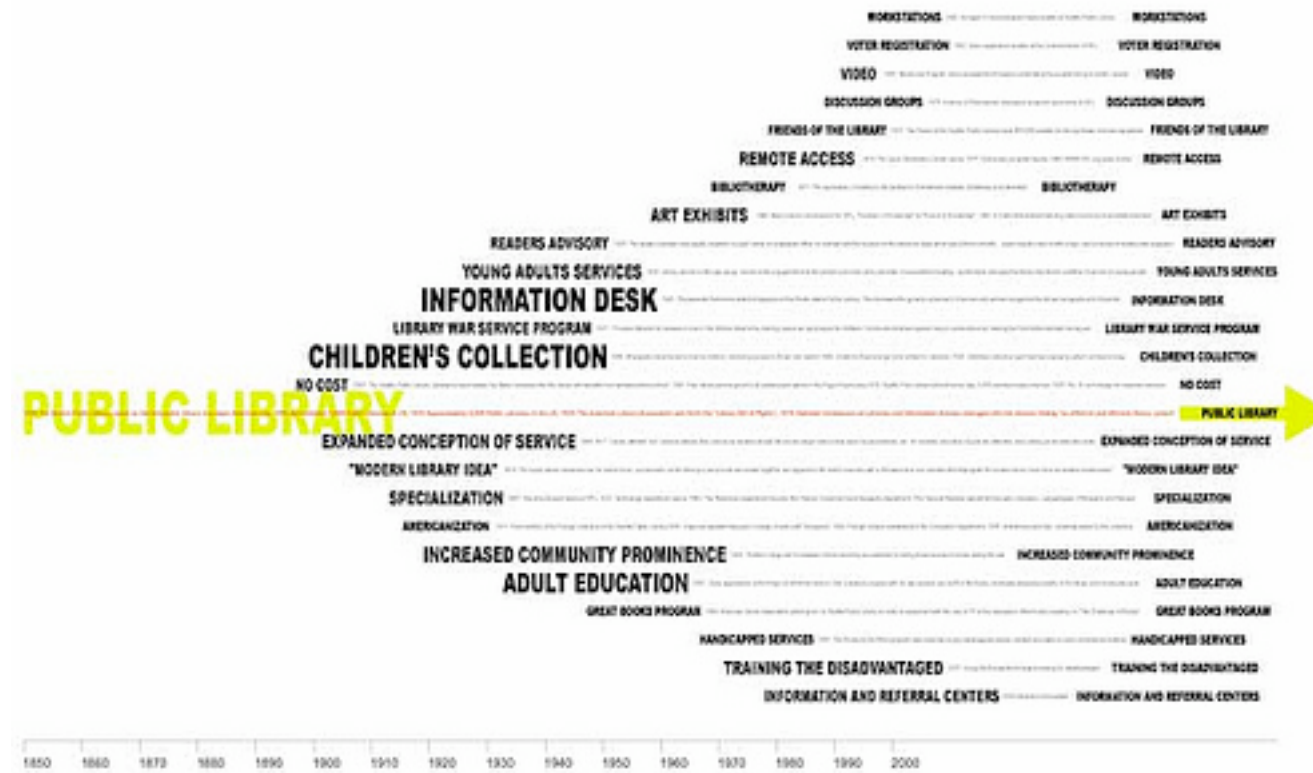
RETROACTIVE ILLUSTRATIONS REPRESENTING  
**WHAT A BUILDING IS**

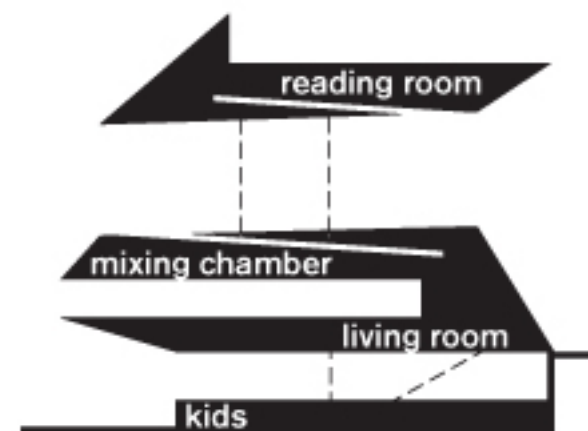
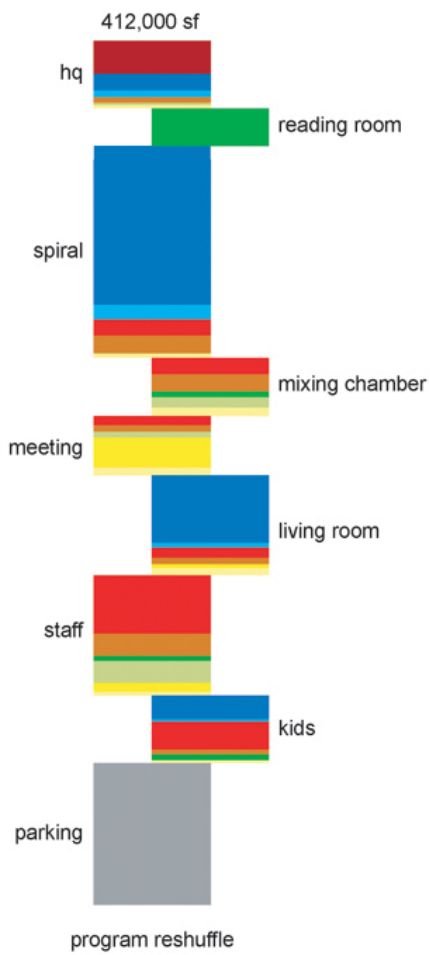
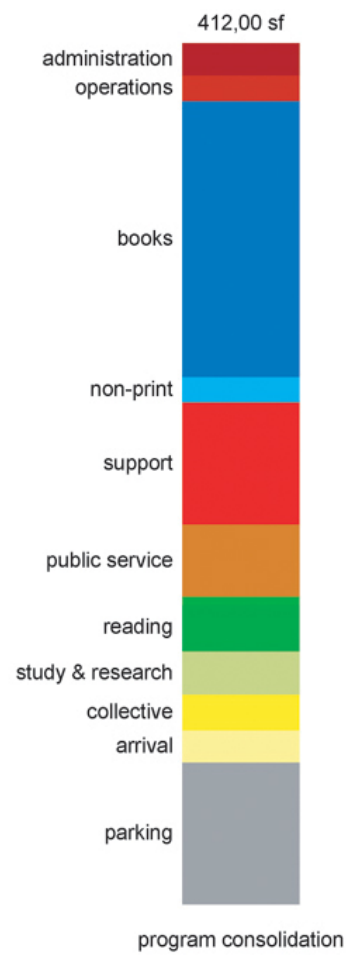
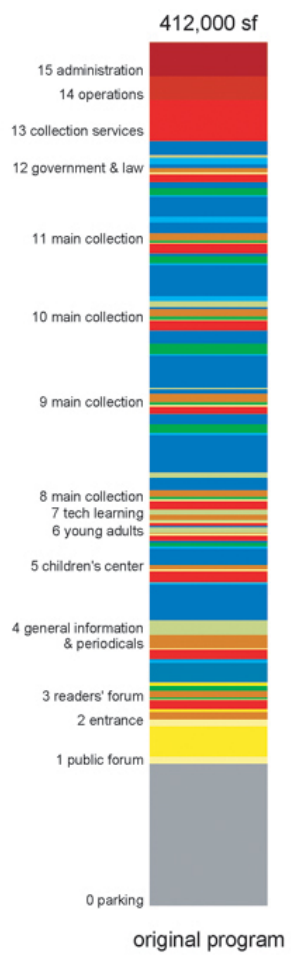
*vs*

# *DESIGN DIAGRAMS*

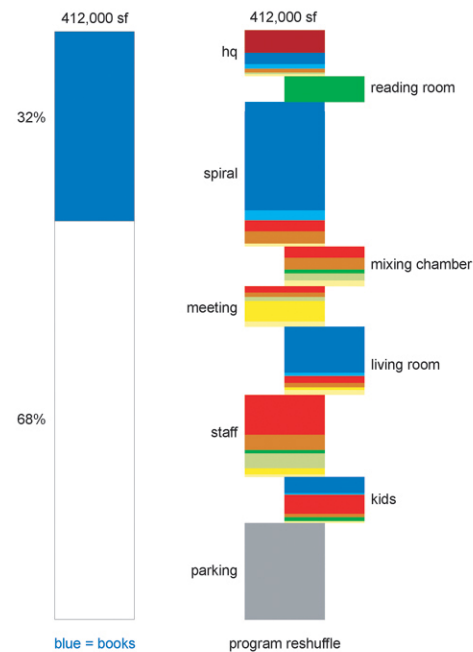
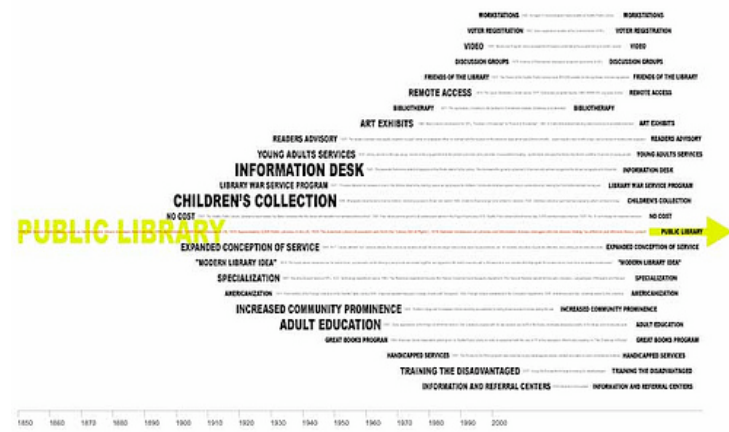
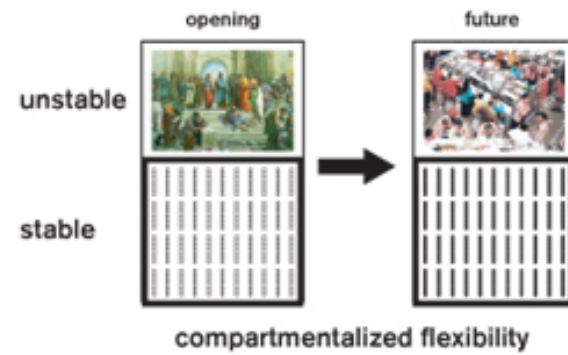
EXPLORATION & DOCUMENTATION OF CONCEPTS  
IN THE DESIGN PROCESS REPRESENTING  
**WHY A BUILDING IS**











WHY  
VS  
WHAT













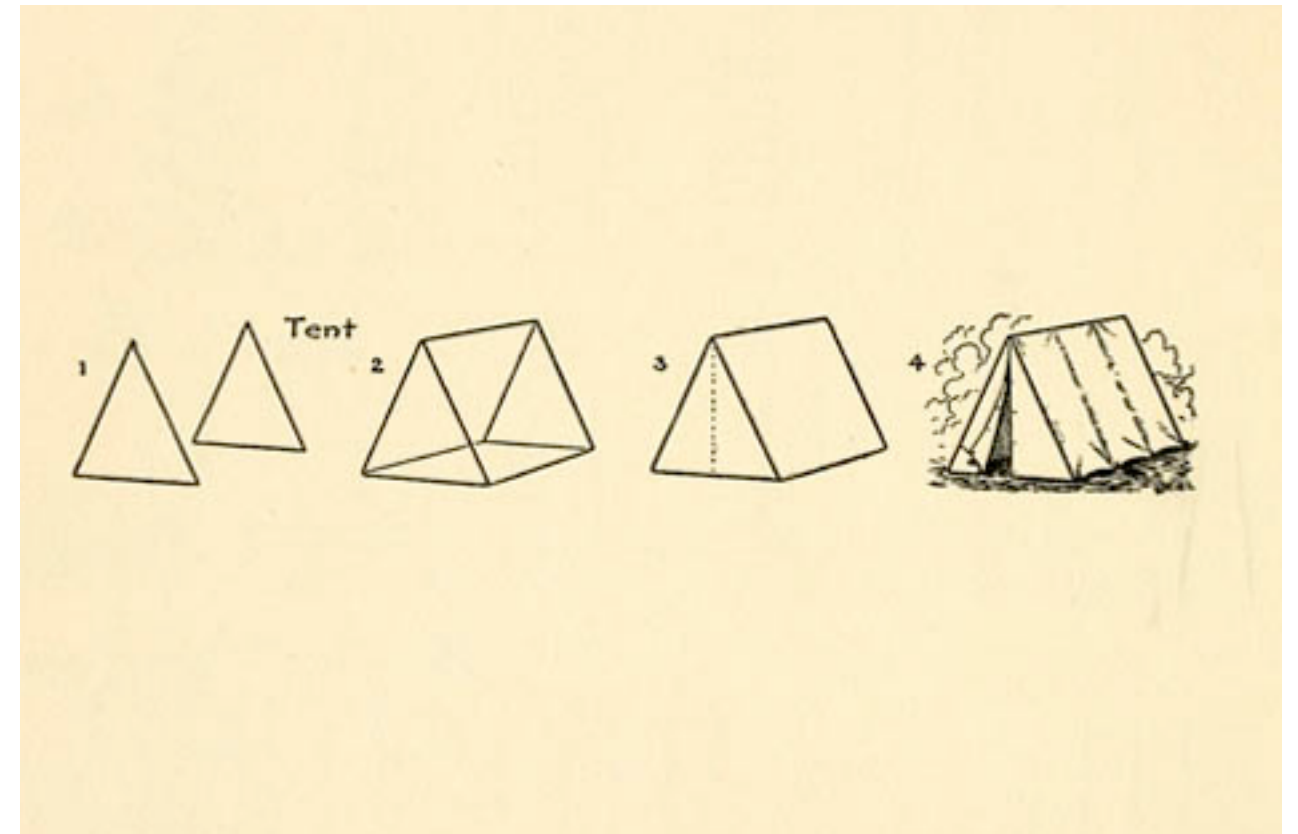
# *DIAGRAMS*

ARCHITECTURAL DIAGRAMS TEND TO EXPLORE THE  
ORGANIZATION OF FORM, SPACE AND FUNCTION

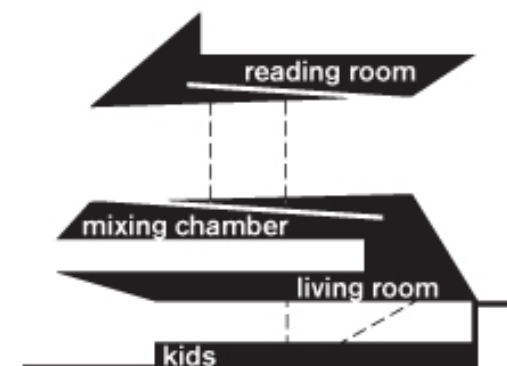
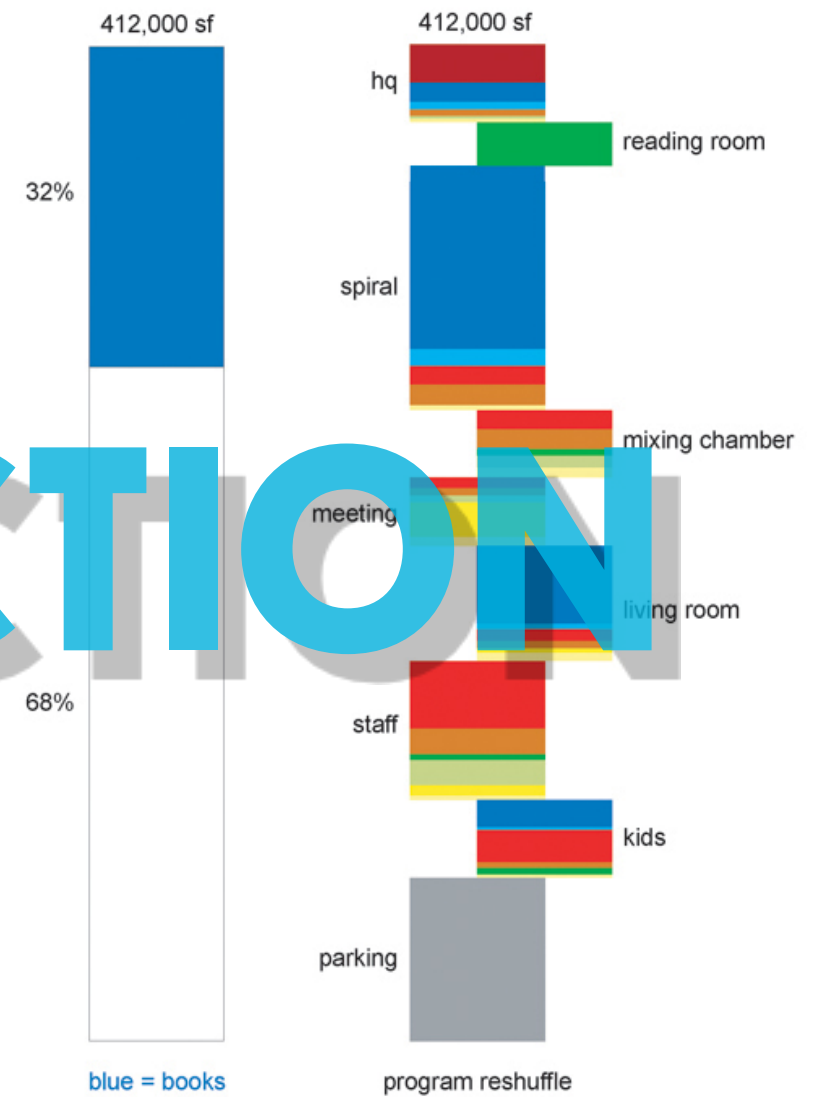
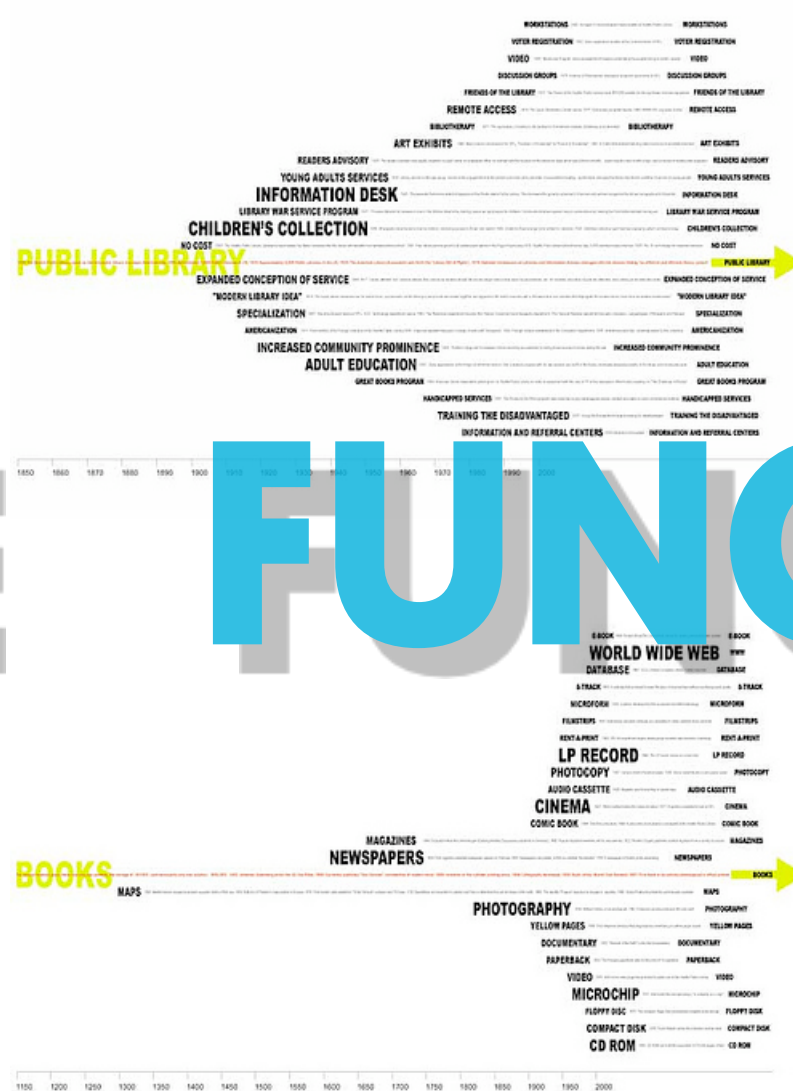
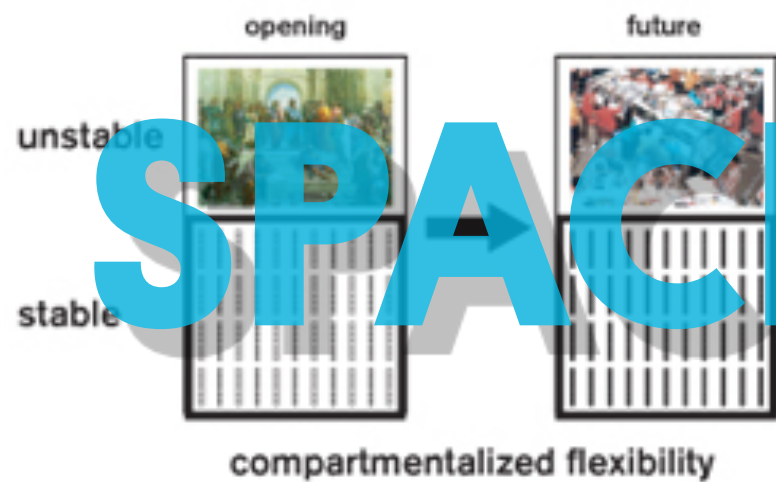




FUNCTION



FORM | SPACE



# *EXAMPLES*

DESIGN DIAGRAMS SPEAK TO A WAY OF THINKING.  
HOW THAT TRANSLATES INTO ARCHITECTURE IS....



