



**Aalto University**

## Part 1

### Lectures

- Into to Exhibition Design
- Crystal Flowers 2021 Exhibition Brief

*(15 min break)*

## Part 2

### Exercises

- Group discussion about collaboration in breakout rooms
- Quick research exercise in breakout rooms
- Presenting exercises and discussion



**what is art?**





**idea and medium**





Ai Weiwei

**communication**





**to an experience**







**something you get  
excited about**

**in an exhibiton**



**The moment is beautiful**

**As designers**



**modify the space**





**take advantage of the space**



**Teamwork**



**Synergy**



# **Power of teamwork and collaboration**

**more variety  
and different  
experiences**

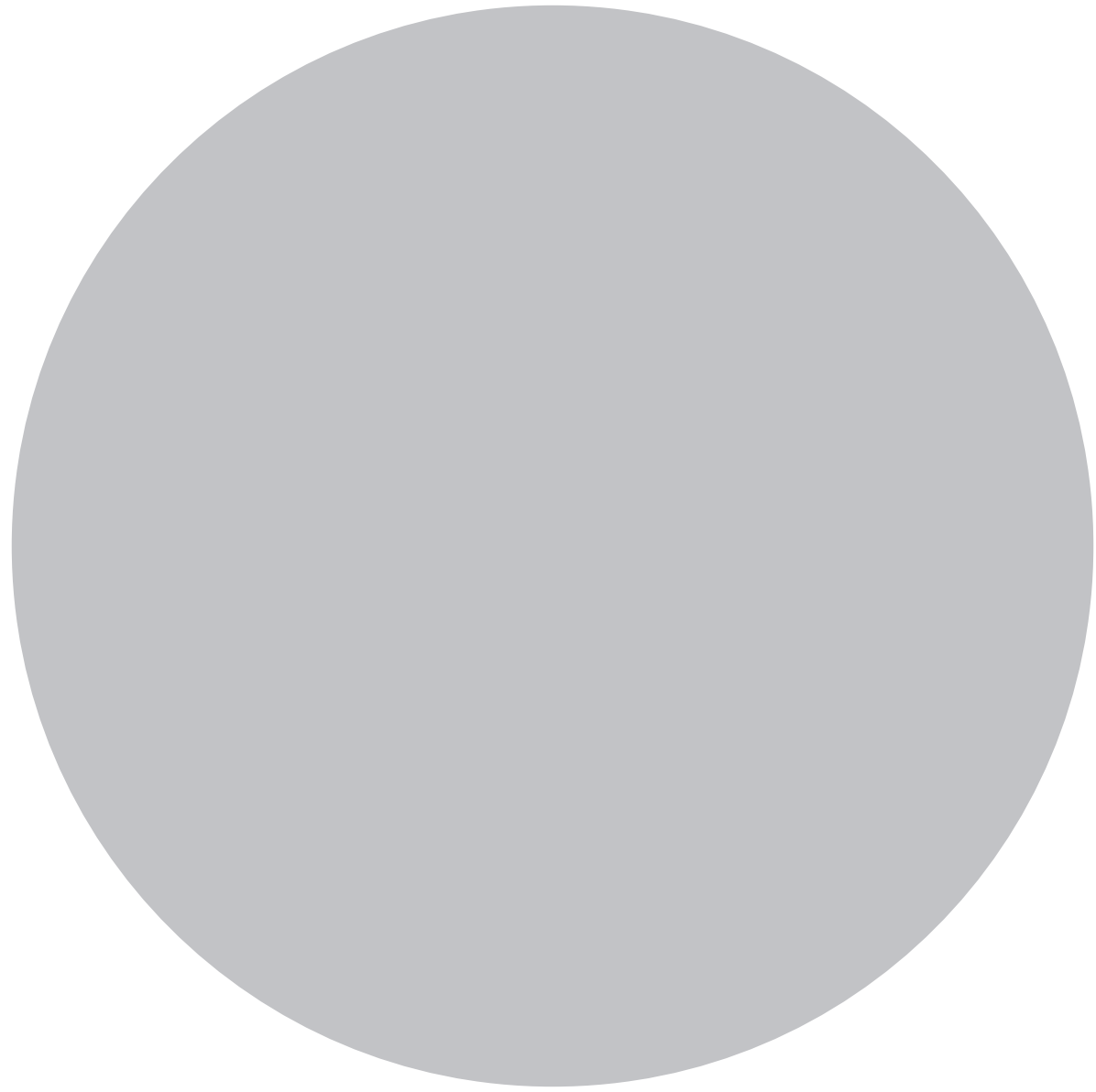


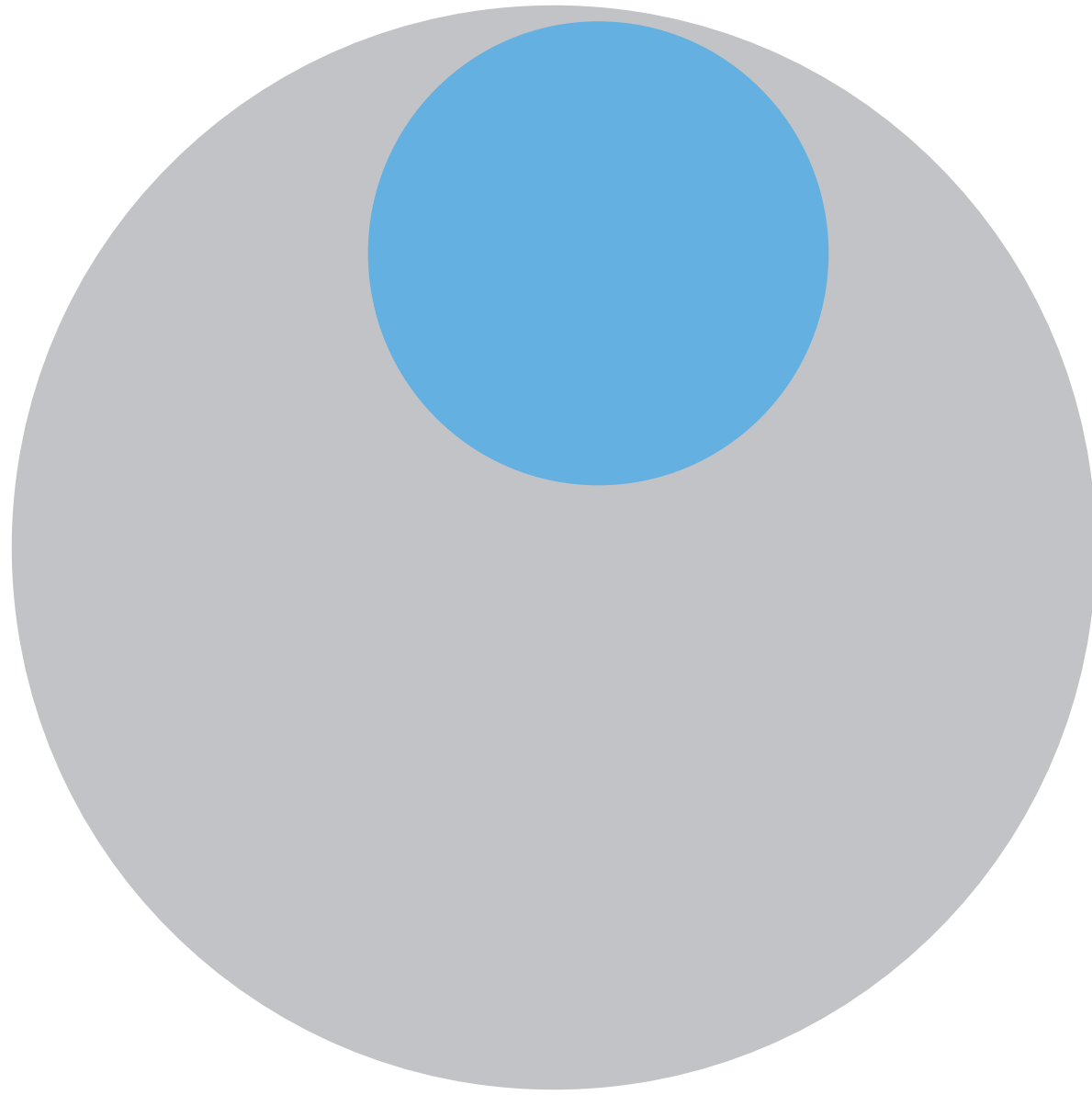


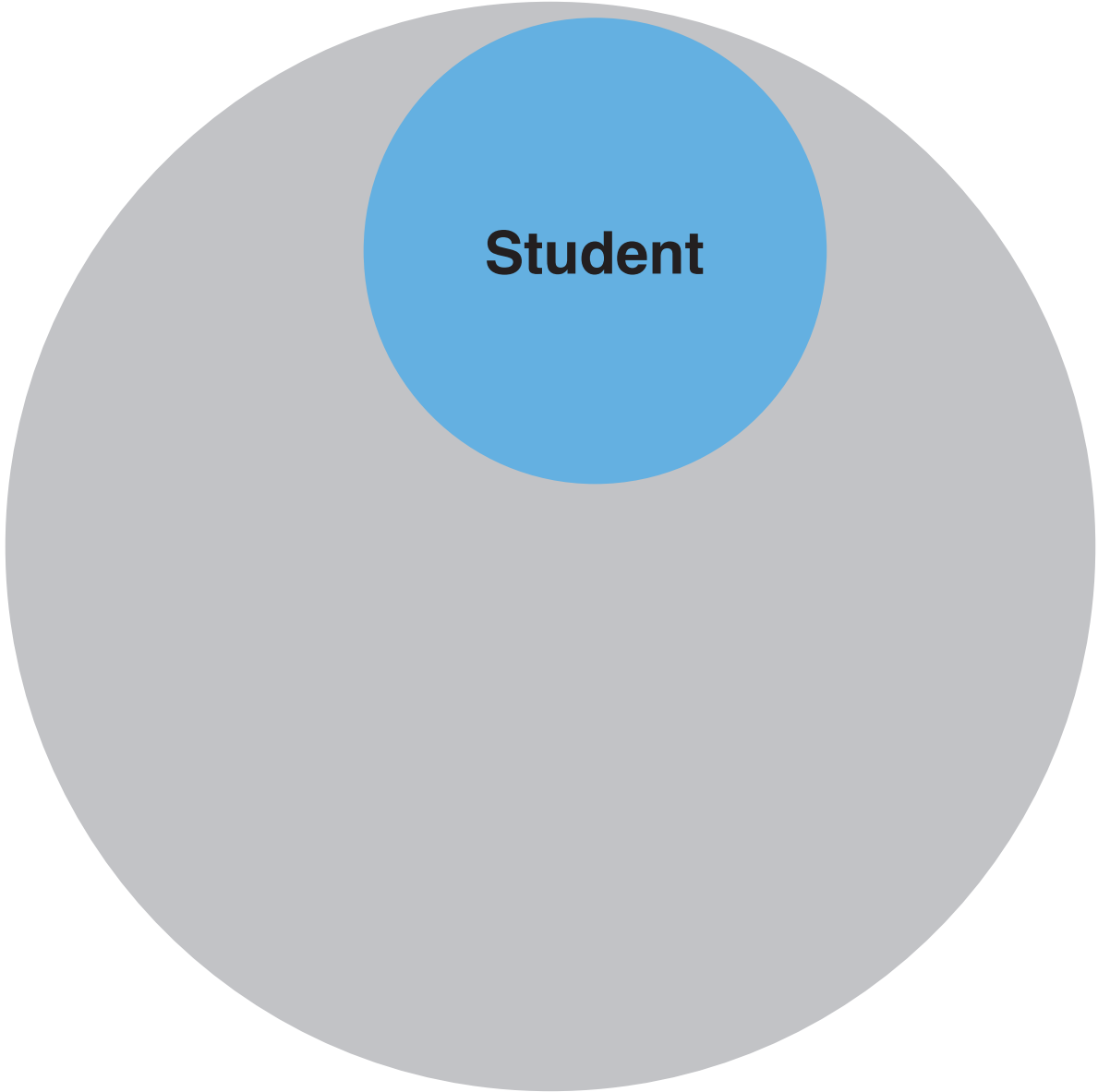