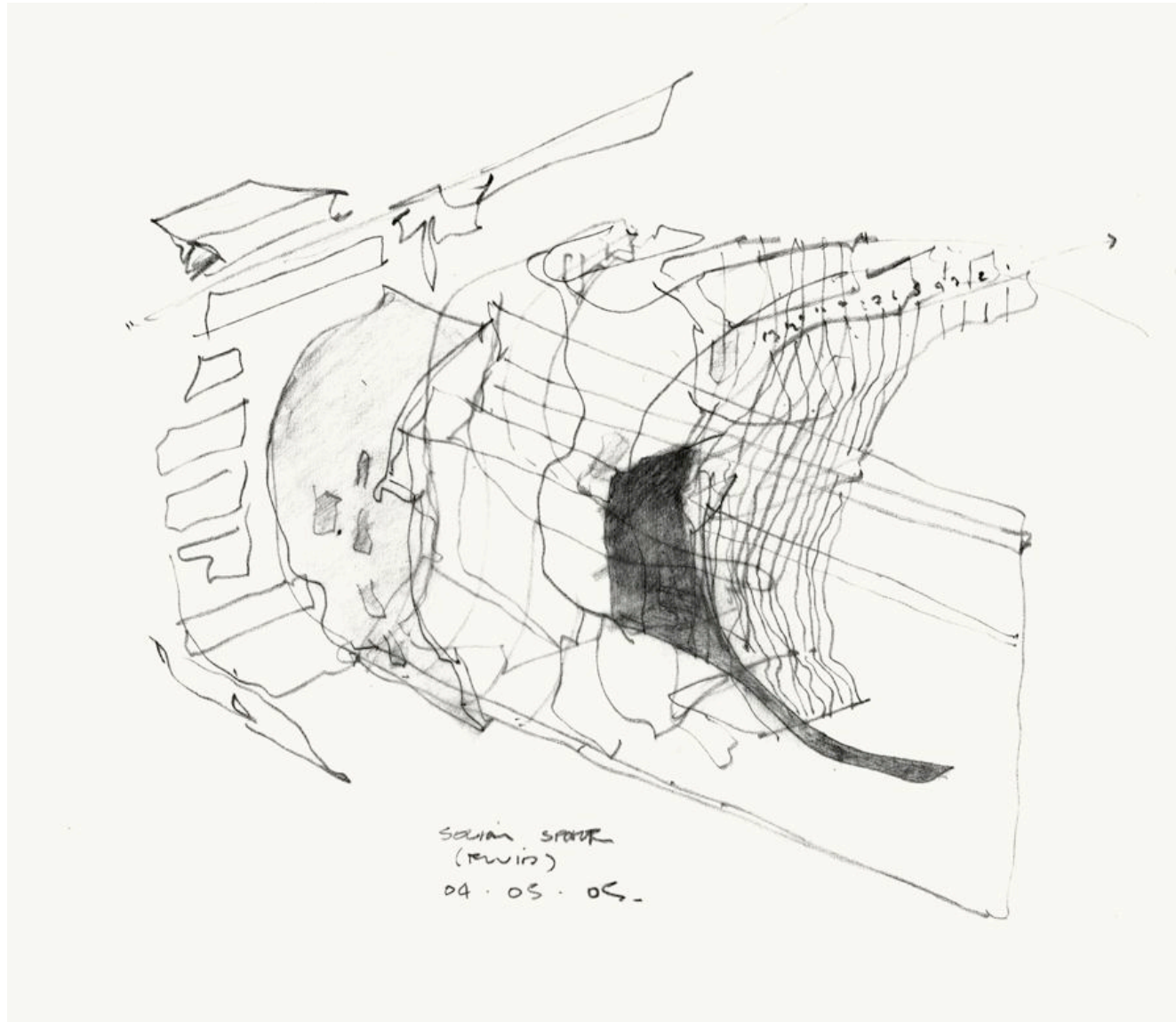
# *EXAMPLES*

CASE STUDIES: Seattle Public Library | **OMA/REX**  
41 Cooper Square | **MORPHOSIS**  
Research Centre for Université Pierre | **BIG**  
Mobius House | **UN Studio**  
Mercedes Benz Museum | **UN Studio**  
Toledo Glass Museum | **SANAA**  
Teshima Art Museum | **Ryue Nishizawa**

# 41 COOPER SQUARE

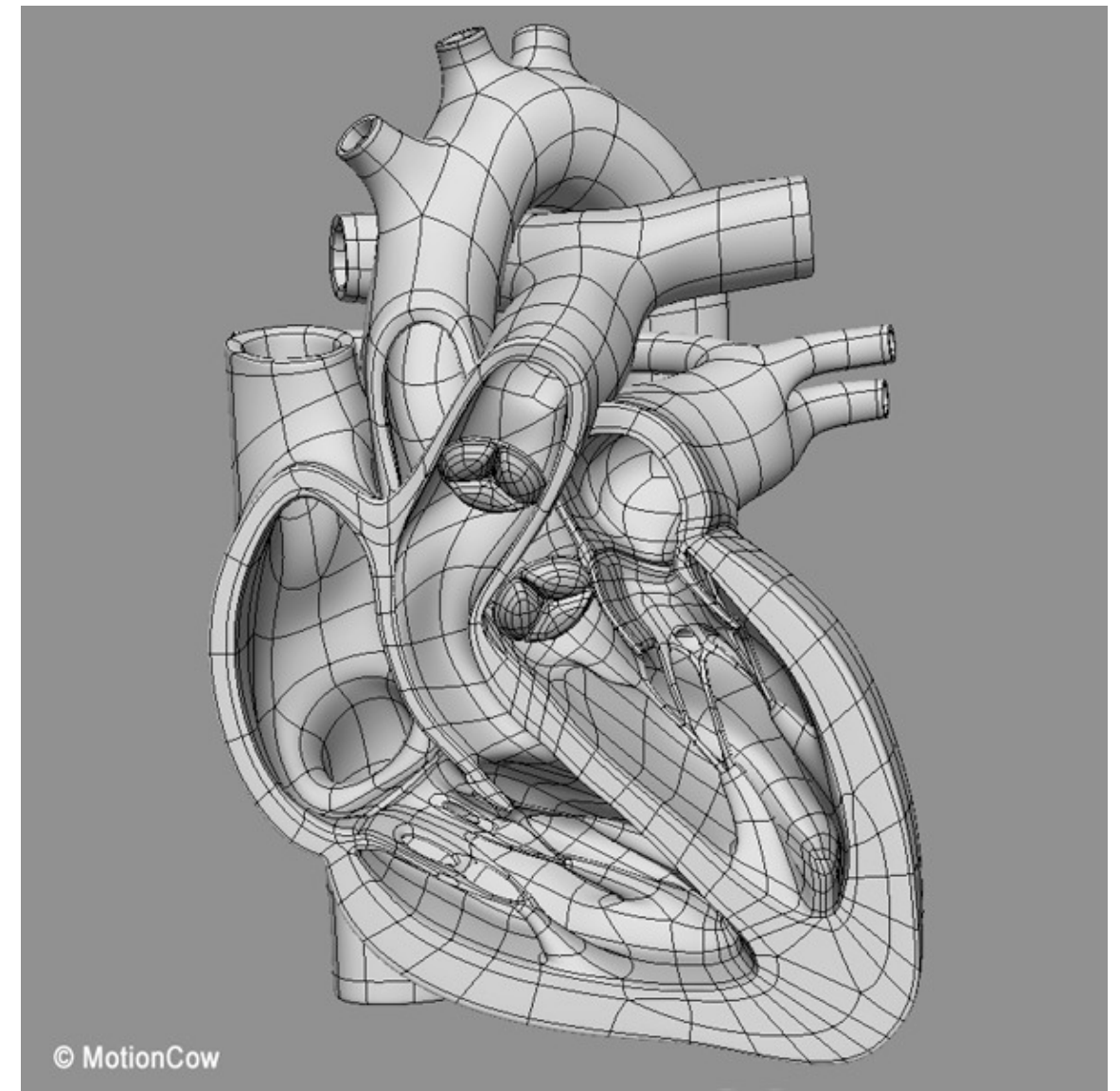
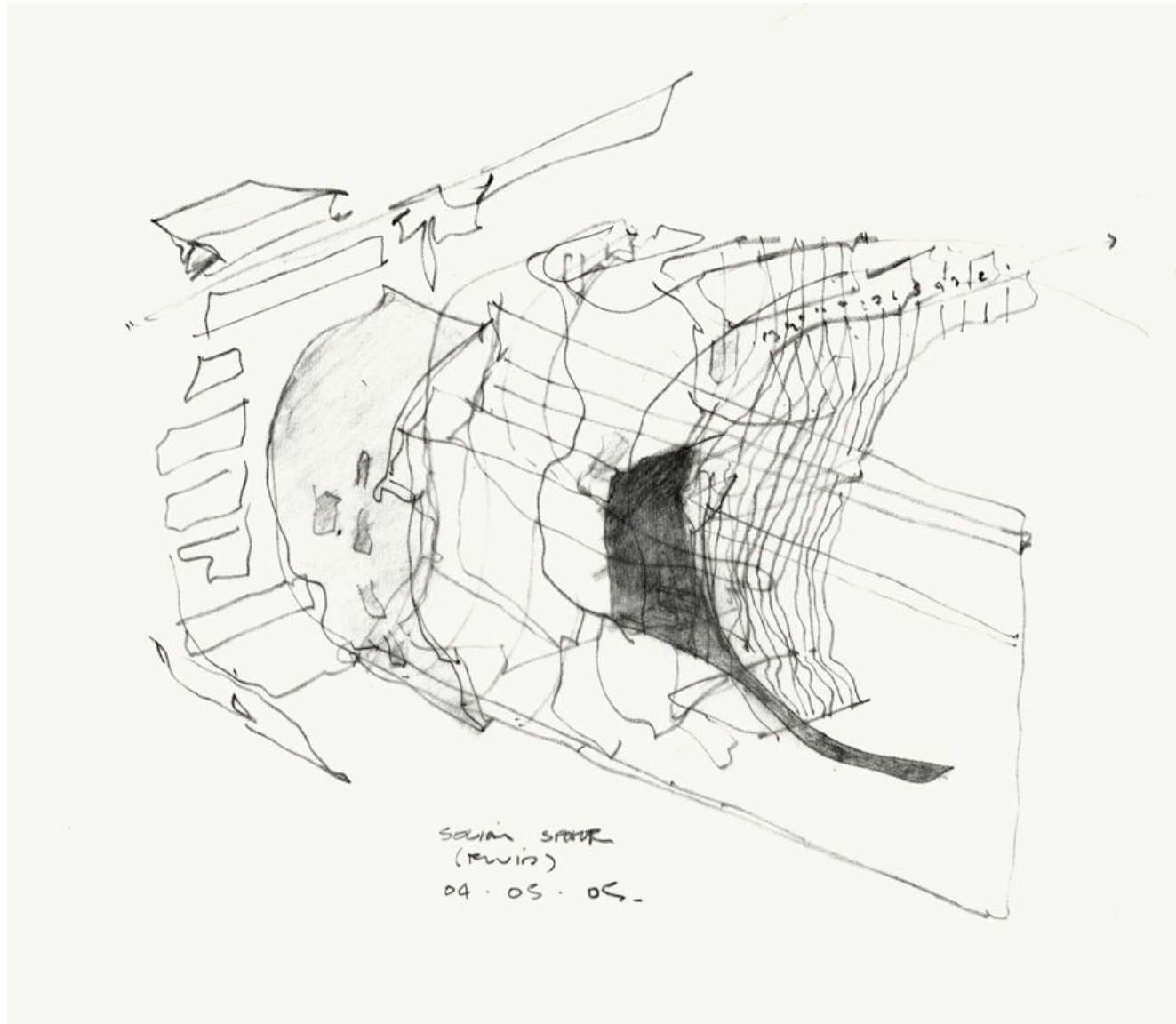
MORPHOSIS

CONCEPT BASED ON SPATIAL METAPHOR  
DIAGRAMS AS GEOMETRICAL SPATIAL EXPLORATIONS

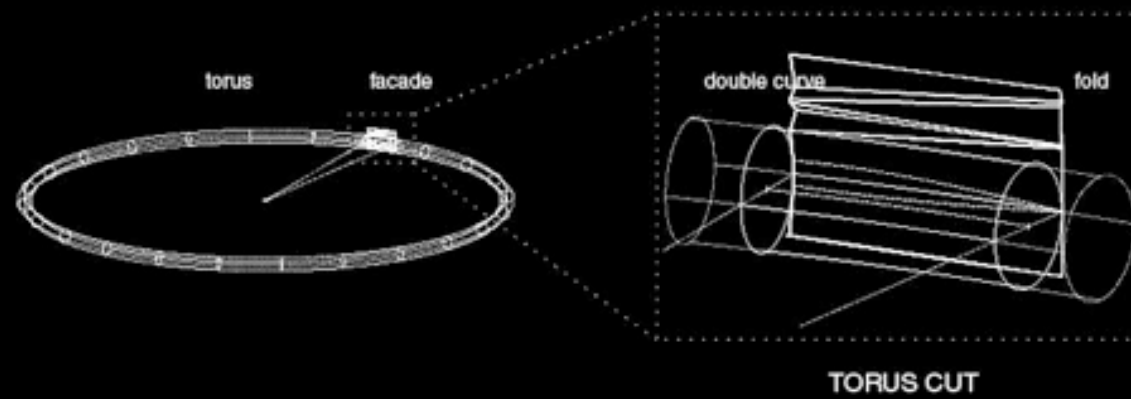


*The building is conceived as a vehicle to foster collaboration and cross-disciplinary dialogue among the college's three schools, previously housed in separate buildings. A **vertical piazza**—the central space for informal social, intellectual and creative exchange—forms the heart of the new academic building. An undulating lattice envelopes a 20-foot wide grand stair which ascends four stories from the ground level through the sky-lit central atrium, which itself reaches to the full height of the building. **This vertical piazza is the social heart of the building, providing a place for impromptu and planned meetings, student gatherings, lectures, and for the intellectual debate that defines the academic environment.***

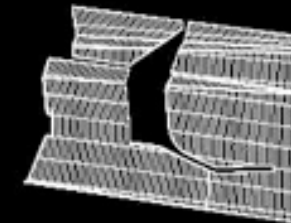




## W. FACADE GEOMETRY

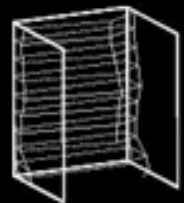


ATRIUM PROJECTION CUT

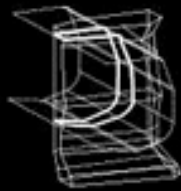


PANELIZATION

## ATRIUM GEOMETRY



MAXIMUM VOLUME



PROGRAM CUT



BRIDGE CUT



SKYLIGHT CUT



STAIR CUT



FINAL

## MESHES



HORIZONTAL



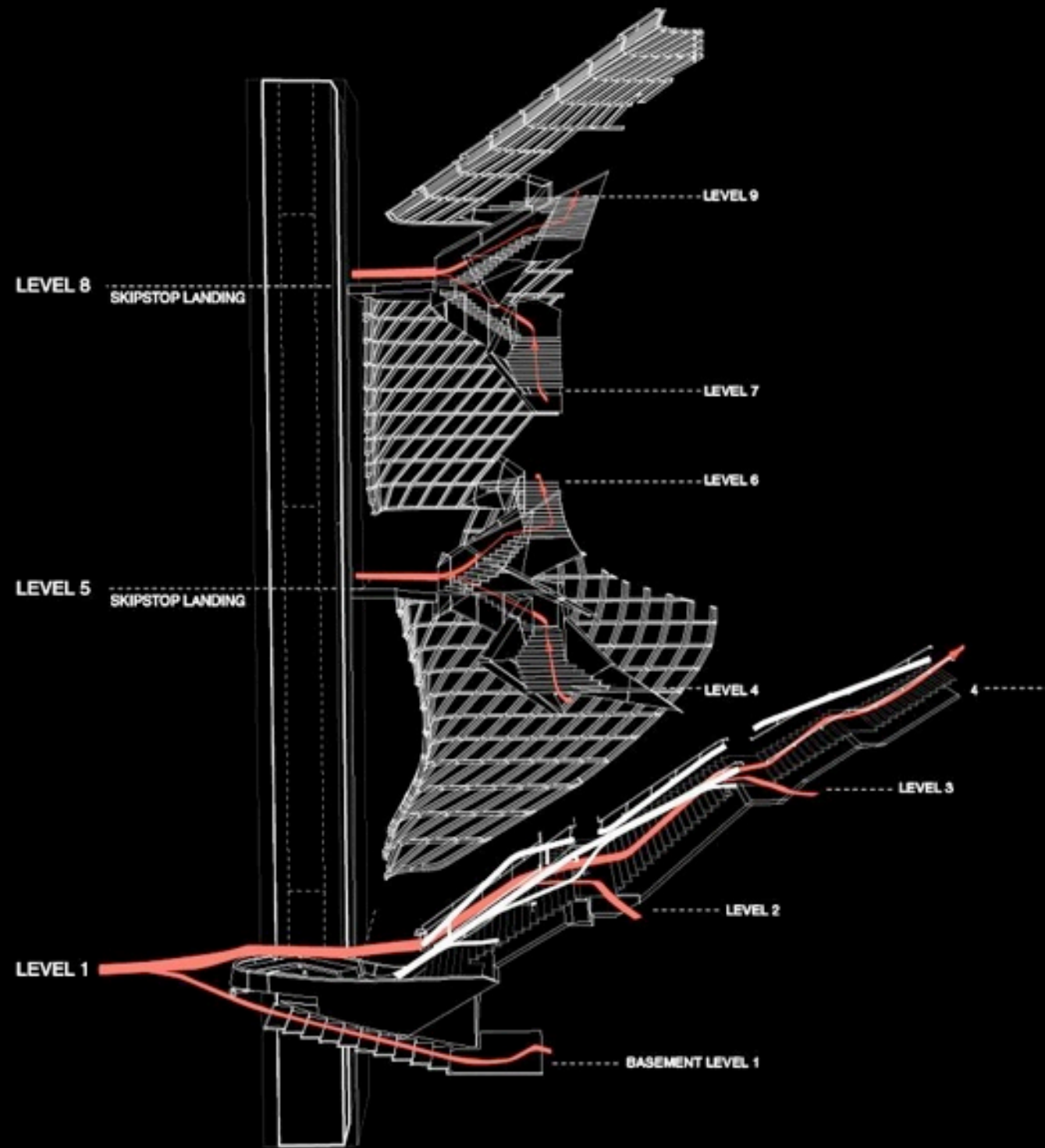
DIAGONAL



FINAL ATRIUM

## FACADE AND ATRIUM GEOMETRY

41 COOPER SQUARE



## SKIP-STOP

41 COOPER SQUARE

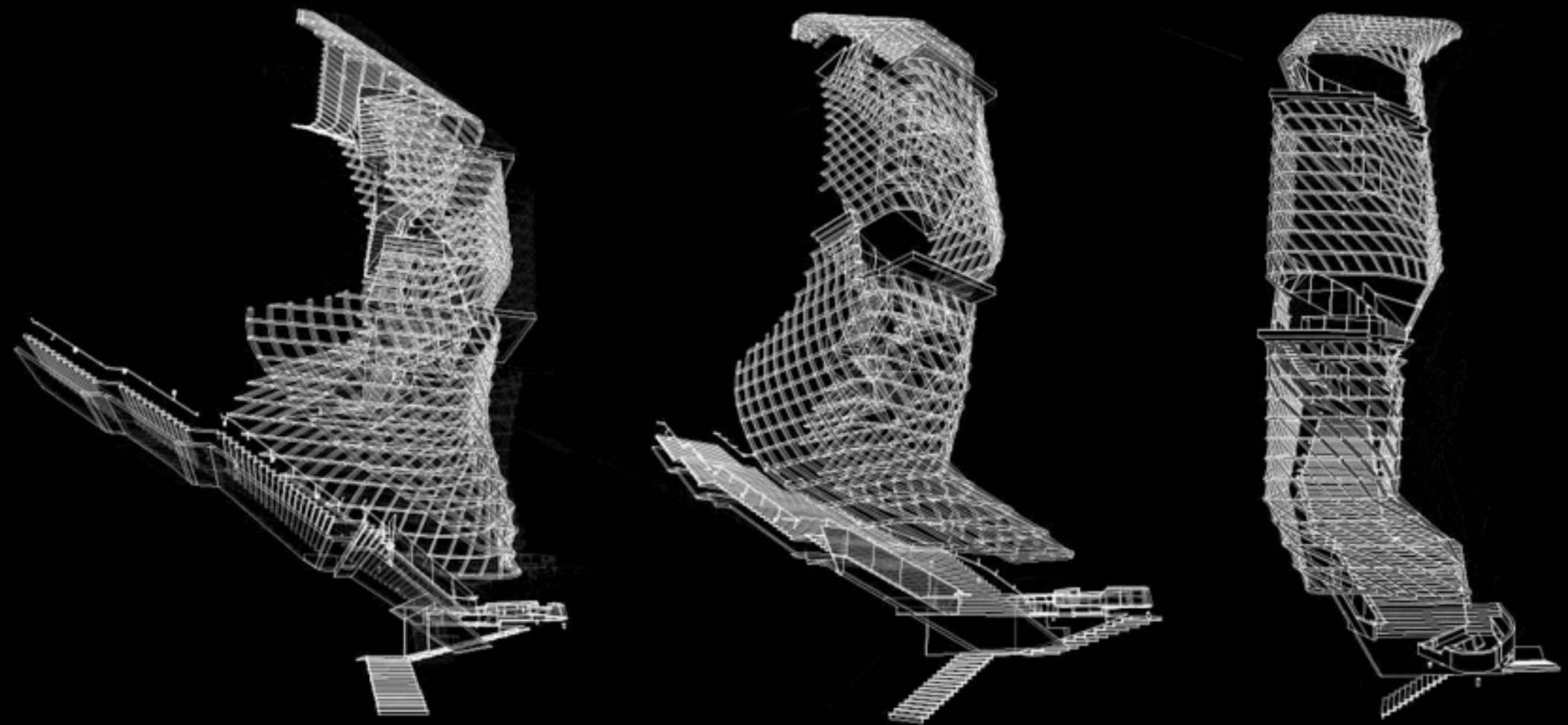




**ATRIUM**

41 COOPER SQUARE





**ATRIUM**  
41 COOPER SQUARE





41 COOPER SQUARE | MORPHOSIS

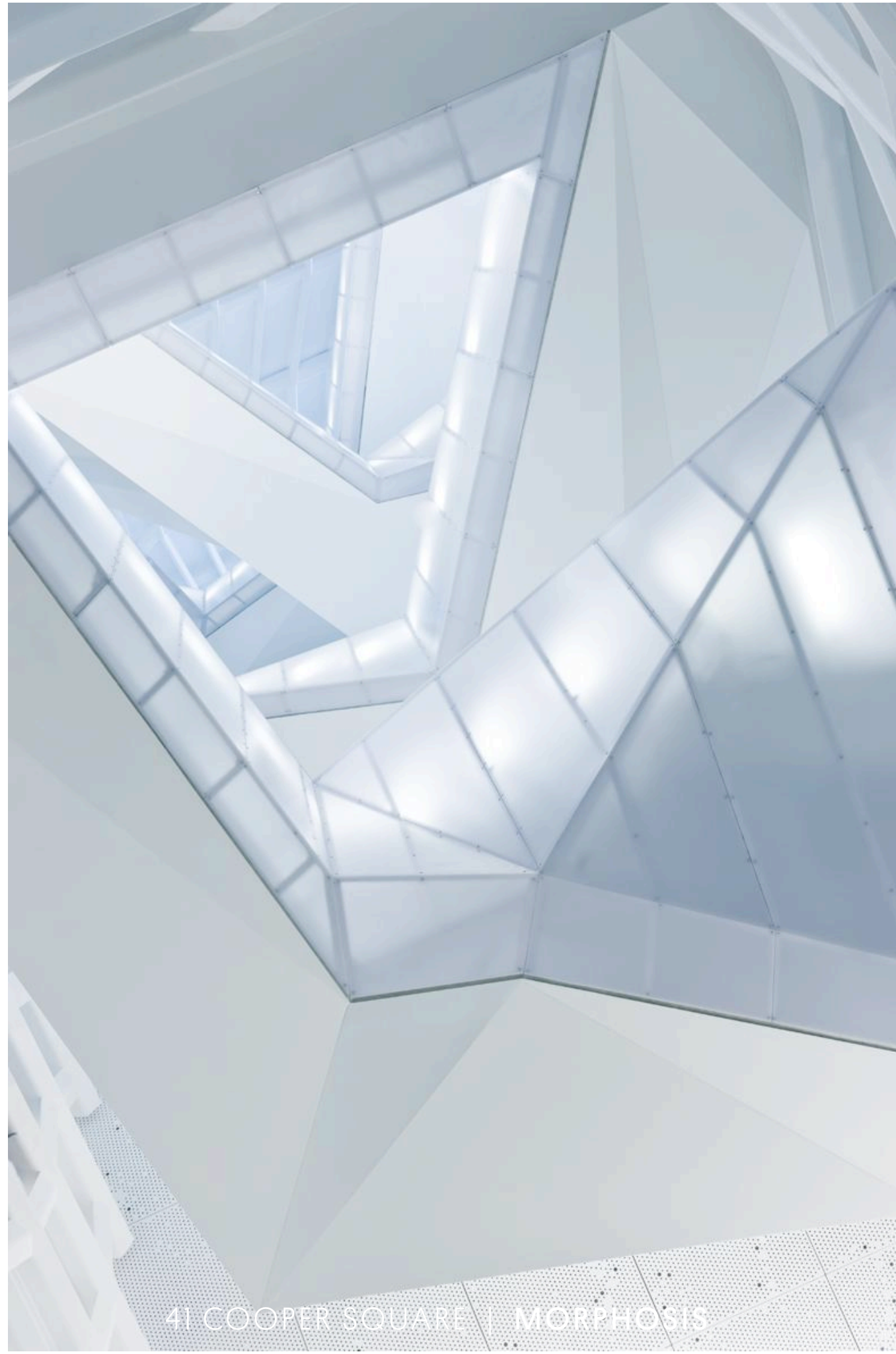










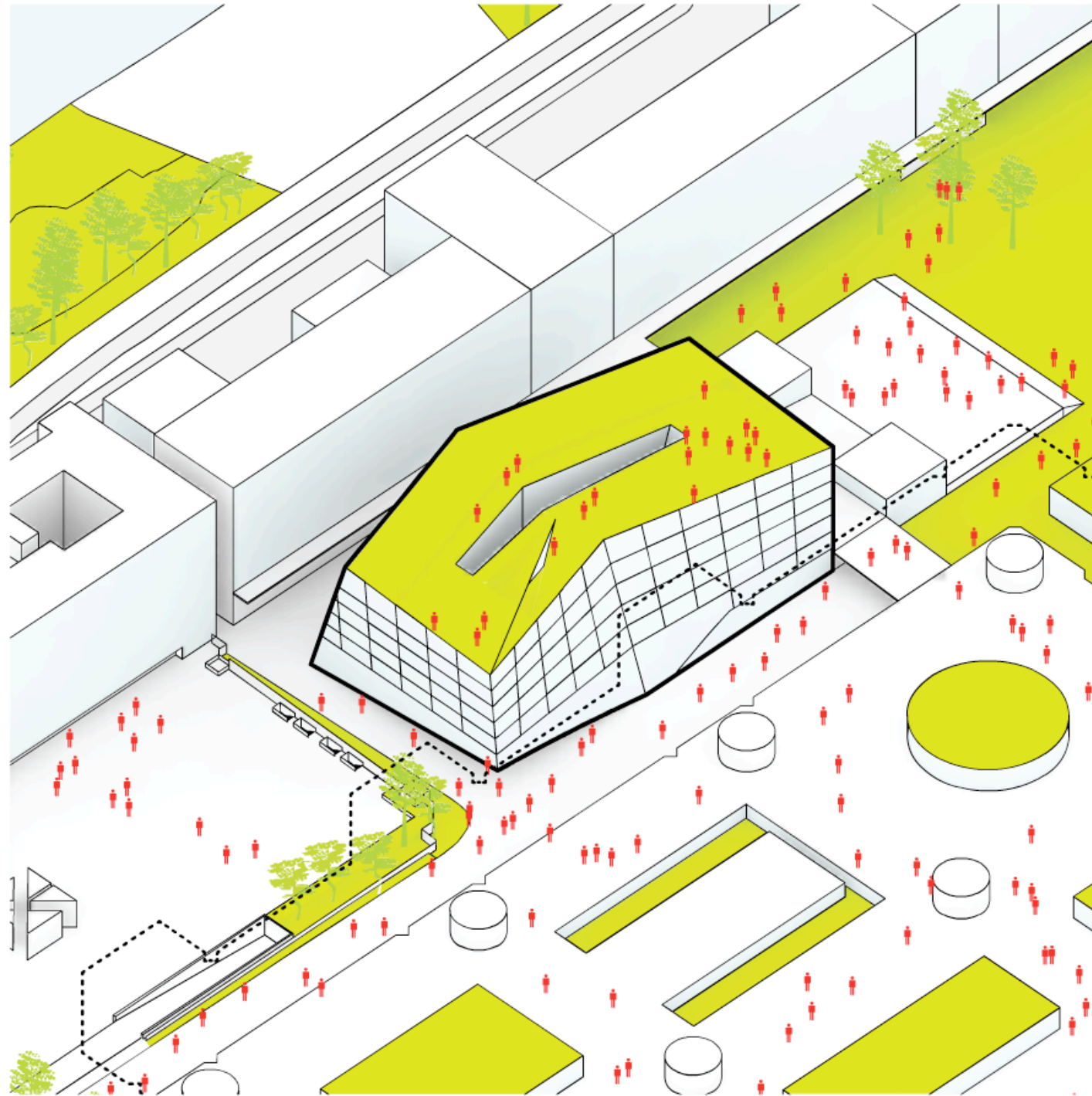


41 COOPER SQUARE | MORPHOSIS

# RESEARCH CENTRE FOR UNIVERSITÉ PIERRE

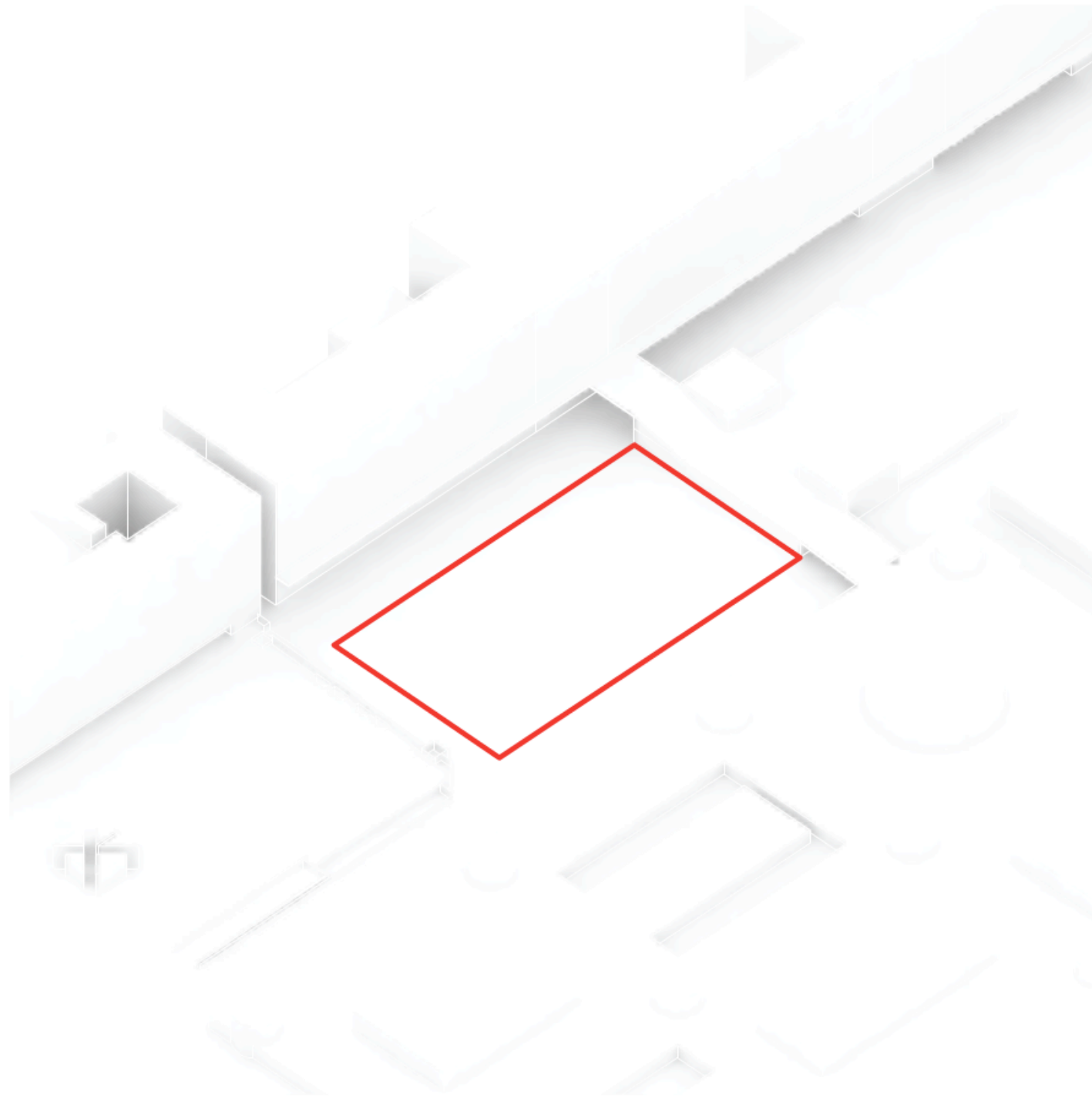
*BIG | BJARKE INGELS GROUP*

CONCEPT OF CONTEXTUAL FORM DEFORMATION  
DIAGRAMS REPRESENT JUSTIFICATION OF FORM GENERATION



## Paris Parc

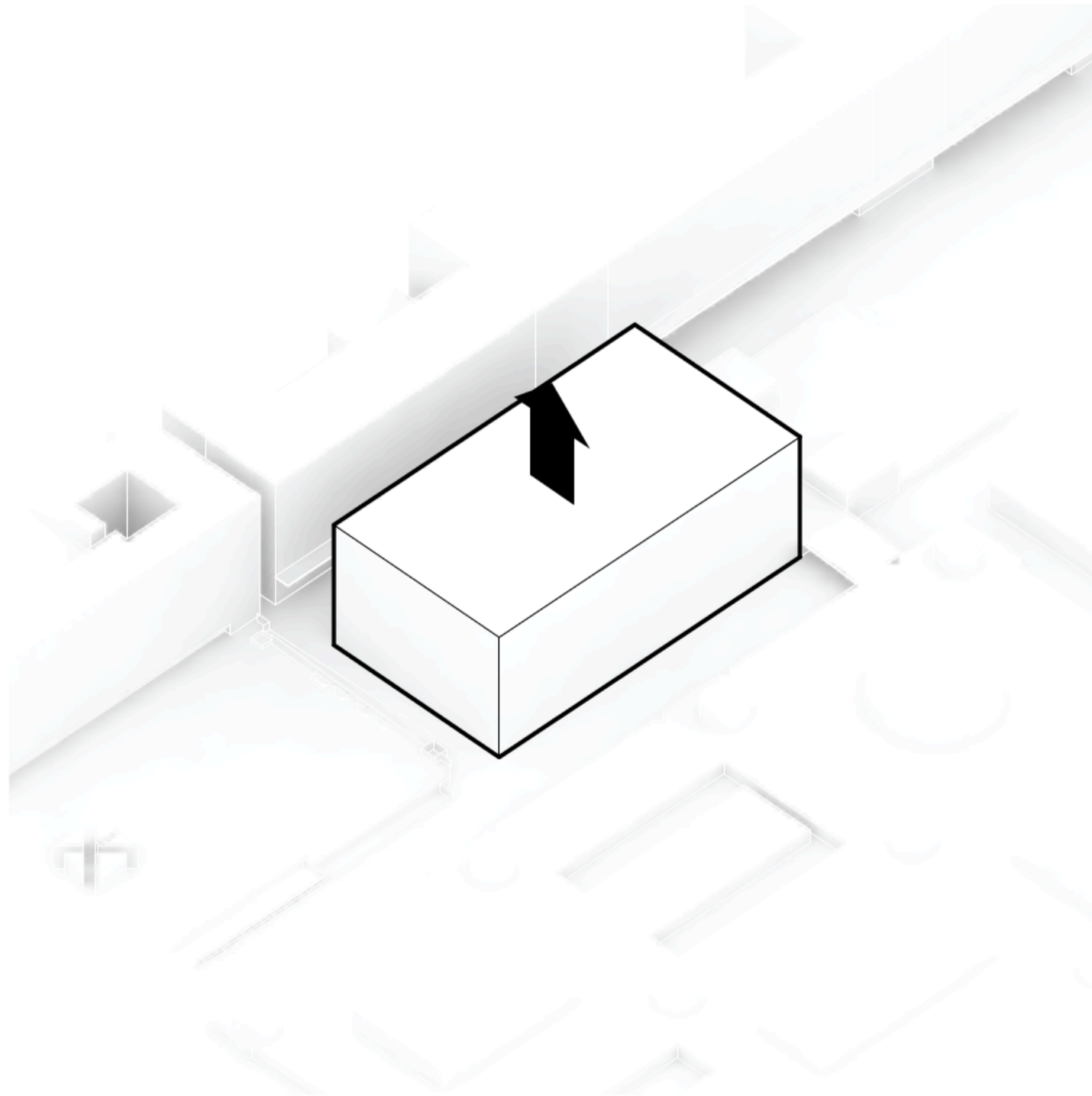
The open space of the atrium and the public accessible recreational rooftop relinks the park and the square in a continuous green axis, following the original intentions of the master plan.



## Context

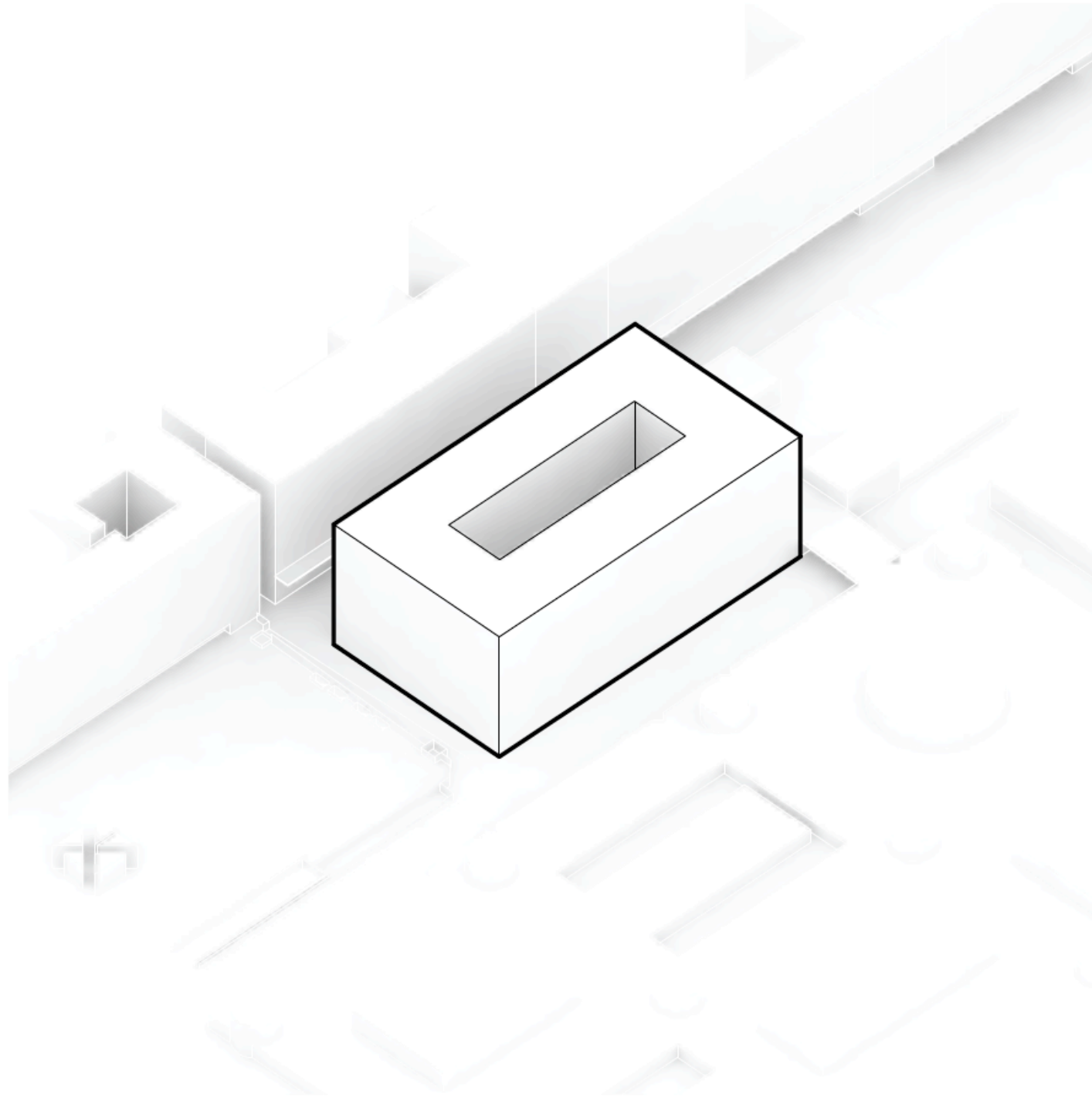
The building site is wedged into a dense context between the emblematic architectures of the Albert Einstein building and the Institut du monde arabe. The site connects the IMA square to the park, and fills the space of the originally planned green axis of the Jussieu Campus.





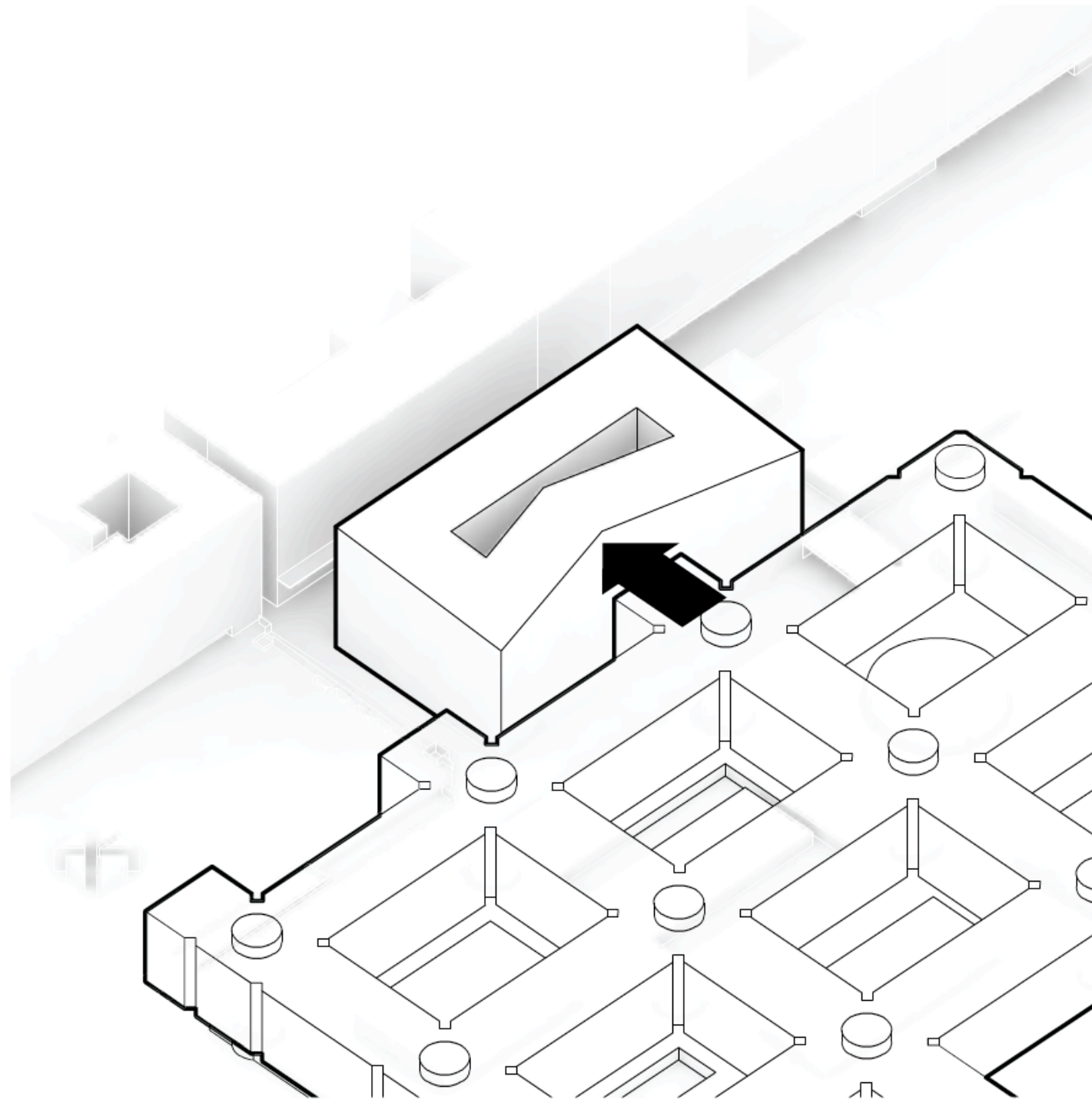
## **Extrusion**

The maximum building envelope forms a building volume with deep floor plans and facades oriented directly towards the neighboring buildings with only few meters distance.



## **Courtyard**

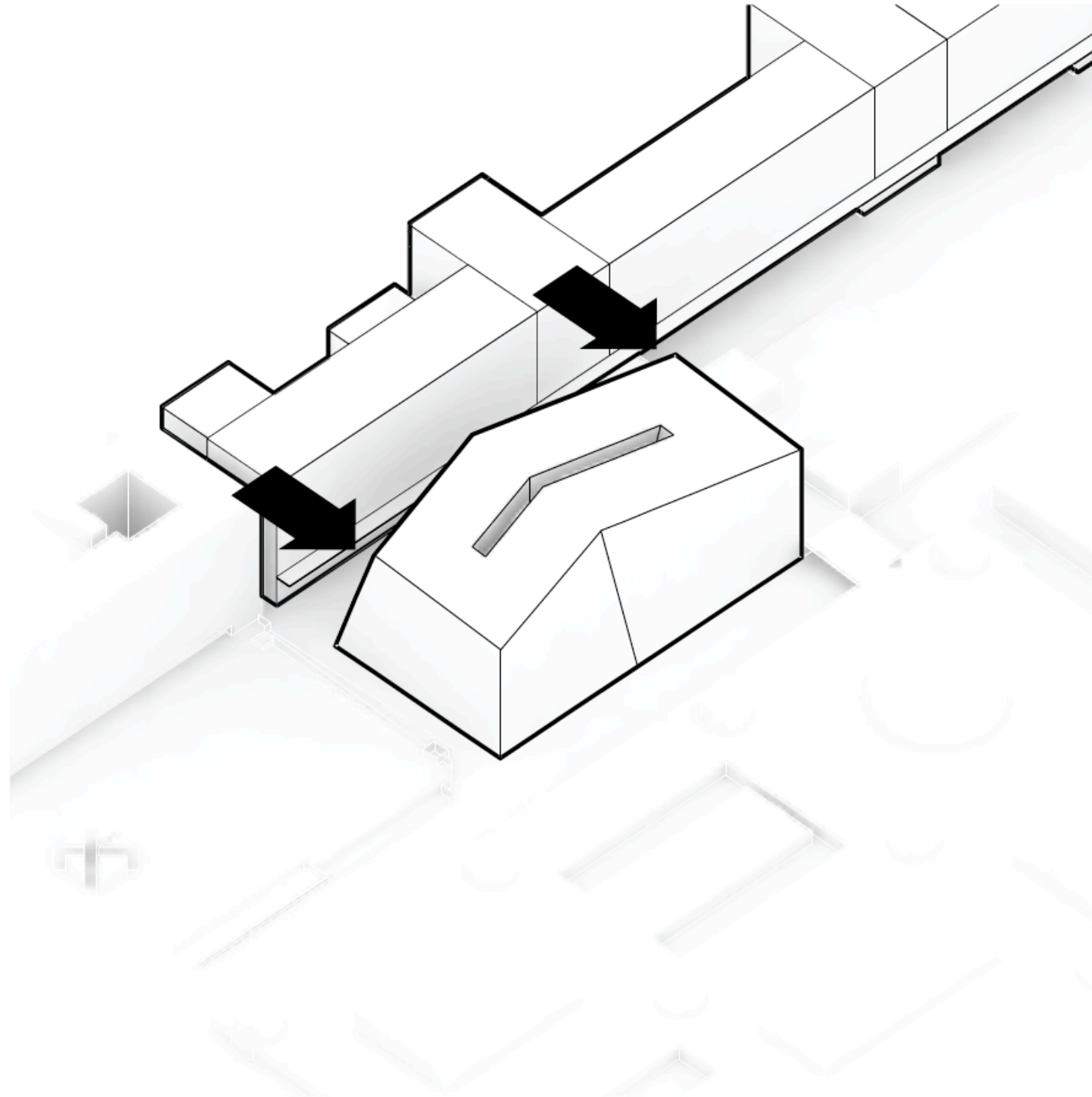
The center of the building volume is subtracted and become a grand atrium maximizing daylight and circulation in the building. Offices and are oriented outside with natural ventilation. Laboratories, needing mechanical ventilation, are organized towards the atrium forming a center of visually connected working spaces.