**Memphis Group**



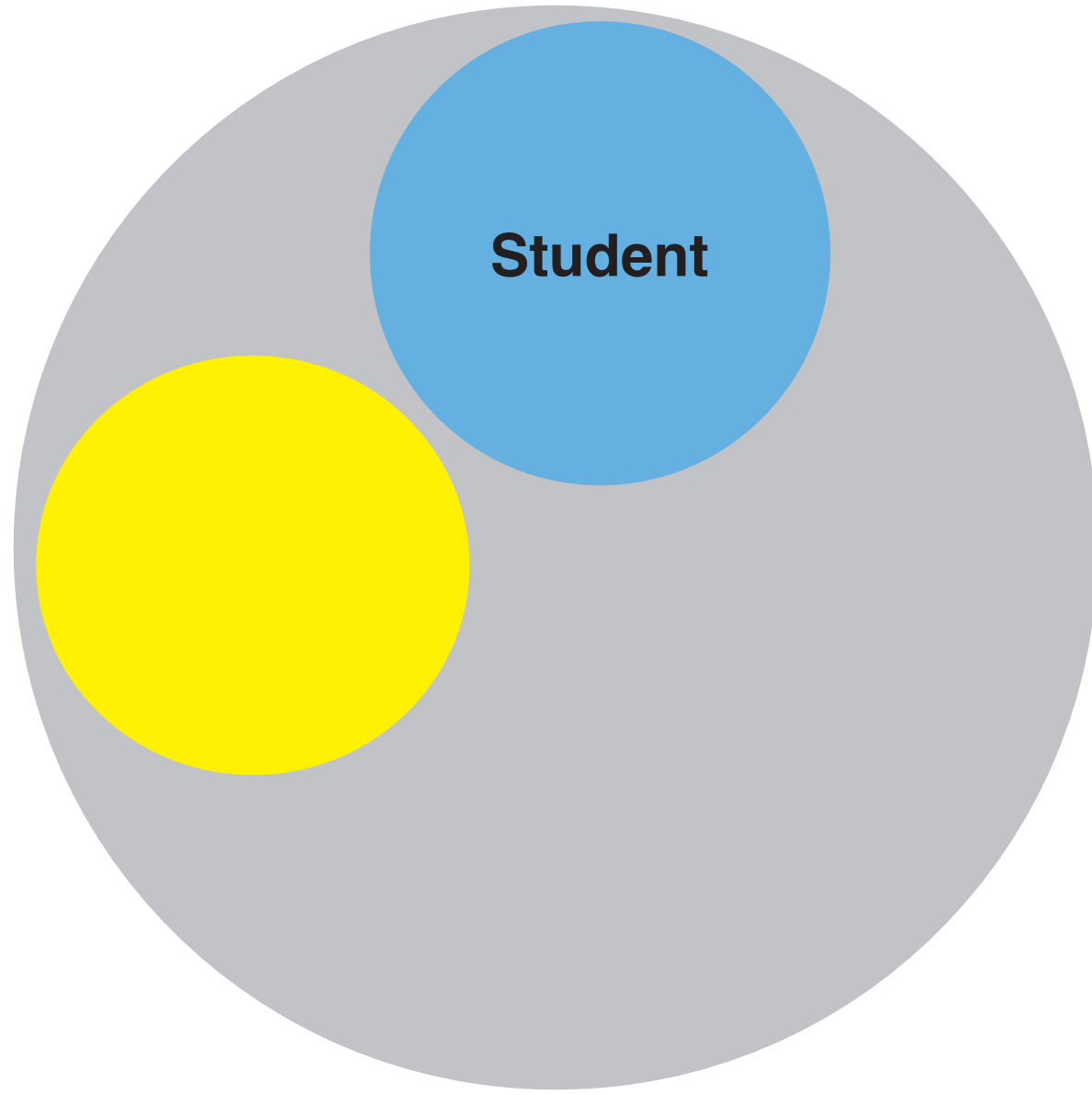
**Renaissance**

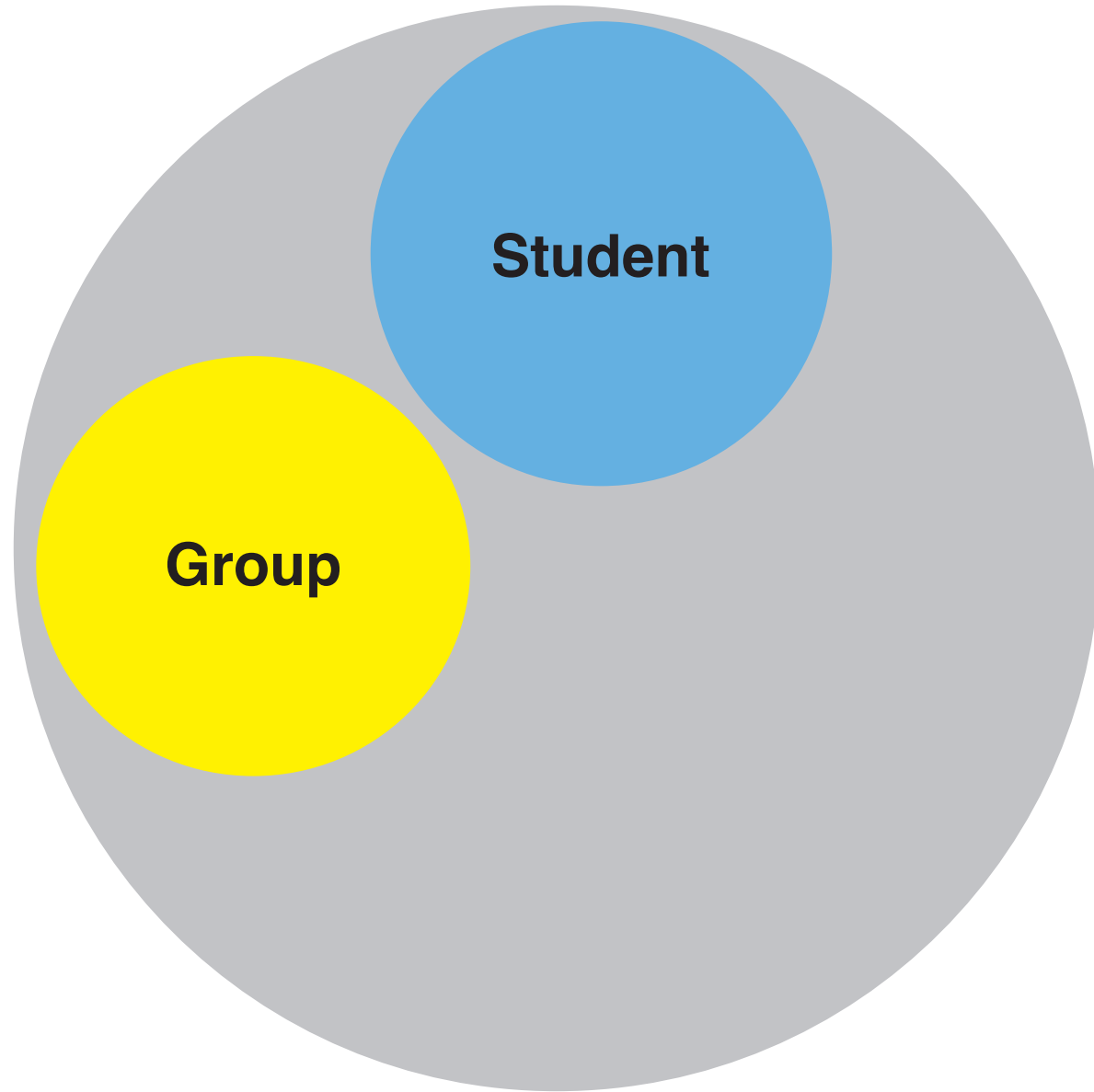