### **Deformation towards housing**

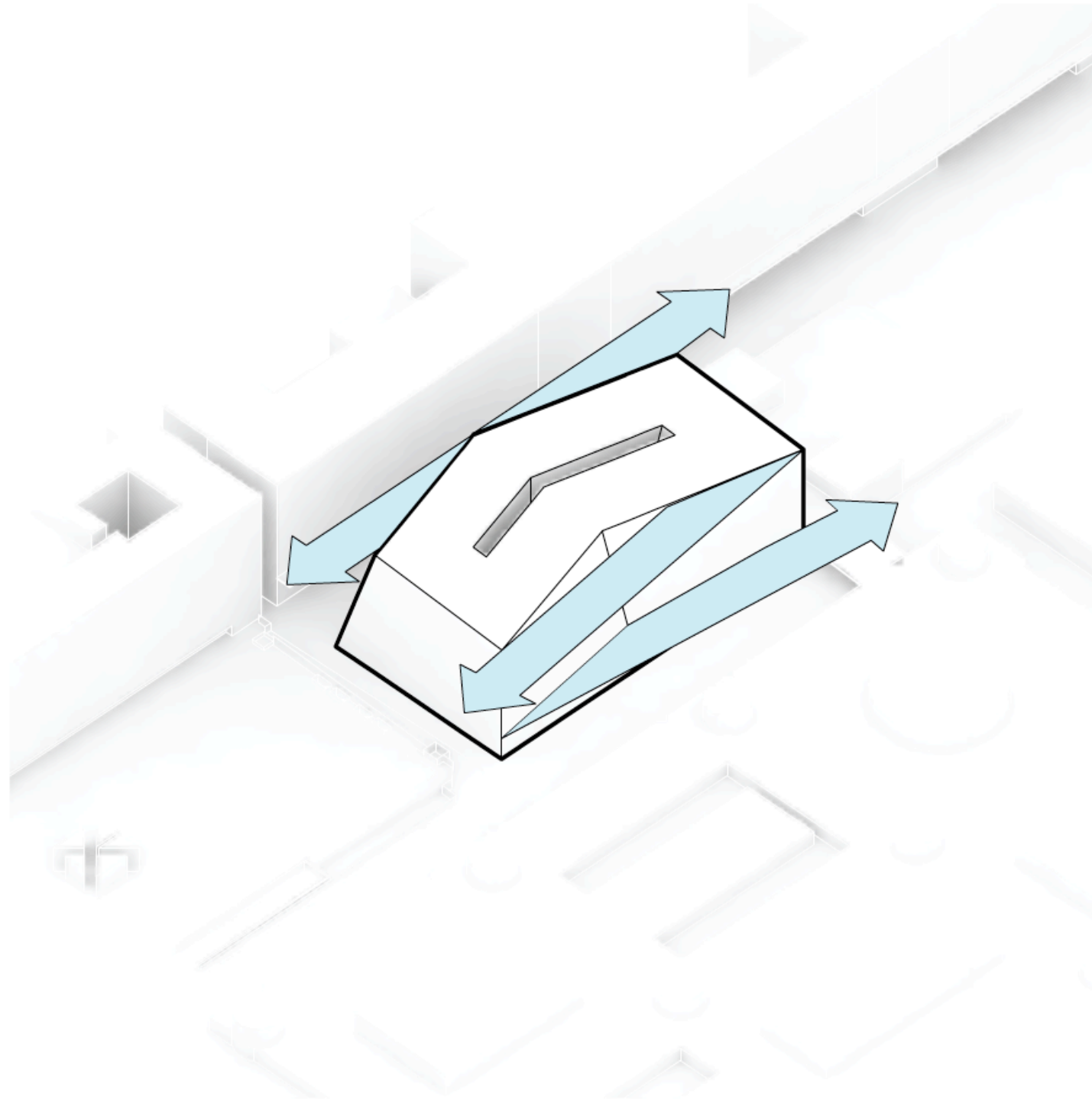
The building envelope is pushed in to keep distance towards the apartments in the Albert Grid, improving the daylight and view conditions for both apartments and offices.





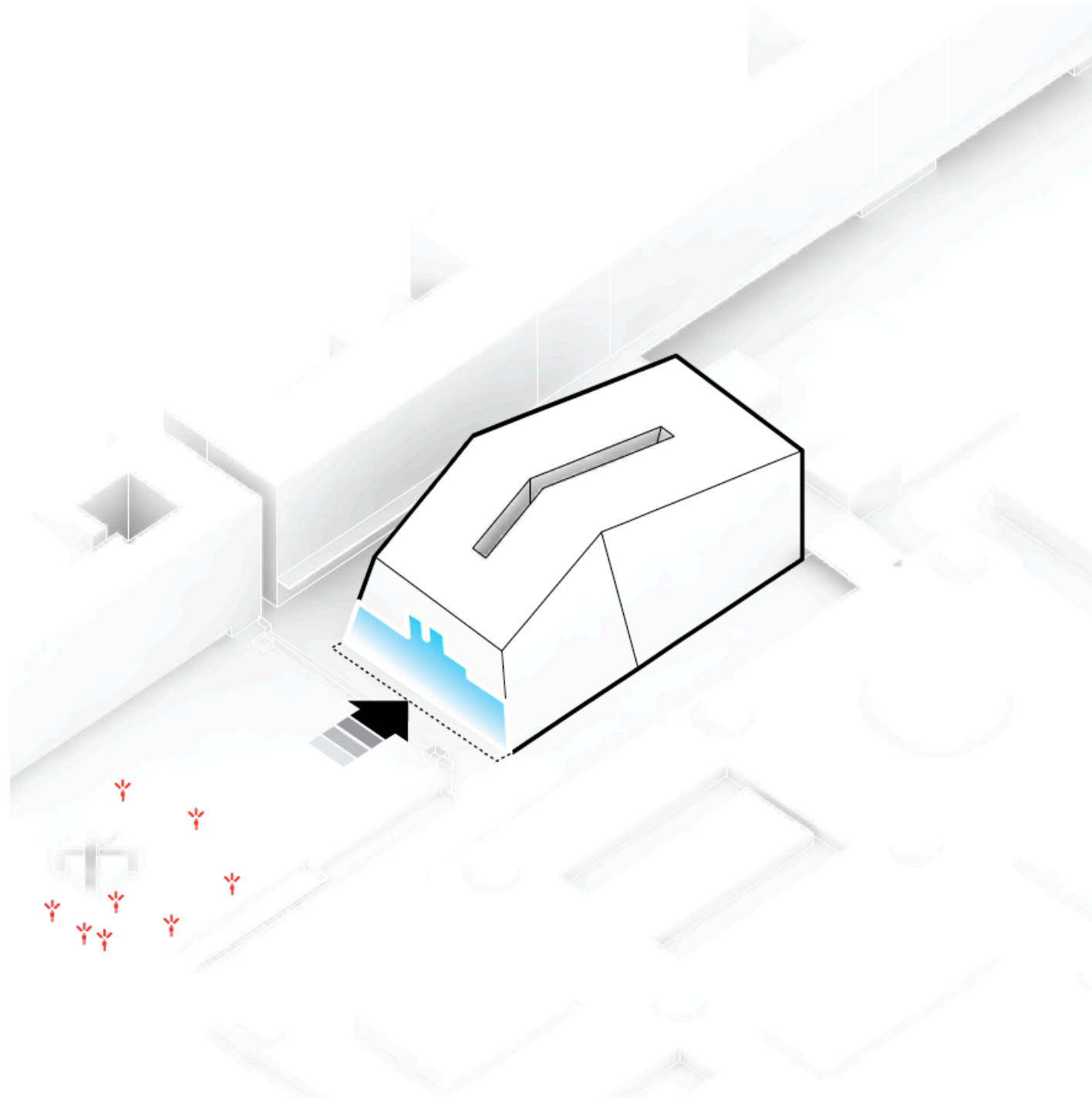
### **Deformation towards the Cassan**

Towards the Cassan building the façade is PULLED BACK IN each corner in a similar way to keep distance, improve daylight and views for both buildings.



### **Improved daylight and views**

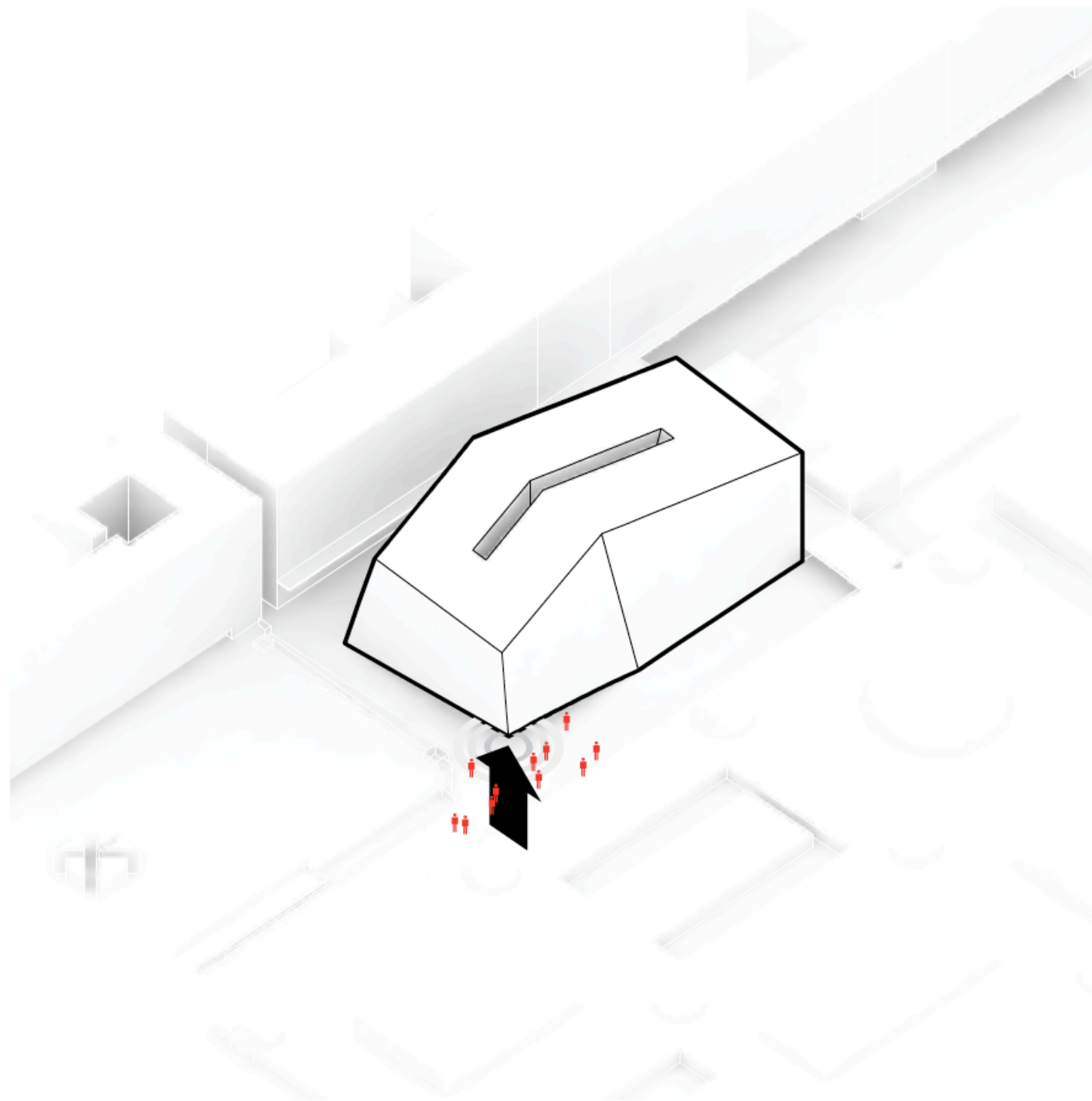
Deformed by the pressure of the surrounding buildings, the resulting volume becomes wedged into the dense urban context, and avoids blocking the views of the green axis. The envelope creates sculptural passages on each side of the building with views towards the park and the Notre Dame Cathedral.



### **Deformation towards Notre Dame**

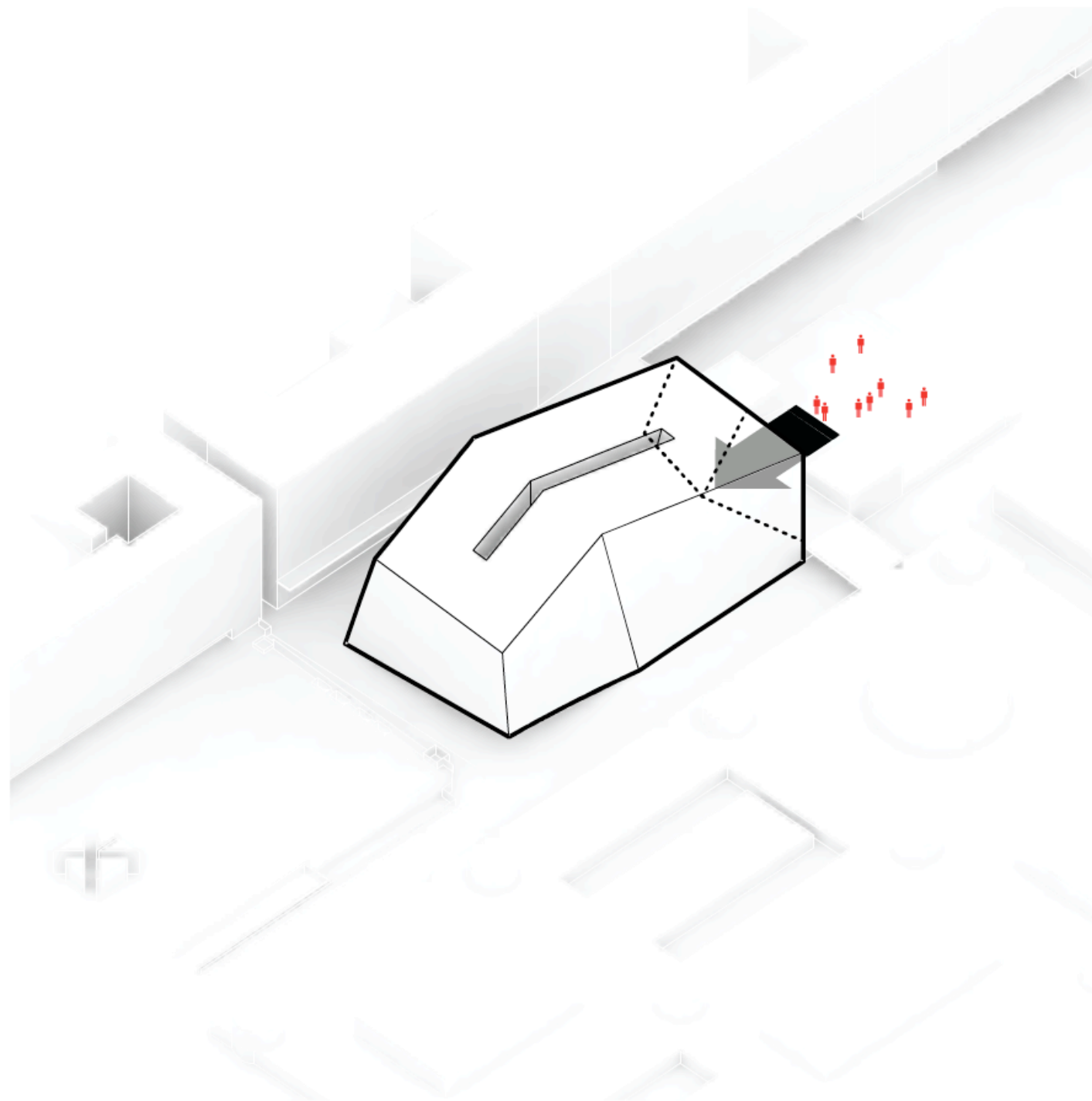
The façade facing the square is angled 5 degrees, creating a mirror image of the skyline of Paris and the Notre Dame visible from the IMA square.





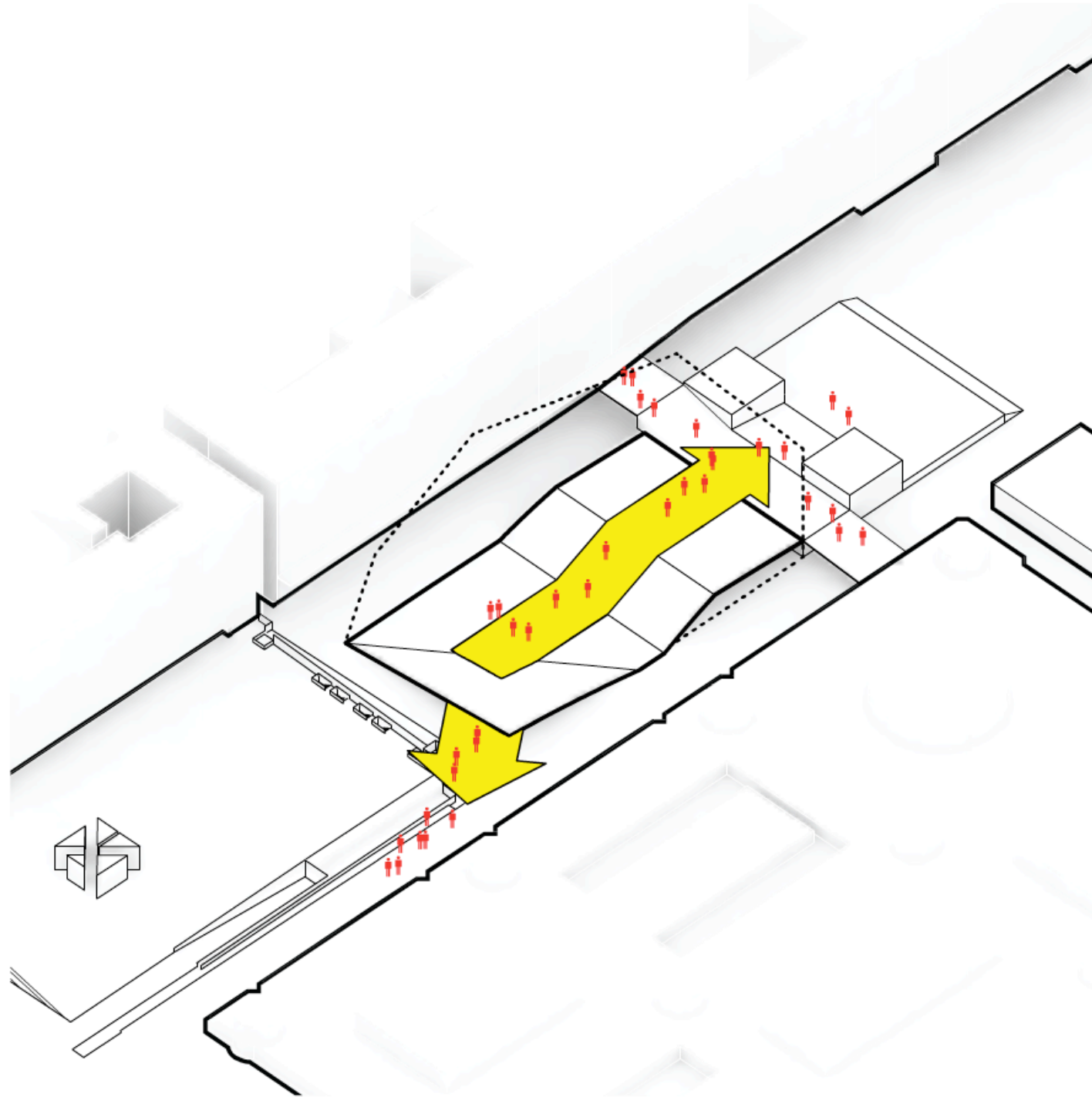
### **Opening towards square**

The building volume is lifted in the corner creating a public entrance and visually connecting the atrium with the square.



### **Opening towards Park**

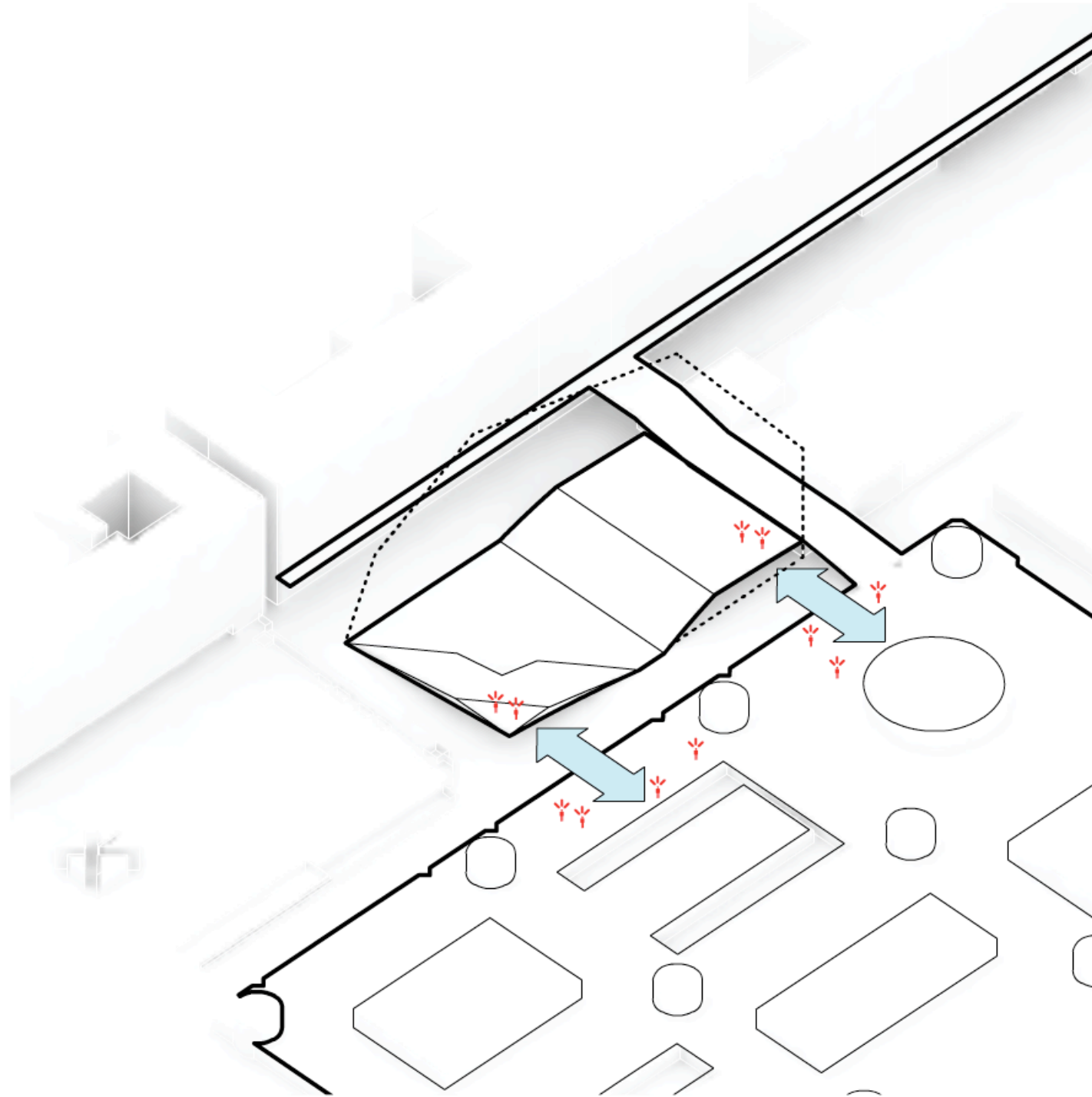
Towards the park the envelope is pushed in slightly to create a canopy above the entrance to the conference facilities.



### **Folded ground floor**

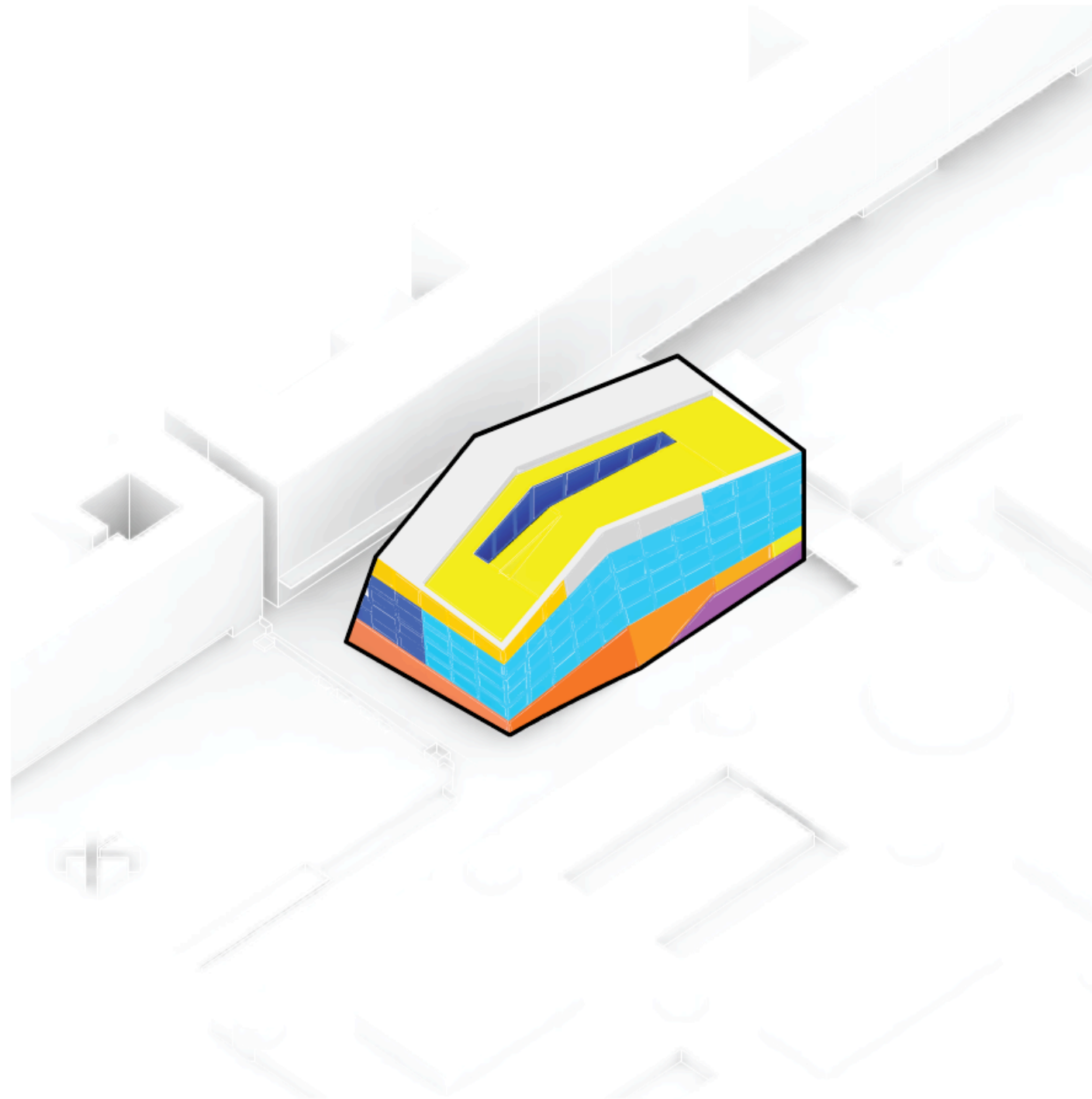
The public ground floor containing the café, the book store and conference facilities, becomes a folded carpet connecting the different height levels of the park, the plinth and the square.





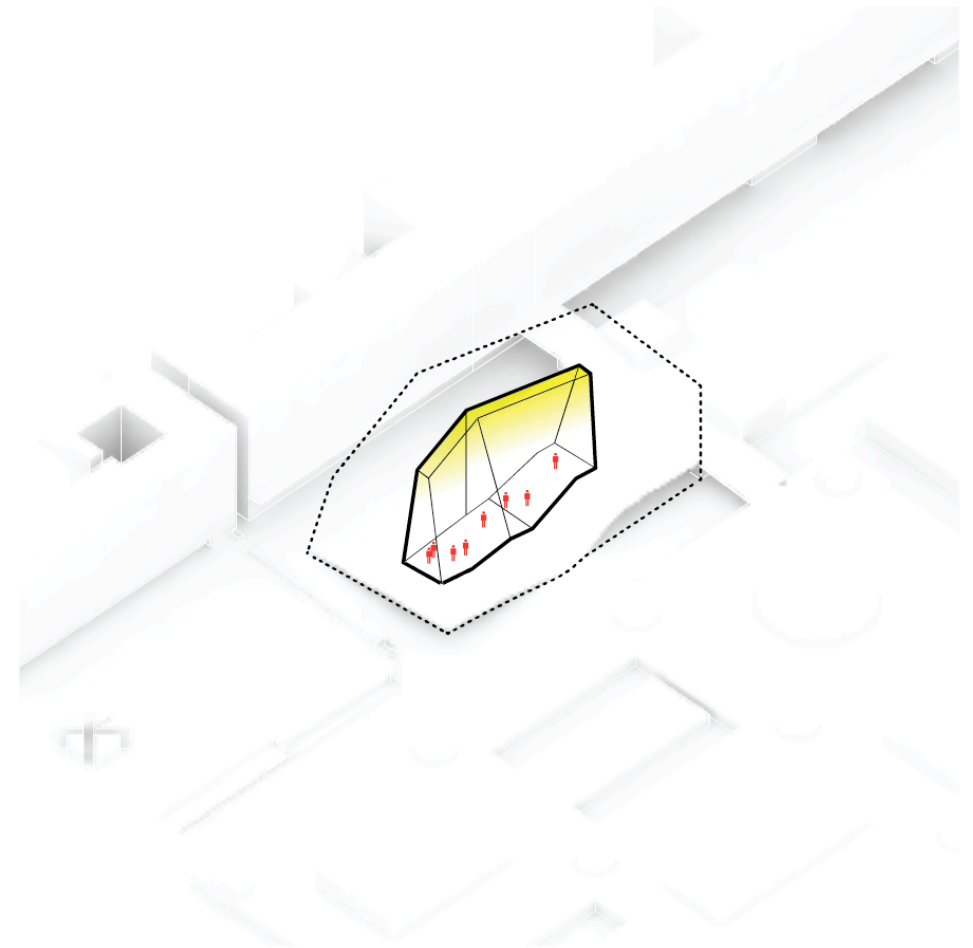
### **Connection to elevated plinth**

Visually the ground floor links the plinth to the street level, and strengthens the connection between the Jussieu Campus and the urban flow of the city.



## Functions

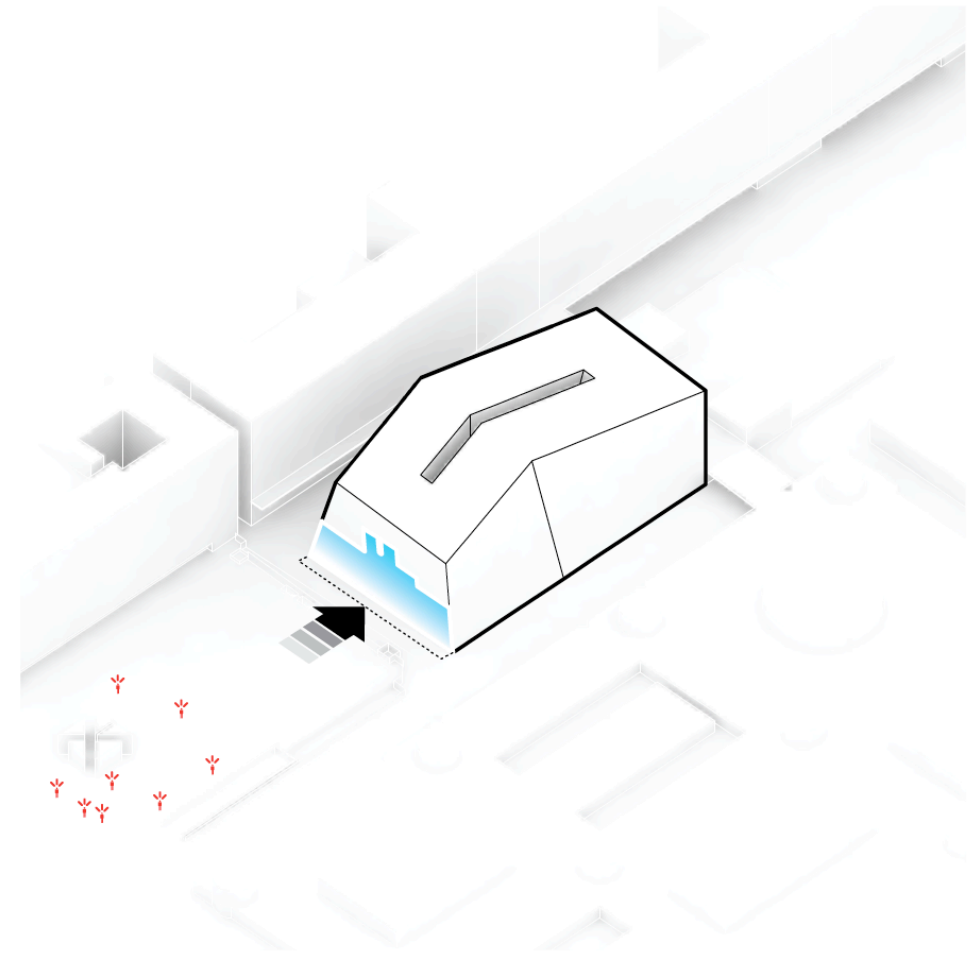
The laboratories and offices are located on the regular floor plans between the public levels at ground floor and the roof.



### Canyon

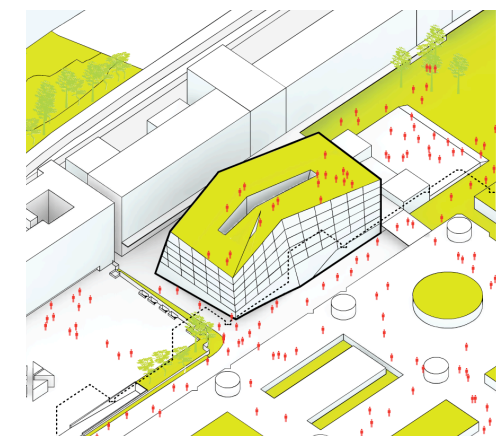
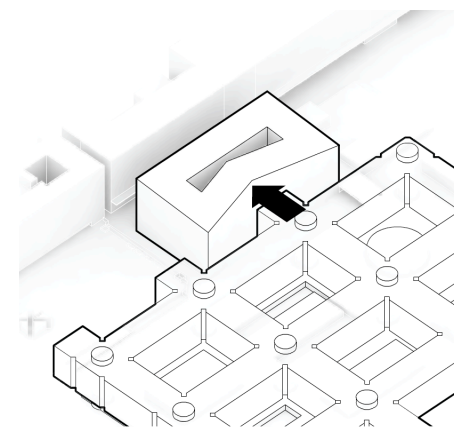
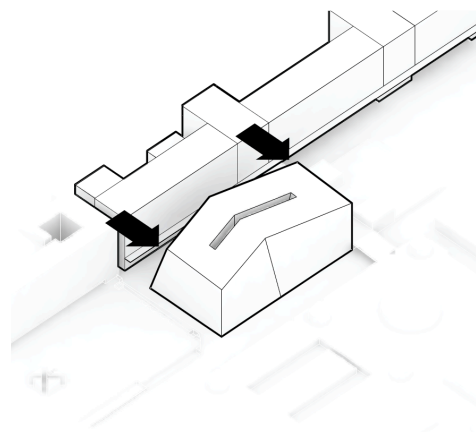
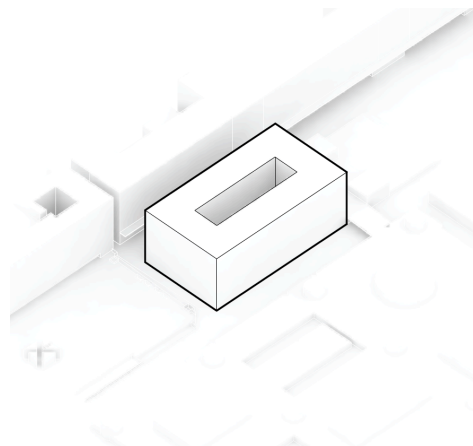
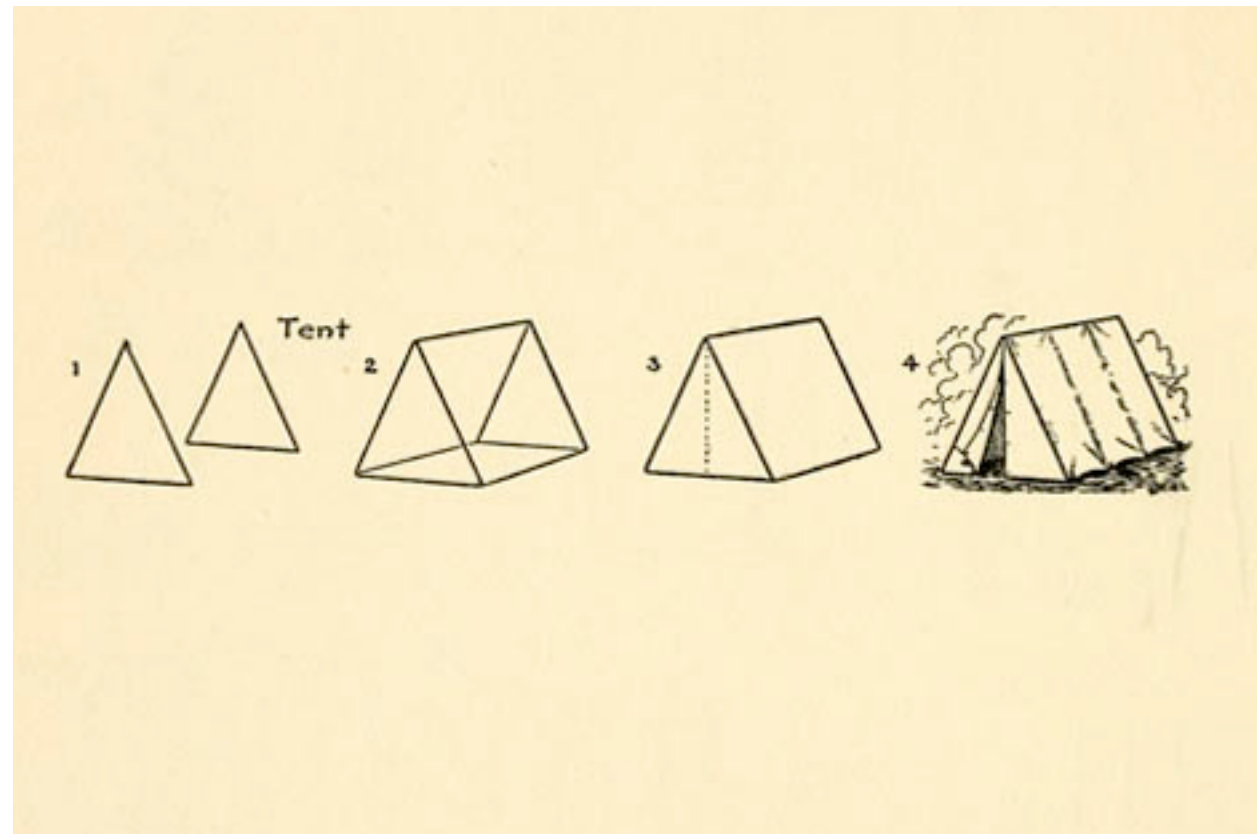
The grand atrium becomes a sculptural daylit canyon – a physical and visual meeting point connecting all users of the building, promoting exchange and sharing between researchers, companies and visitors.





#### **Deformation towards Notre Dame**

The façade facing the square is angled 5 degrees, creating a mirror image of the skyline of Paris and the Notre Dame visible from the IMA square.

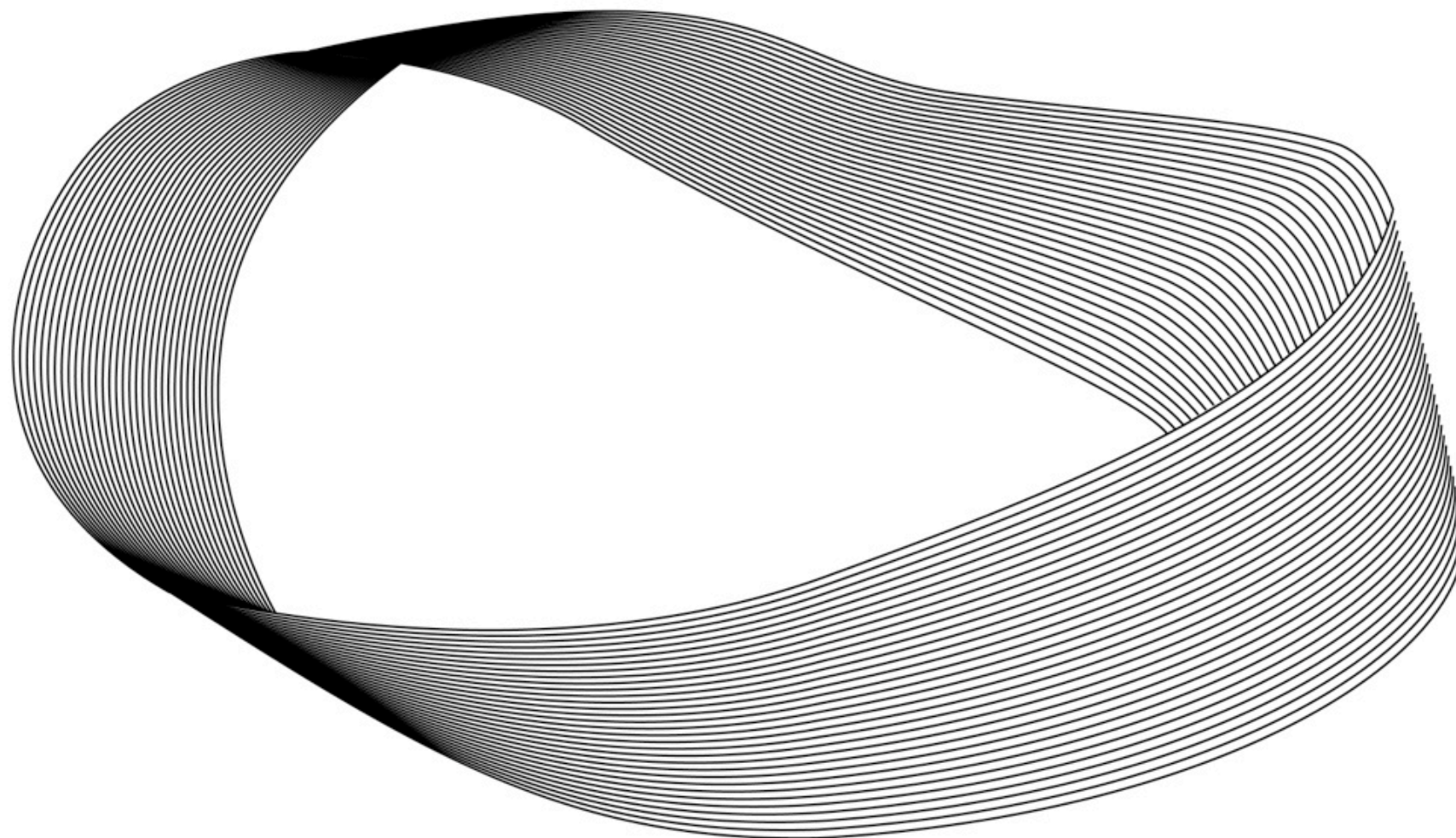


# MOBIUS HOUSE

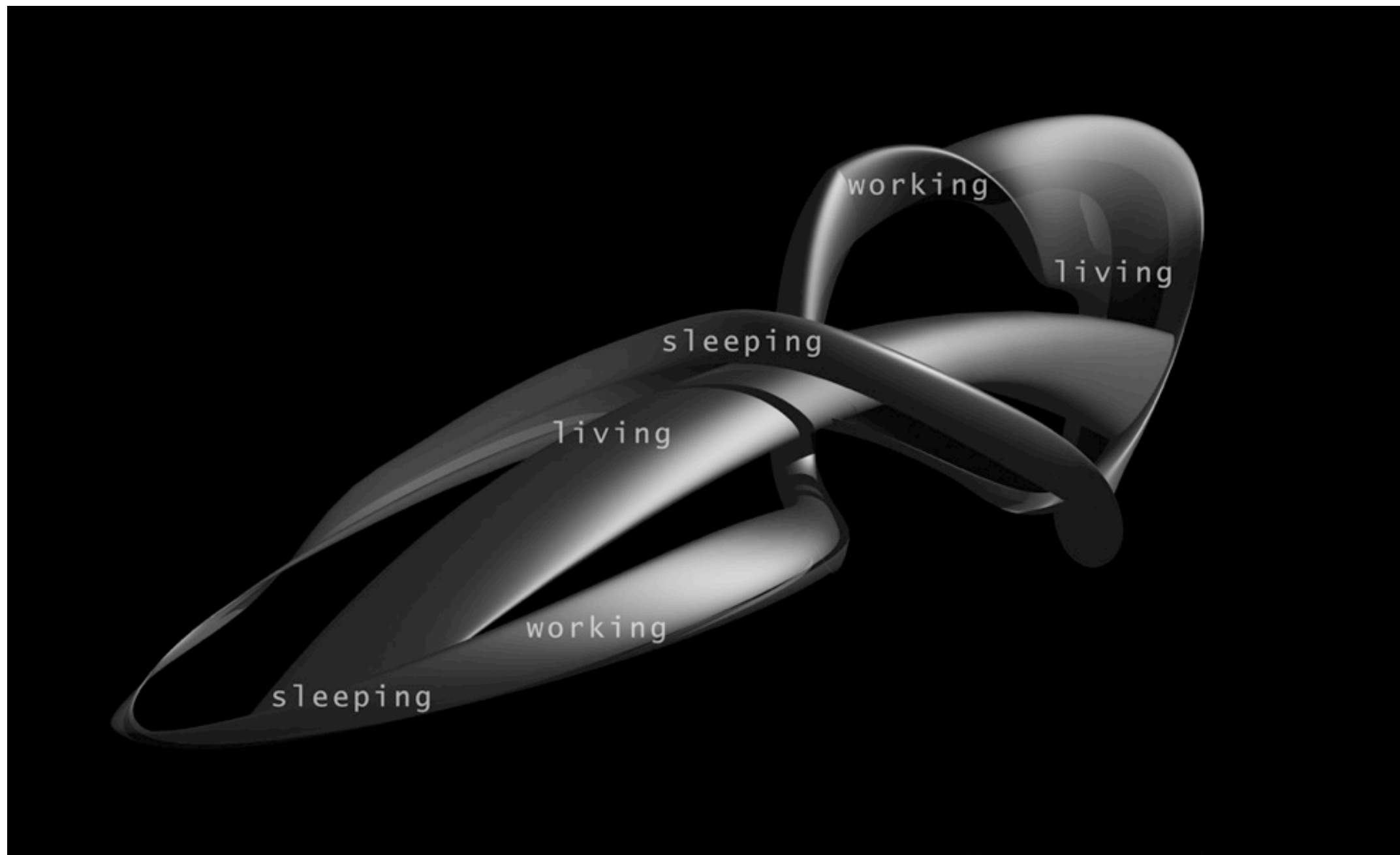
*UN STUDIO*

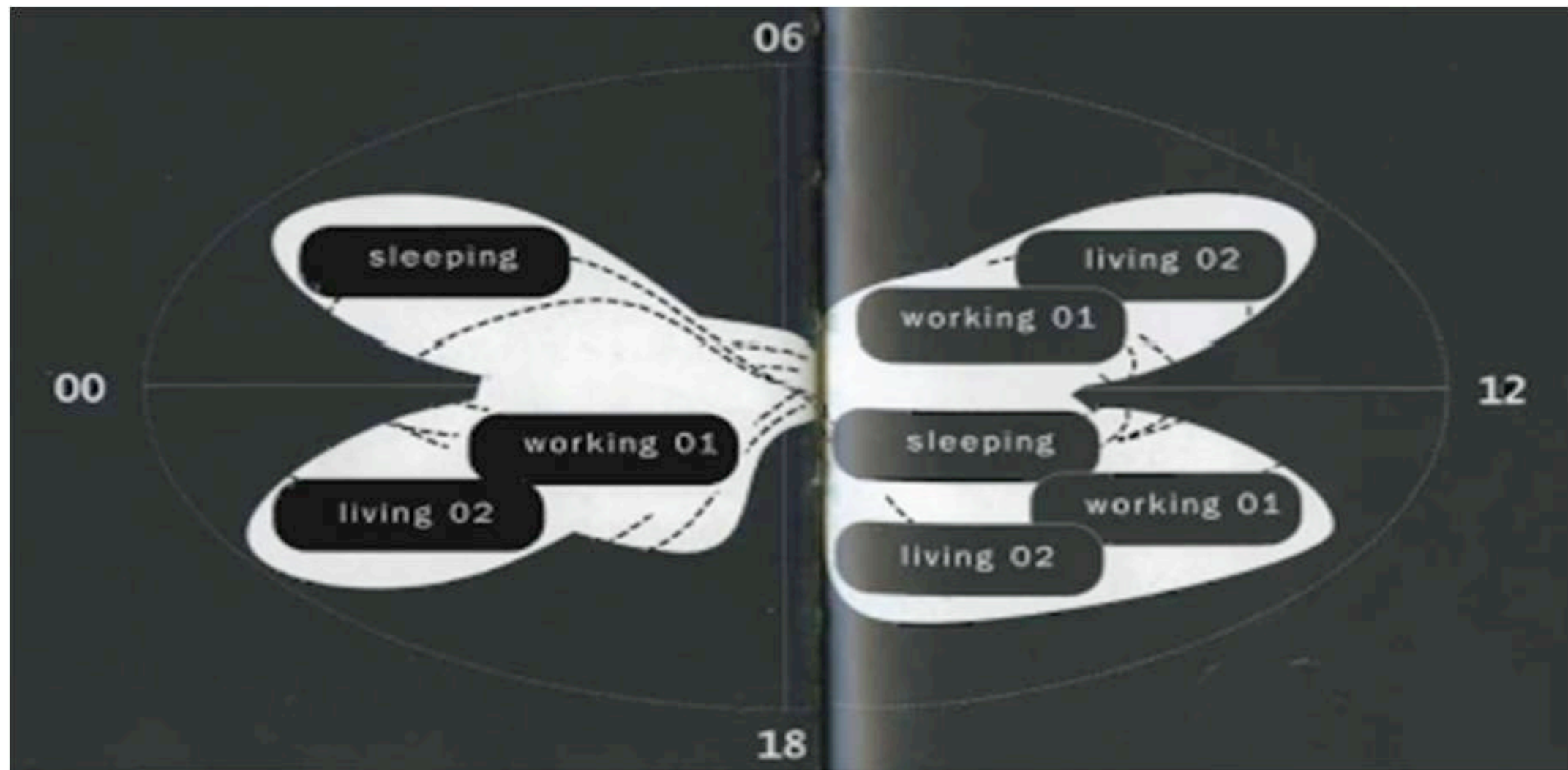
CONCEPT AS PURE ABSTRACT SPATIAL DIAGRAM  
DIAGRAMS AS TOOL FOR TRANSLATION



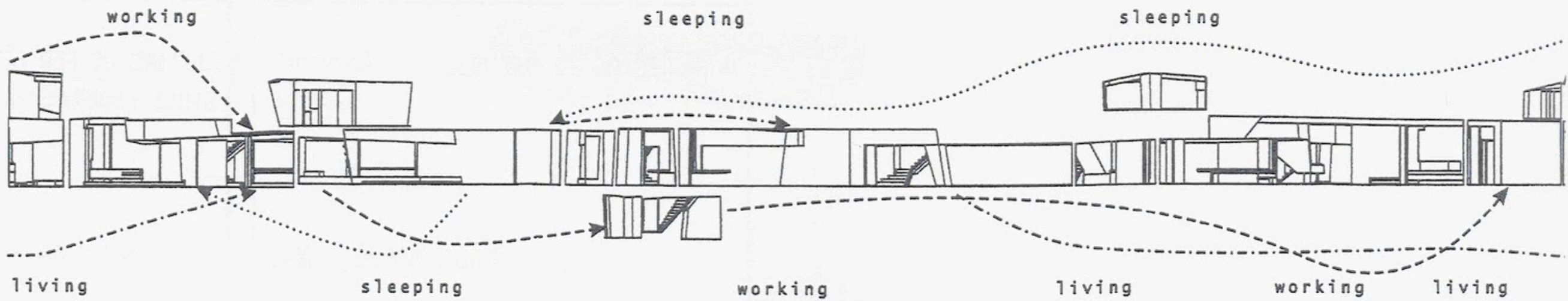


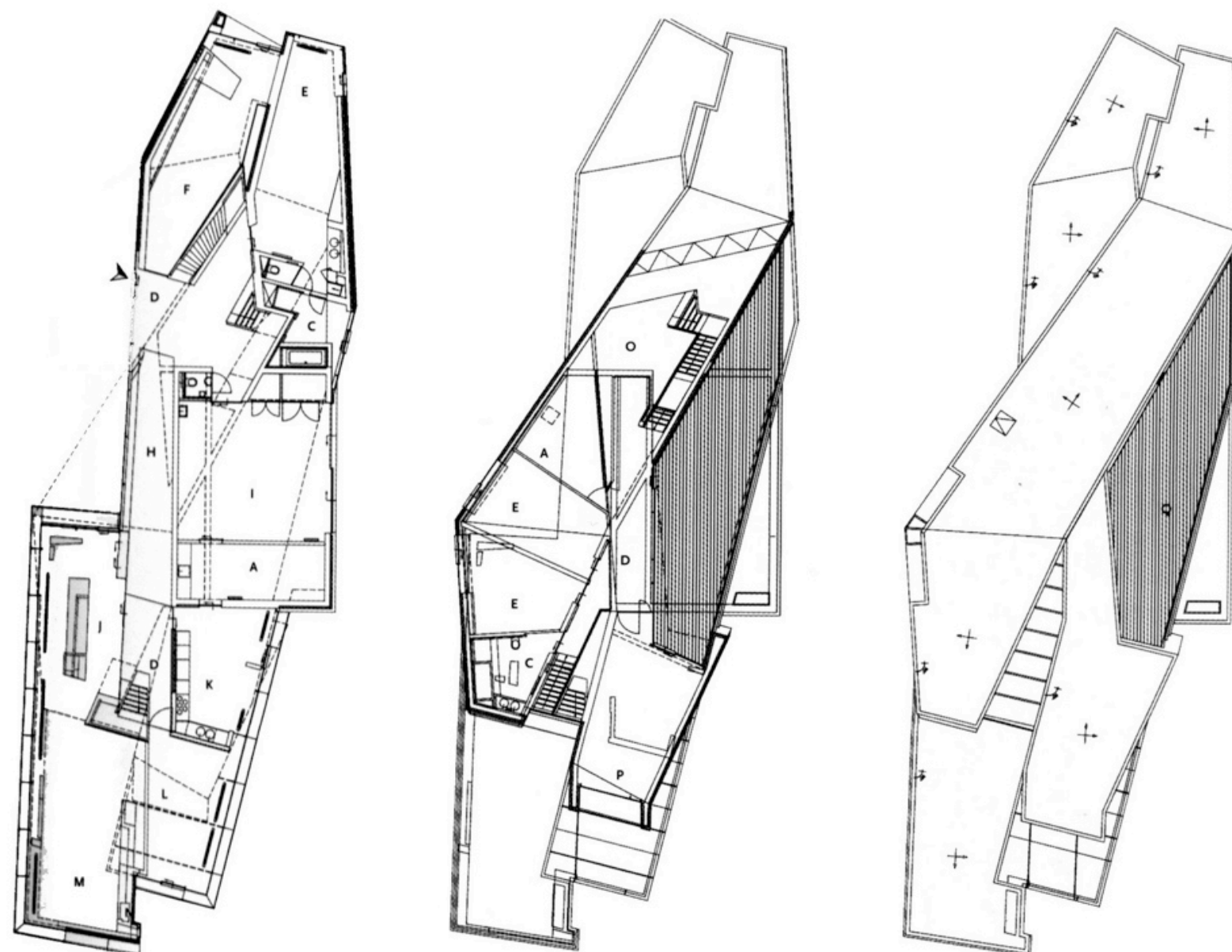
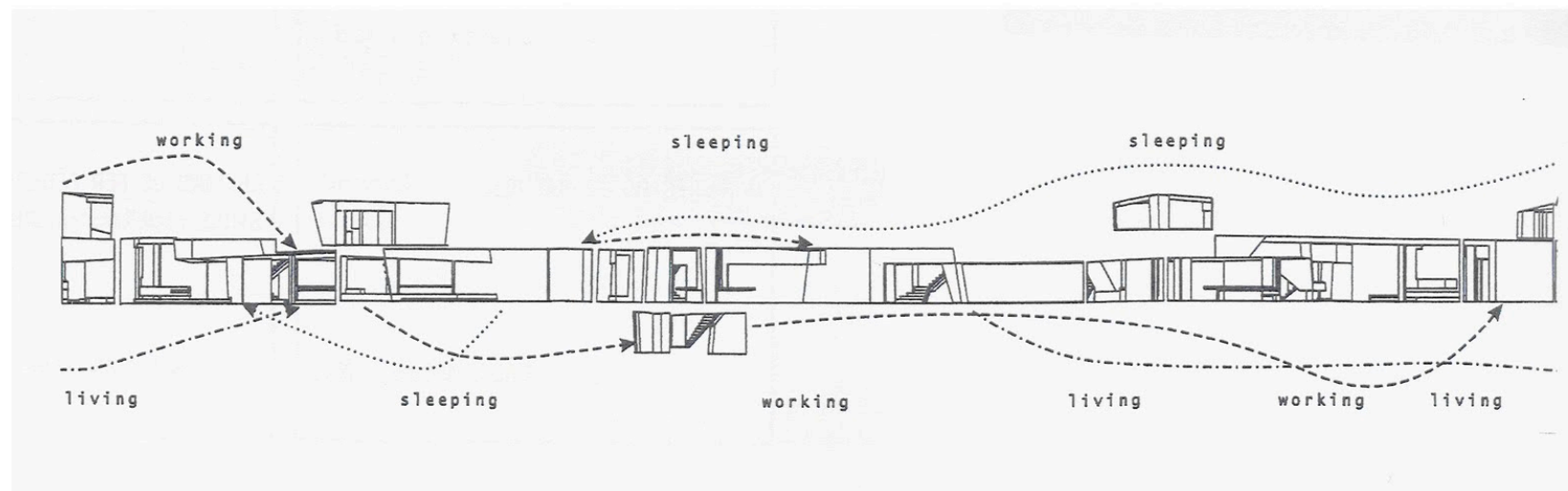
MOBIUS HOUSE | UN STUDIO











MOBIUS HOUSE | UN STUDIO





MOBIUS HOUSE | UN STUDIO





MOBIUS HOUSE | UN STUDIO





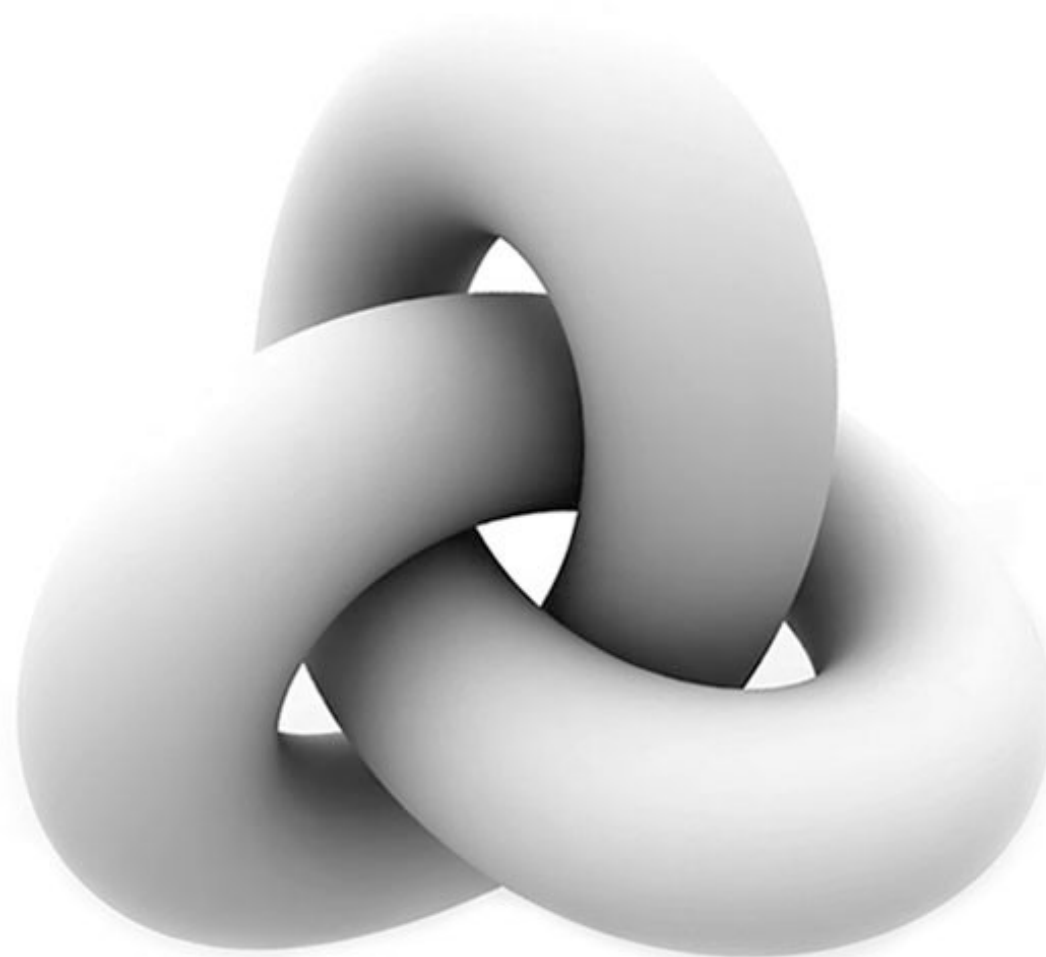
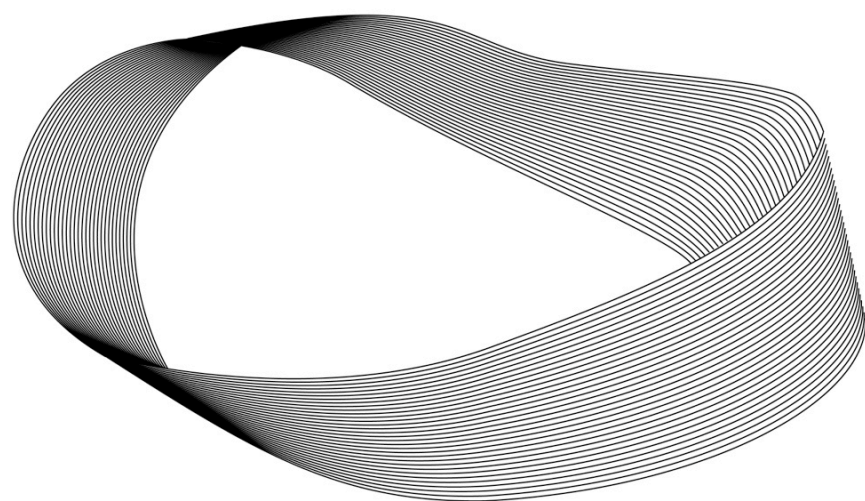
MOBIUS HOUSE | UN STUDIO

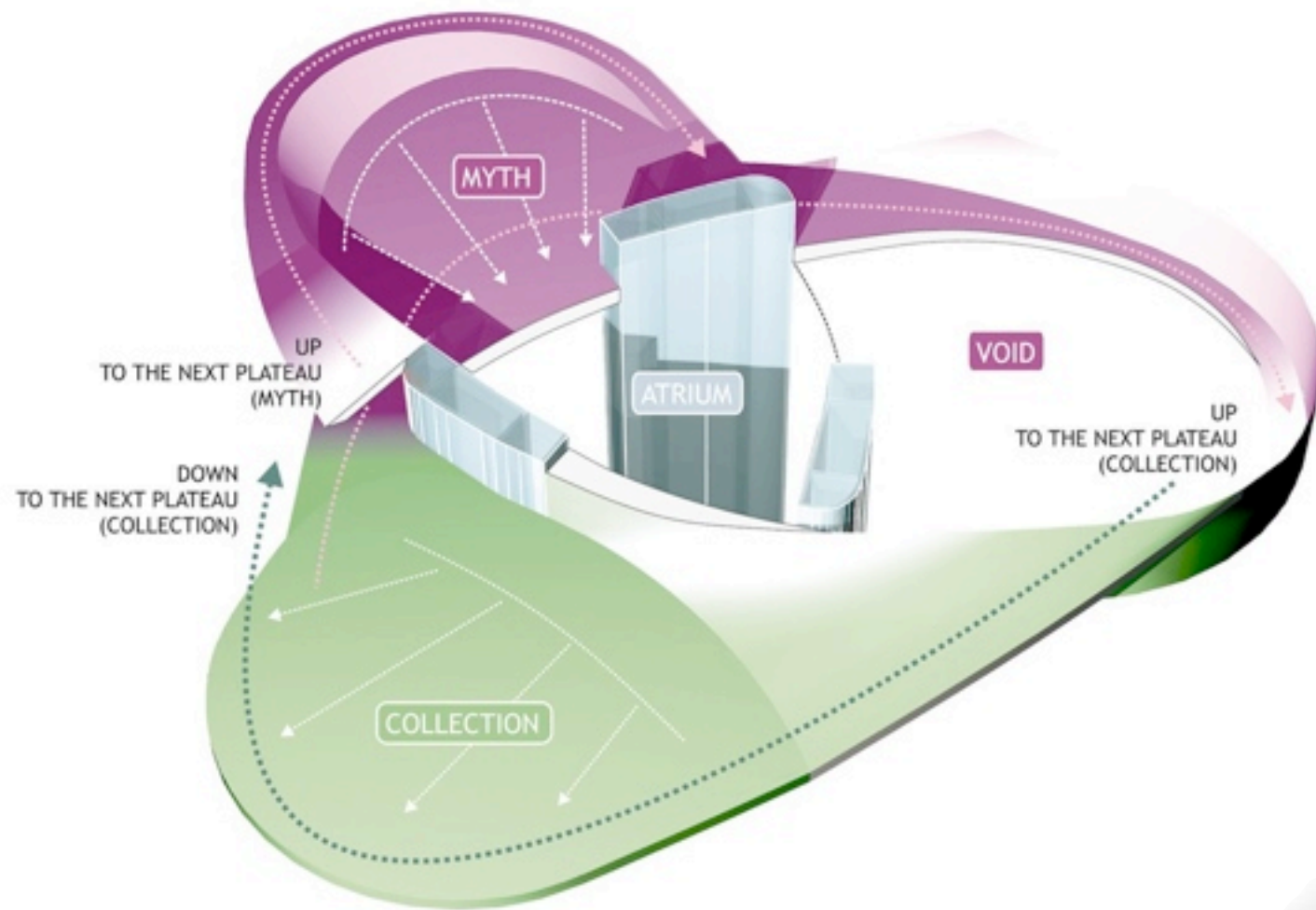
# MERCEDES BENZ MUSEUM

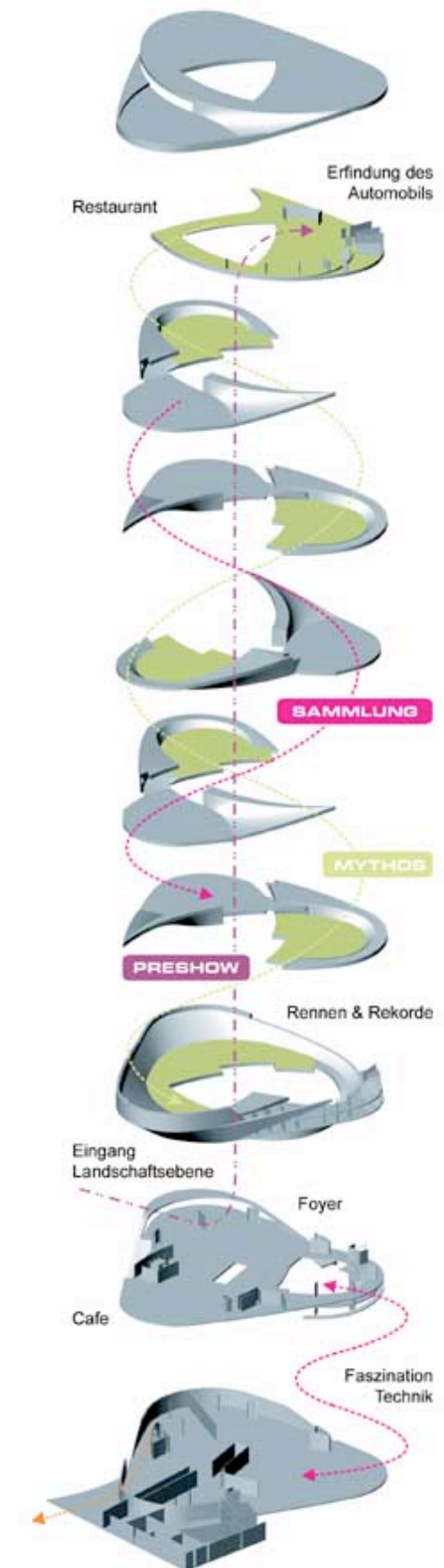
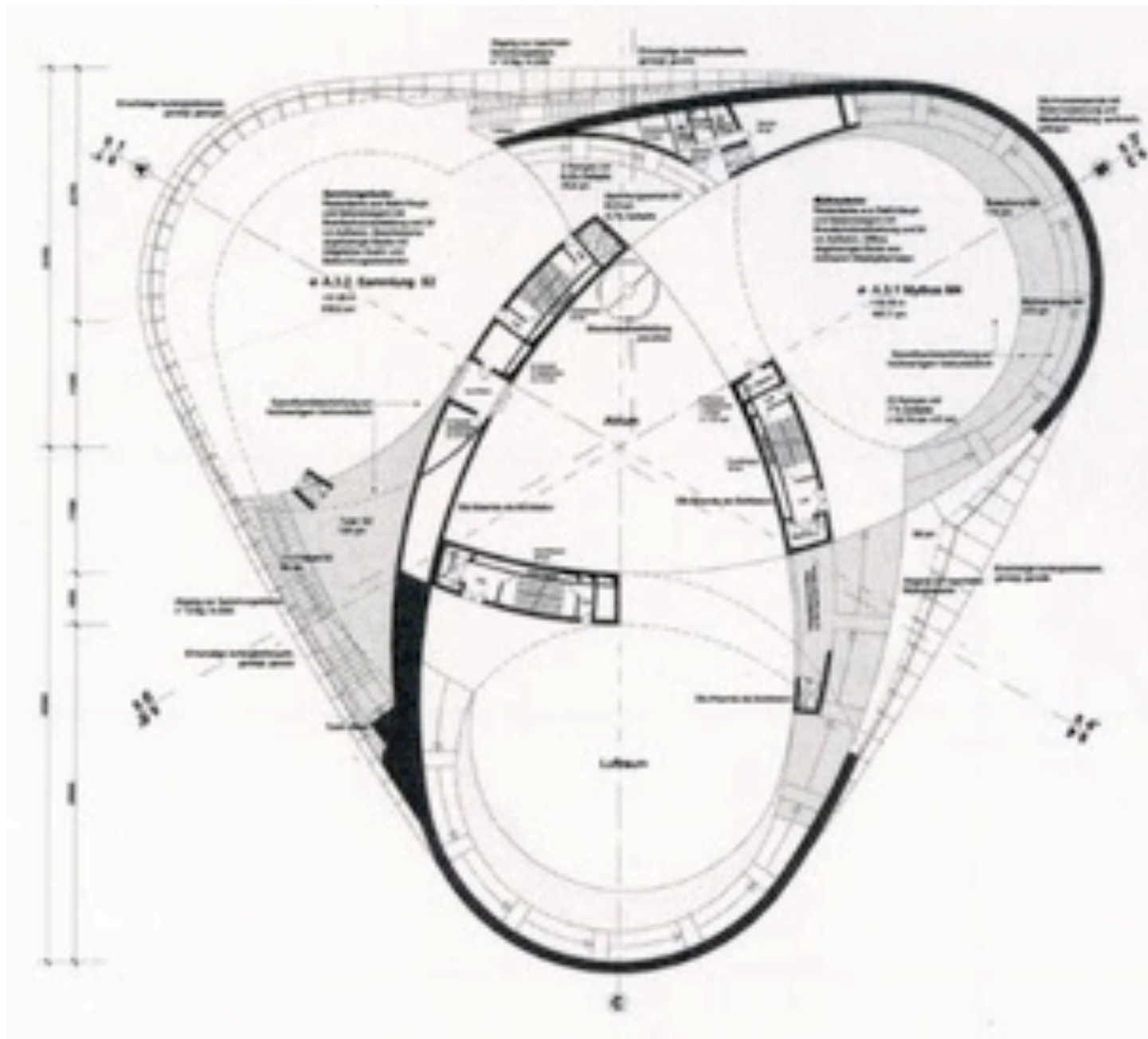
*UN STUDIO*

CONCEPT AS PURE ABSTRACT SPATIAL DIAGRAM  
DIAGRAMS AS TOOL FOR TRANSLATION













MERCEDES BENZ MUSEUM | UN STUDIO



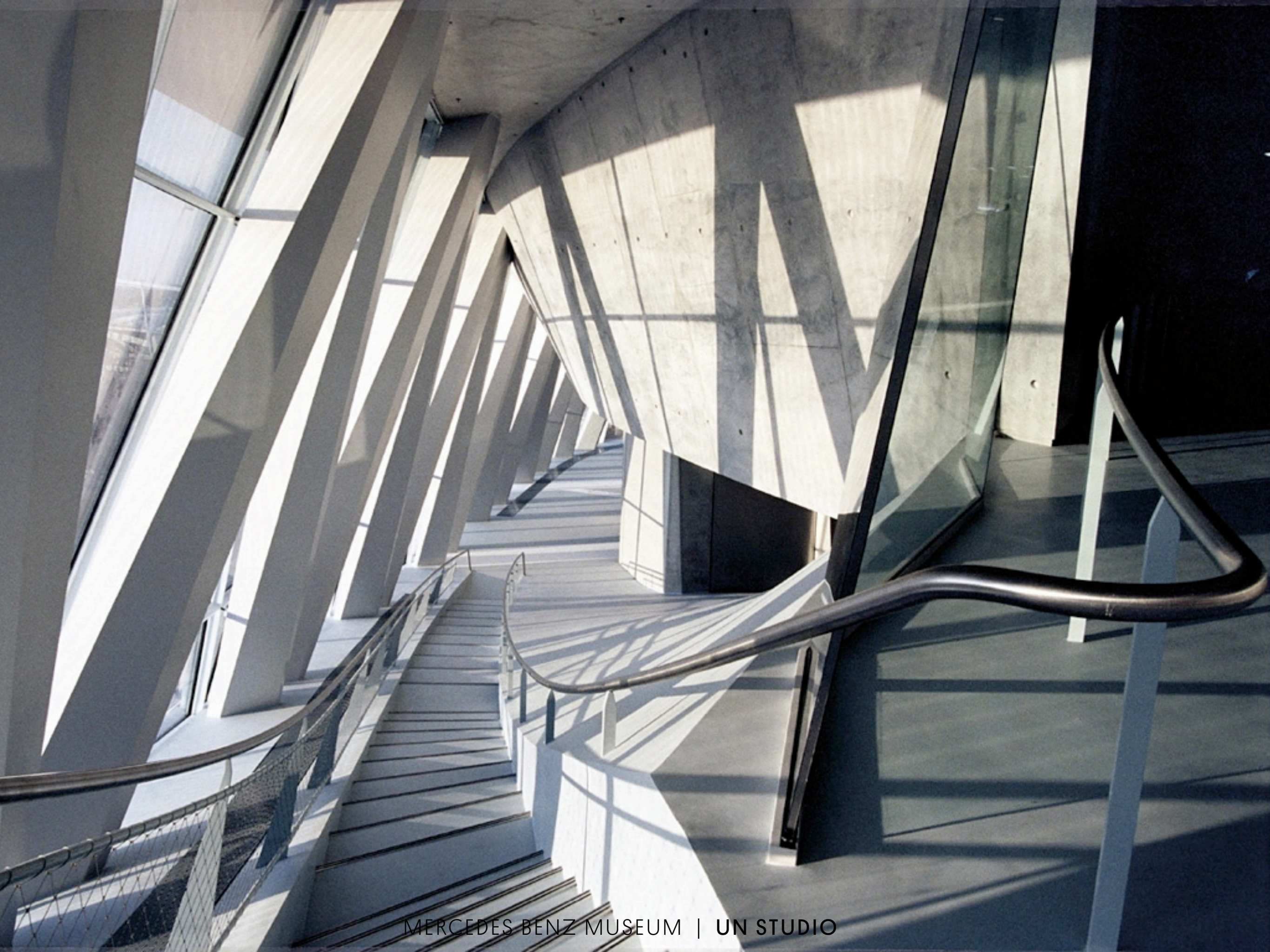






MERCEDES BENZ MUSEUM | UN STUDIO





MERCEDES BENZ MUSEUM | UN STUDIO

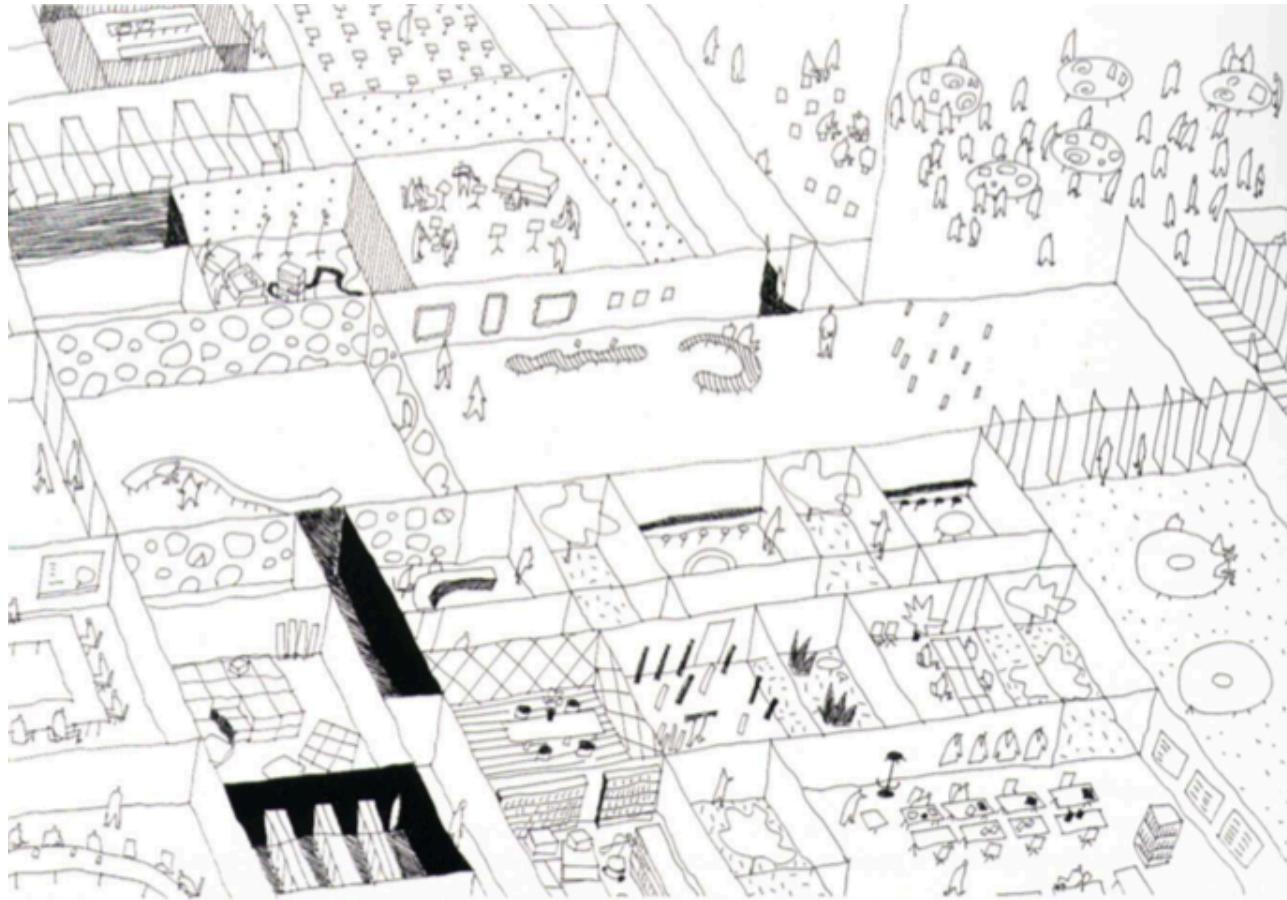


# TOLEDO GLASS MUSEUM

S A N A A

CONCEPT OF SPATIAL CONTINUITY  
DIAGRAM EXPLORES MANIPULATION OF PROGRAM TO  
ACHIEVE SPATIAL CONDITION  
[NO TRANSLATION FROM DIAGRAM TO BUILDING]





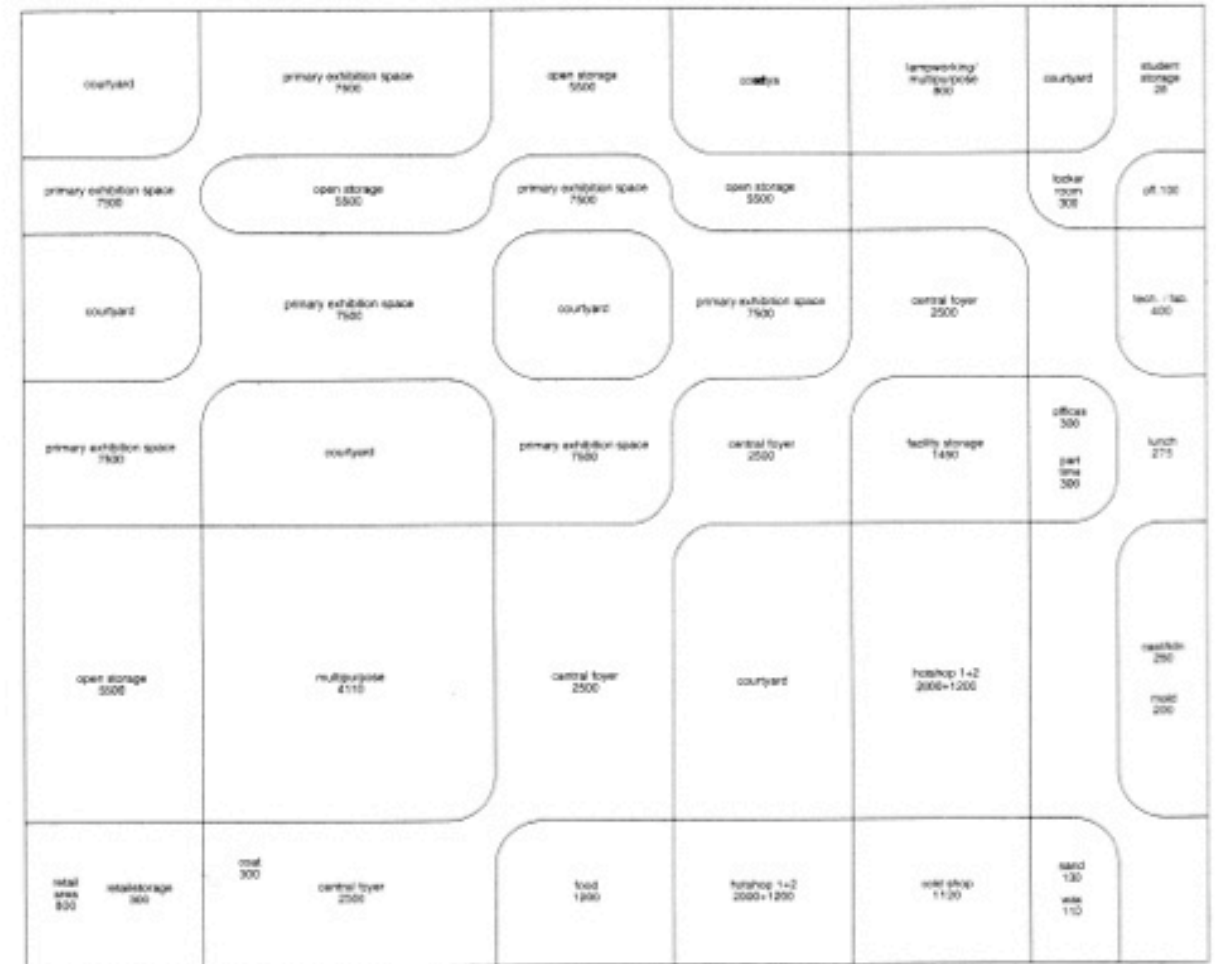
*“ I see it [architecture] more as a kind of open stage that should serve to facilitate freedom of movement... I believe an architect should put up structures that serve to mutually incorporate people, city, and information or media. ”*

K A Z U Y O S E J I M A



En el centro del parque proponemos una retícula modular. Las salas uniformes sobre retículas uniformes carecen de conexiones diagonales. Cuando esta relación resulta necesaria, se emplean las curvas para establecer una conexión en diagonal.

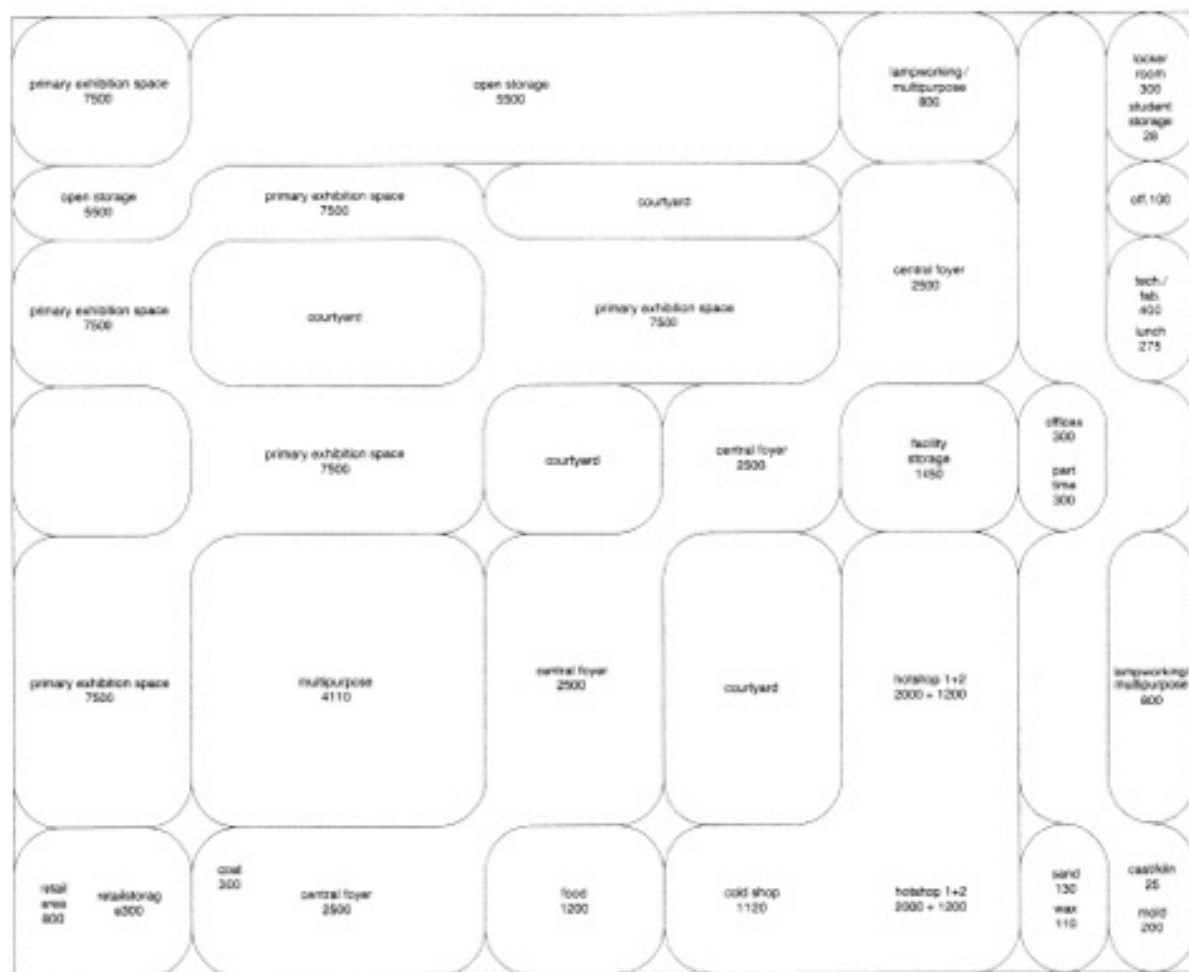
At the center of the park, we impose a modular grid. Uniform rooms on uniform grids do not have diagonal connections. Where this relationship proves necessary, curves are used to connect in the diagonal direction.



Para adaptarse al programa, la retícula uniforme se ajusta para transformarse en una retícula rectangular. Aquellos lugares en los que las salas rectangulares quedan conectadas por paredes curvas son buenos. Sin embargo, empezamos a pensar que una curva en una sola esquina de una sala es algo espacialmente desagradable.

To meet the program, the uniform grid is adjusted to become a rectangular grid. The places where rectangular rooms are connected by curved walls are good. However, we begin to think that a curve at just one corner of a room is spatially unpleasant.





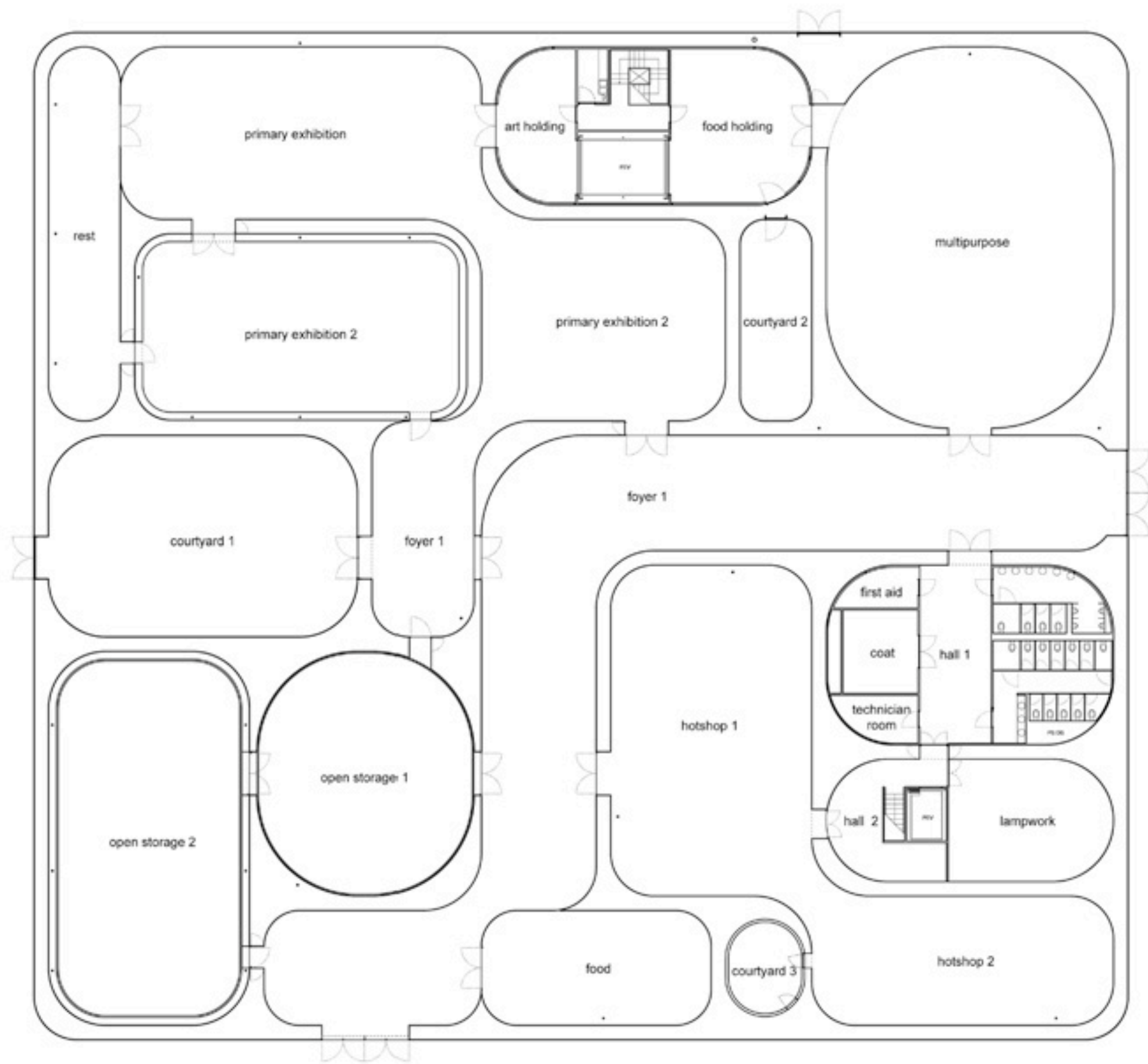
Todas las salas tienen esquinas en curva, y no en ángulo. Creemos que las salas con esquinas en curva son más independientes

All rooms are made by curved corners, not angled corners. We find rooms with curved corners to be more independent.

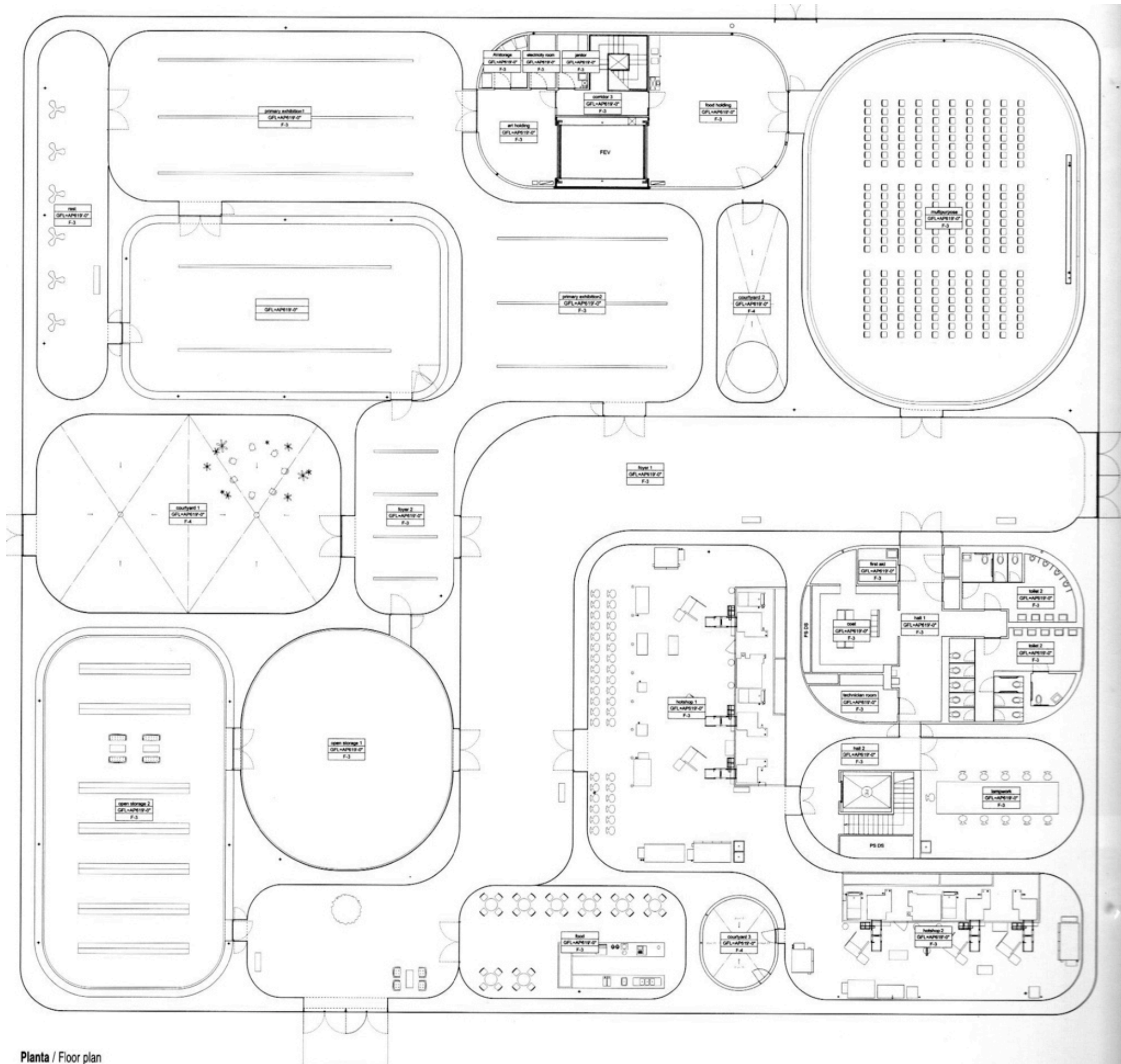


Originalmente, un muro era compartido por dos salas. Los muros dobles hacen que cada sala sea independiente.

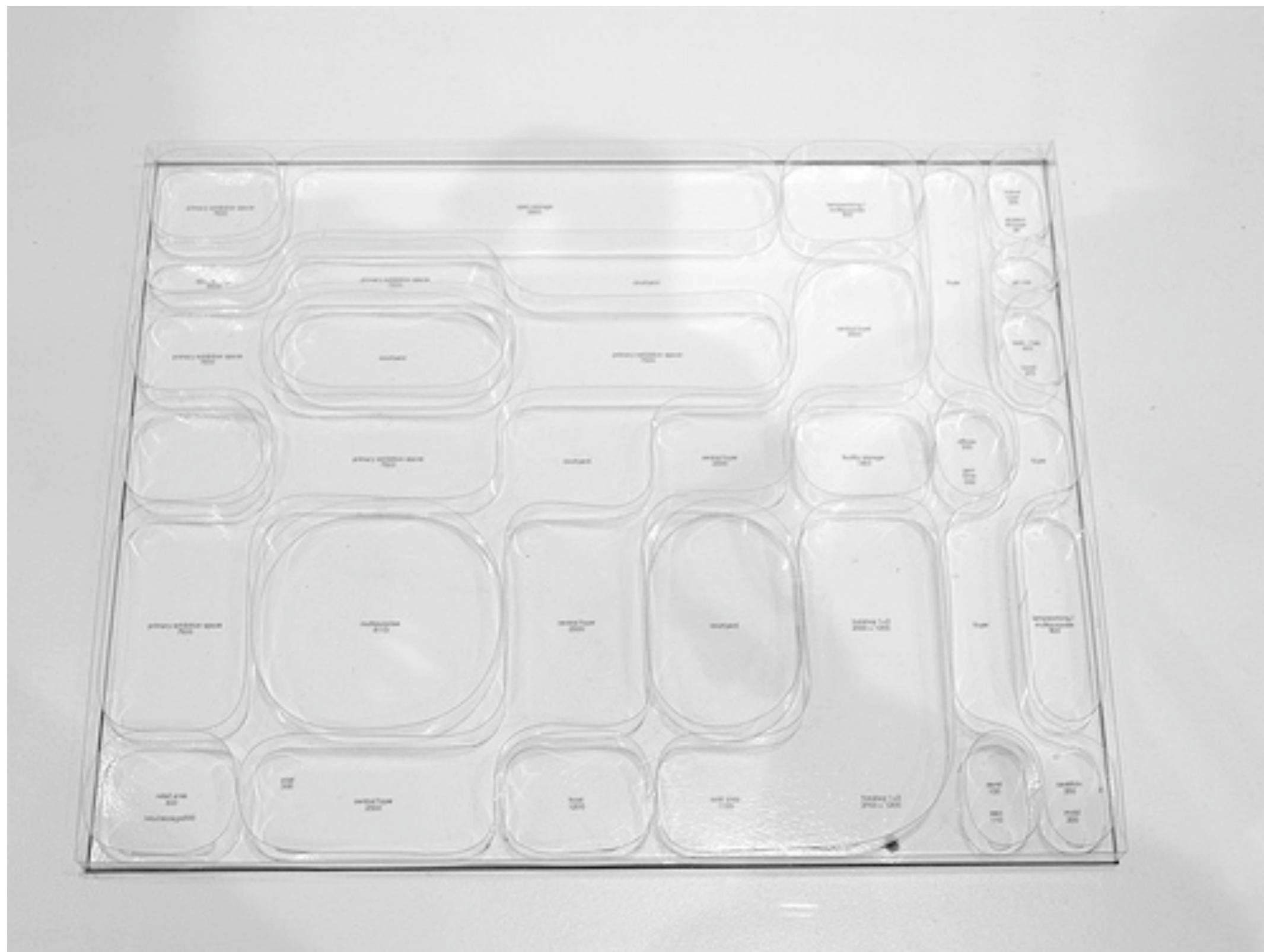
Originally, one wall was shared between two rooms. Double walls make each room independent.







Planta / Floor plan







TOLEDO GLASS MUSEUM | SANAA





TOLEDO GLASS MUSEUM | **SANAA**





TOLEDO GLASS MUSEUM | SANAA



TOLEDO GLASS MUSEUM | SANAA





TOLEDO GLASS MUSEUM | SANAA

# TESHIMA ART MUSEUM

*RYUE NISHIZAWA*

CONCEPT OF SPATIAL METAPHOR AS LITERAL SPACE  
DIAGRAM AS CONCEPT AND BUILDING  
[CONCEPT=DIAGRAM=BUILDING]





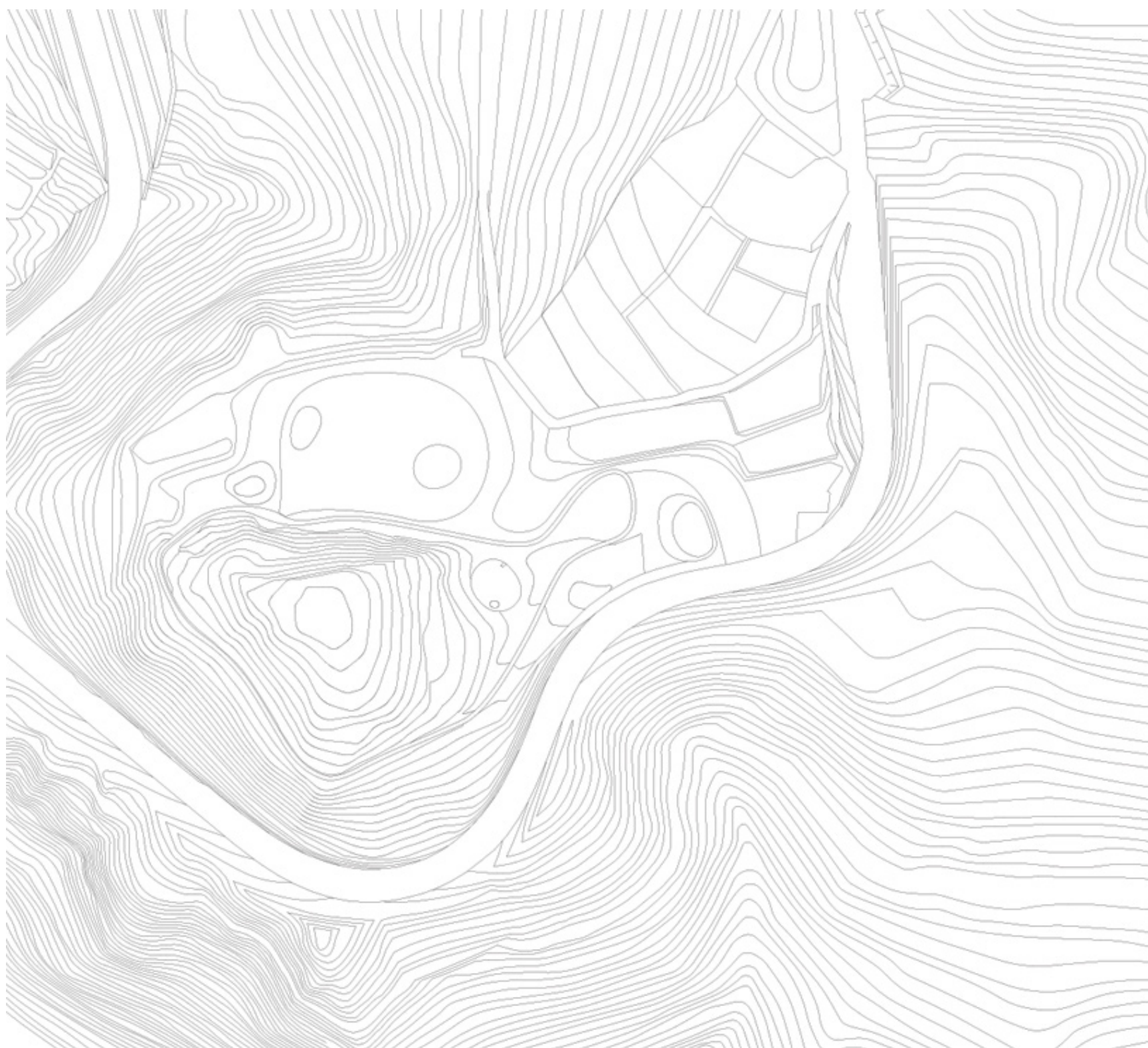
“ We proposed an architectural design composed of free curves, echoing the shape of a water drop. Our idea was that the curved drop-like form would create a powerful architectural space in harmony with the undulating landforms around it.

The architecture aims to create a dynamic space that is both closed for the work of art and the environment and open at the same time. **Our goal is to generate a fusion of the environment, art, and architecture, and we hope these three elements work together as a single entity.** ”

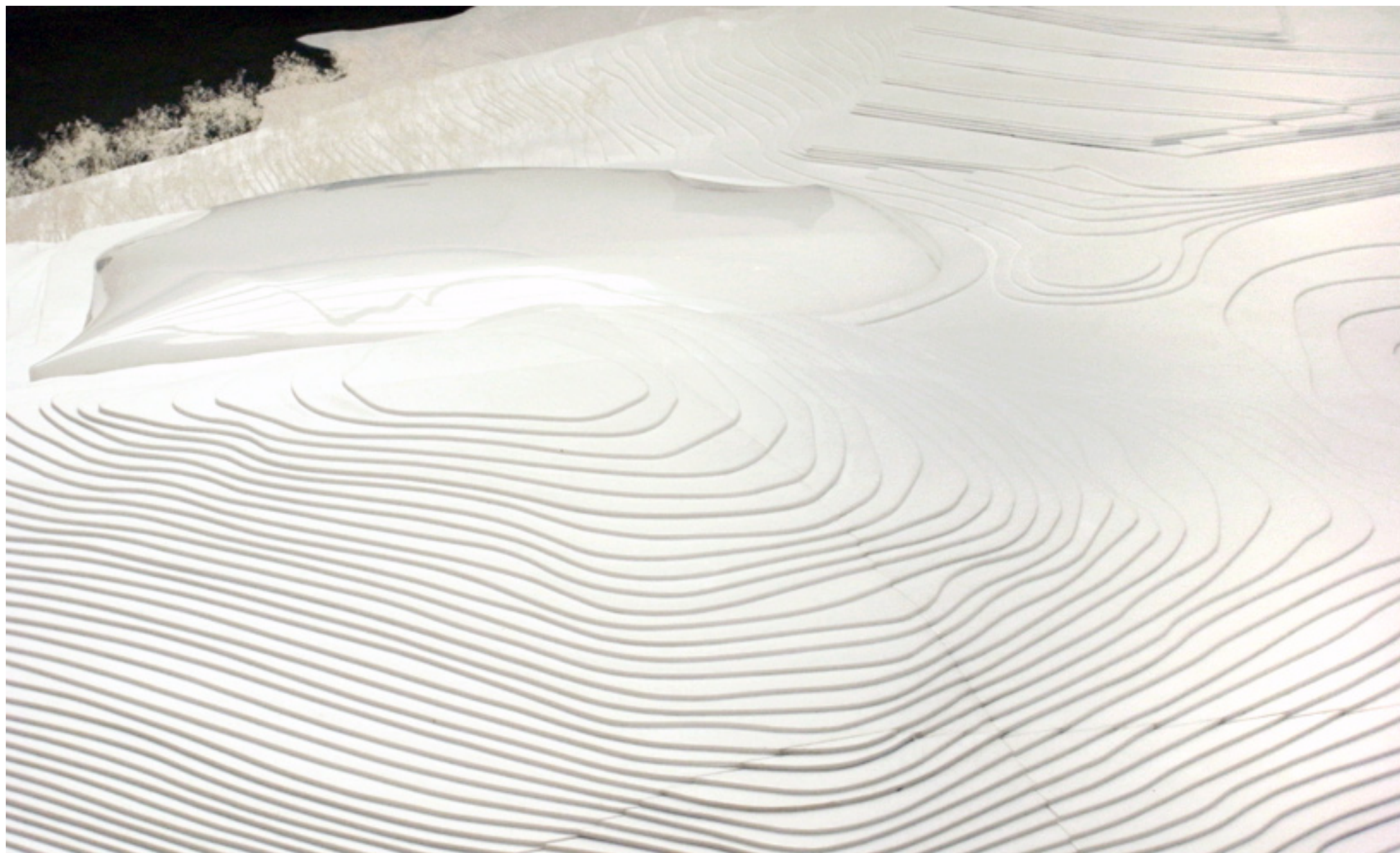
RYUE NISHIZAWA















TESHIMA ART MUSEUM | RYUE NISHIZAWA





TESHIMA ART MUSEUM | RYUE NISHIZAWA





TESHIMA ART MUSEUM | RYUE NISHIZAWA







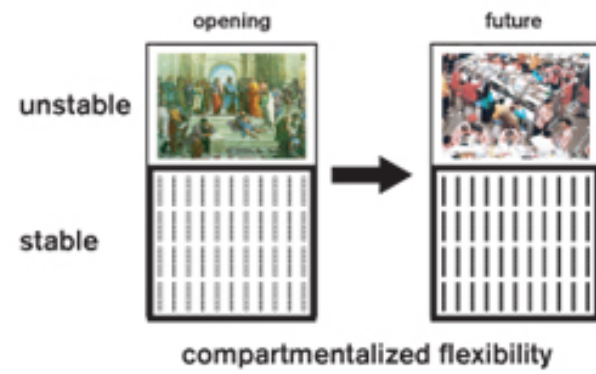
TESHIMA ART MUSEUM | RYUE NISHIZAWA



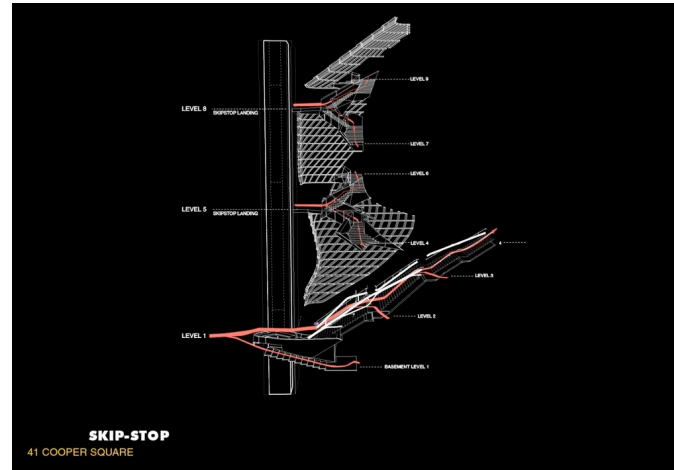
TESHIMA ART MUSEUM | RYUE NISHIZAWA



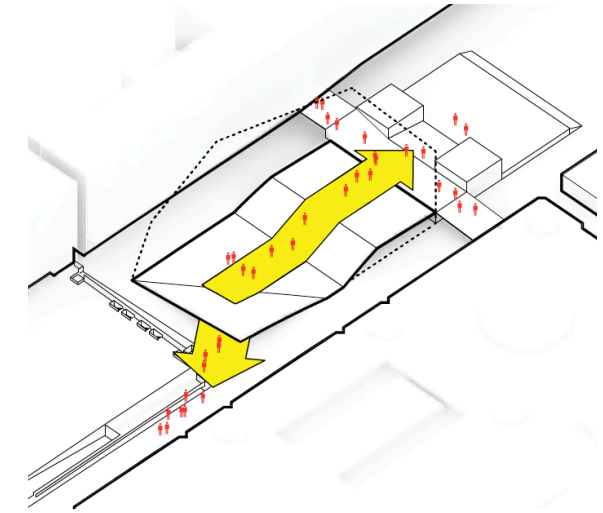




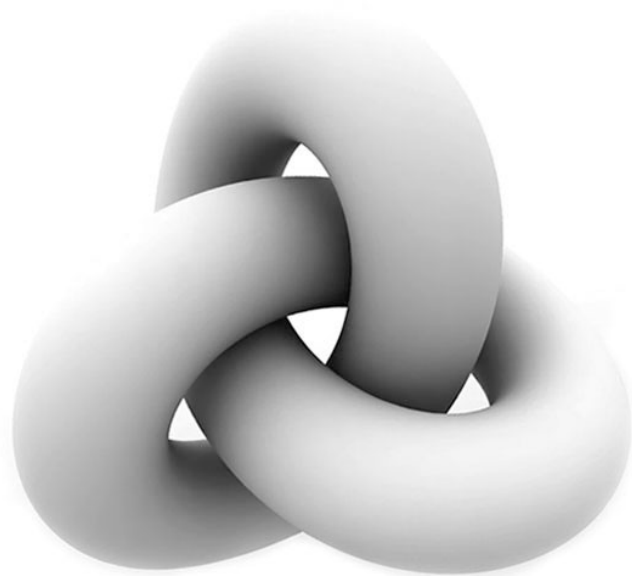
REPRESENTATION OF  
THEORY & RESEARCH



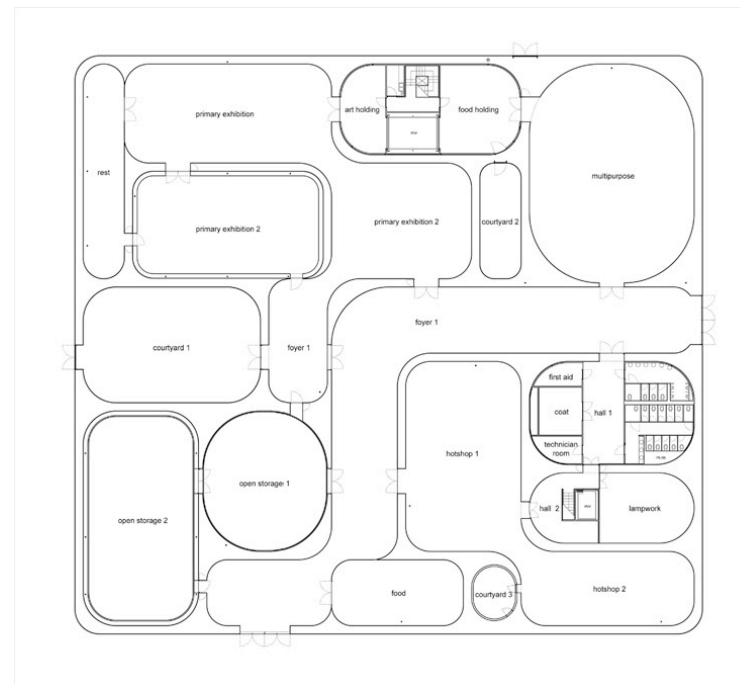
TOOL FOR FORMAL  
EXPLORATION OF CONCEPT



REPRESENTATION OF  
FORMAL PROCESS



IS CONCEPT AND TOOL FOR  
TRANSLATION



IS BUILDING AS REPRESENTATION  
OF SPATIAL CONDITION



IS BUILDING, CONCEPT,  
& ART



# DIAGRAMS

ABSTRACT MEANS FOR EXPLORING **CONCEPTS**

REPRESENT COMPLEX IDEAS, SIMPLY *CLARITY*  
ALLOW YOU TO STUDY MANY IDEAS QUICKLY *INSIGHT*  
CREATE A PLATFORM FOR DIALOGUE *HONEST*  
ARE DEMOCRATIC *APPROPRIATE*  
EMBODY OPPORTUNITY *UNEXPECTED*  
FORCE DECISION MAKING *PURPOSEFUL*  
MOMENTS OF FOCUS PROVIDING PLATFORMS FOR INQUIRY *THOUGHTFUL*  
RECORD THE DESIGN PROCESS *ORGANIZED*  
MANY CAN MAKE UP A SINGLE BUILDING *COHESIVE*

↓  
**THE ORGANIZATION OF**

**FORM  
SPACE  
FUNCTION**