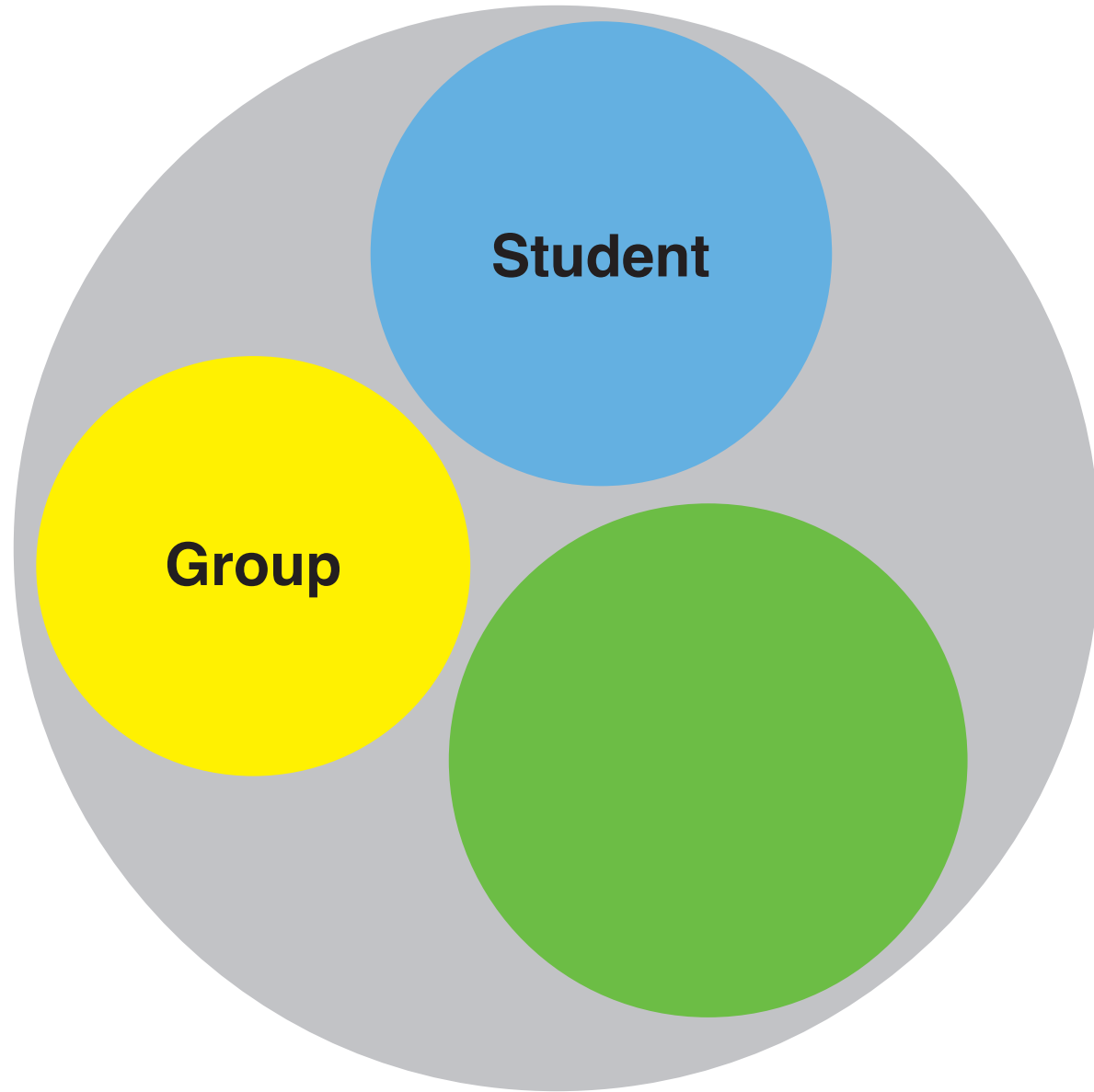


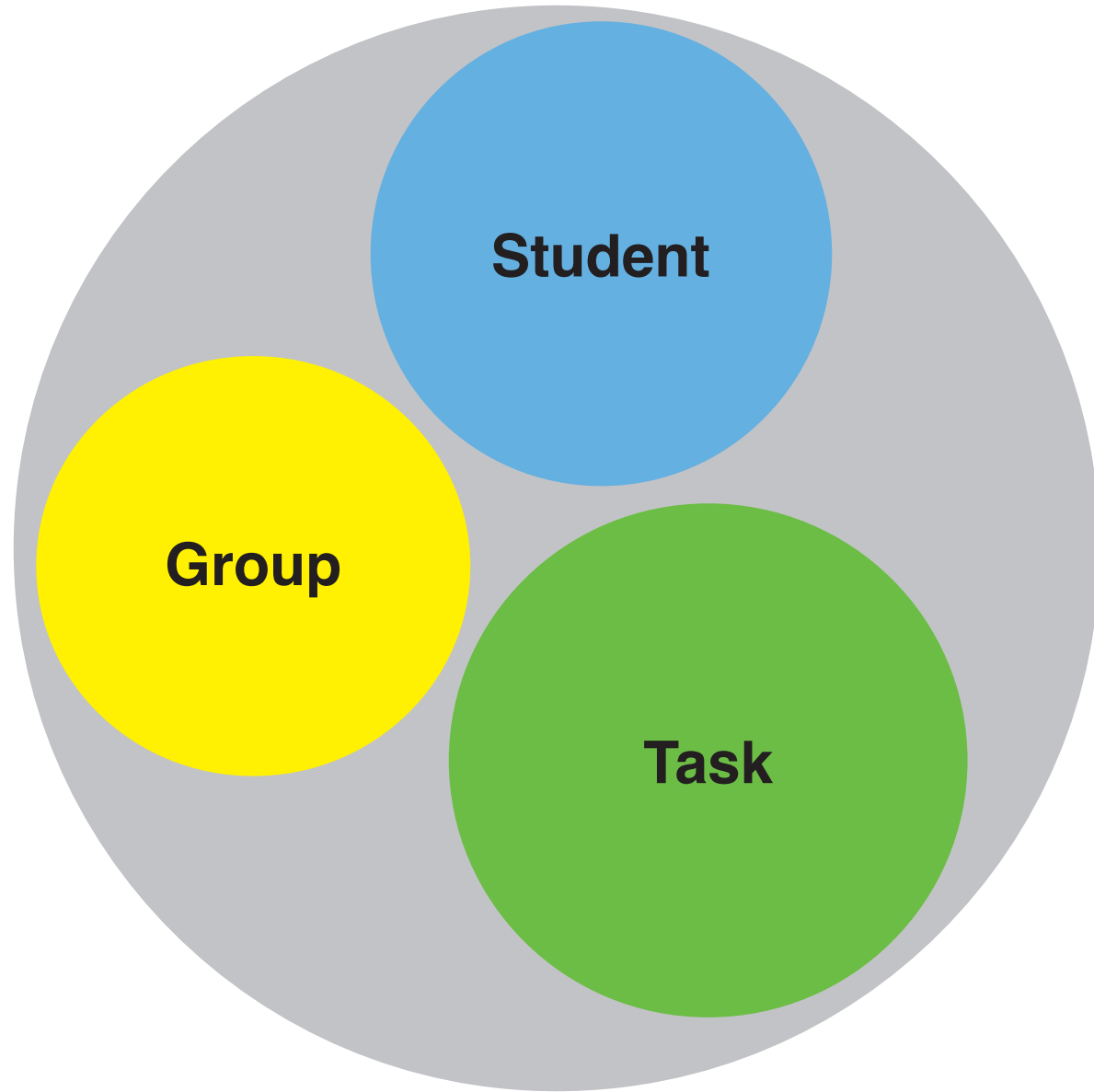


**Student**

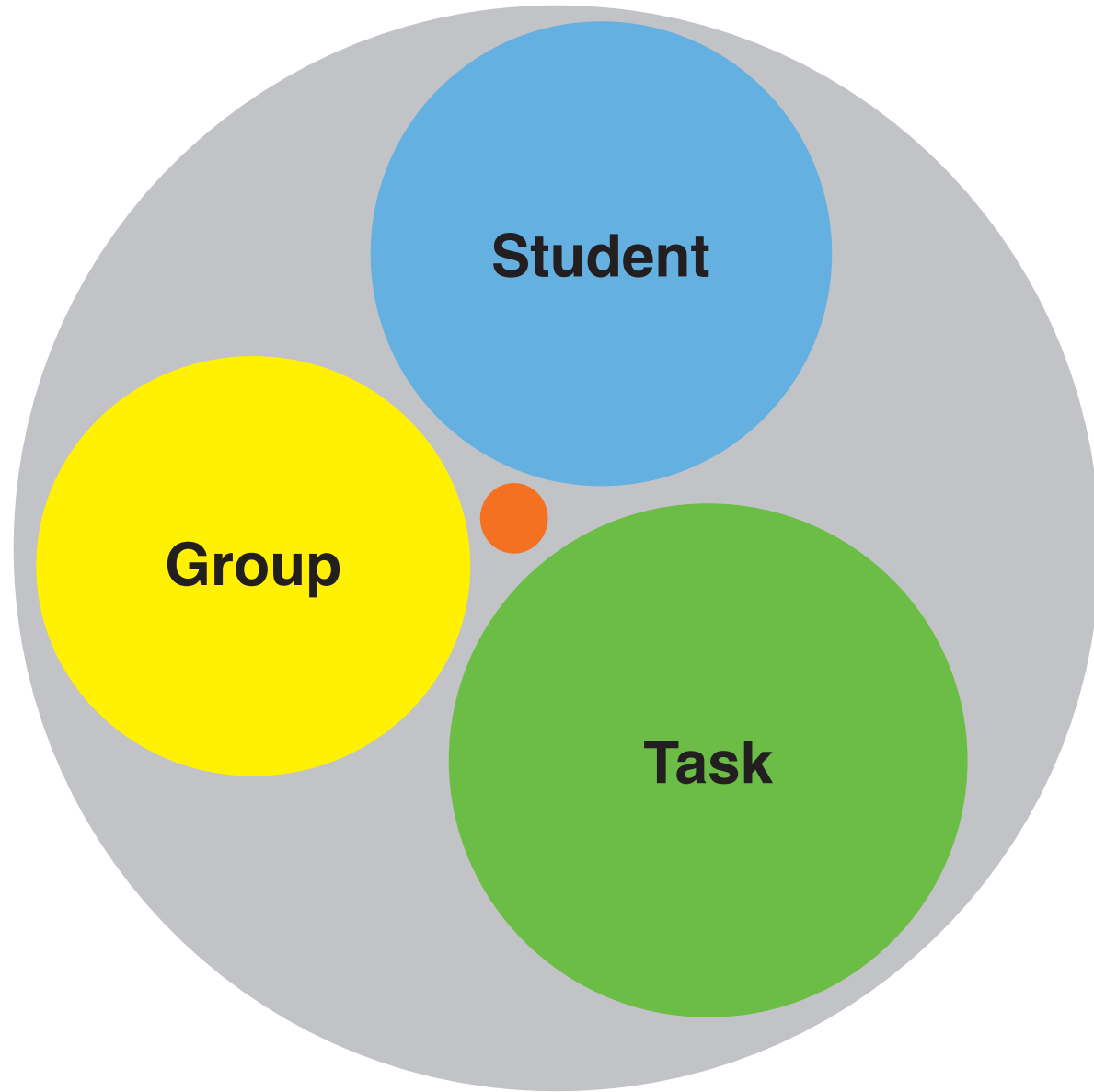


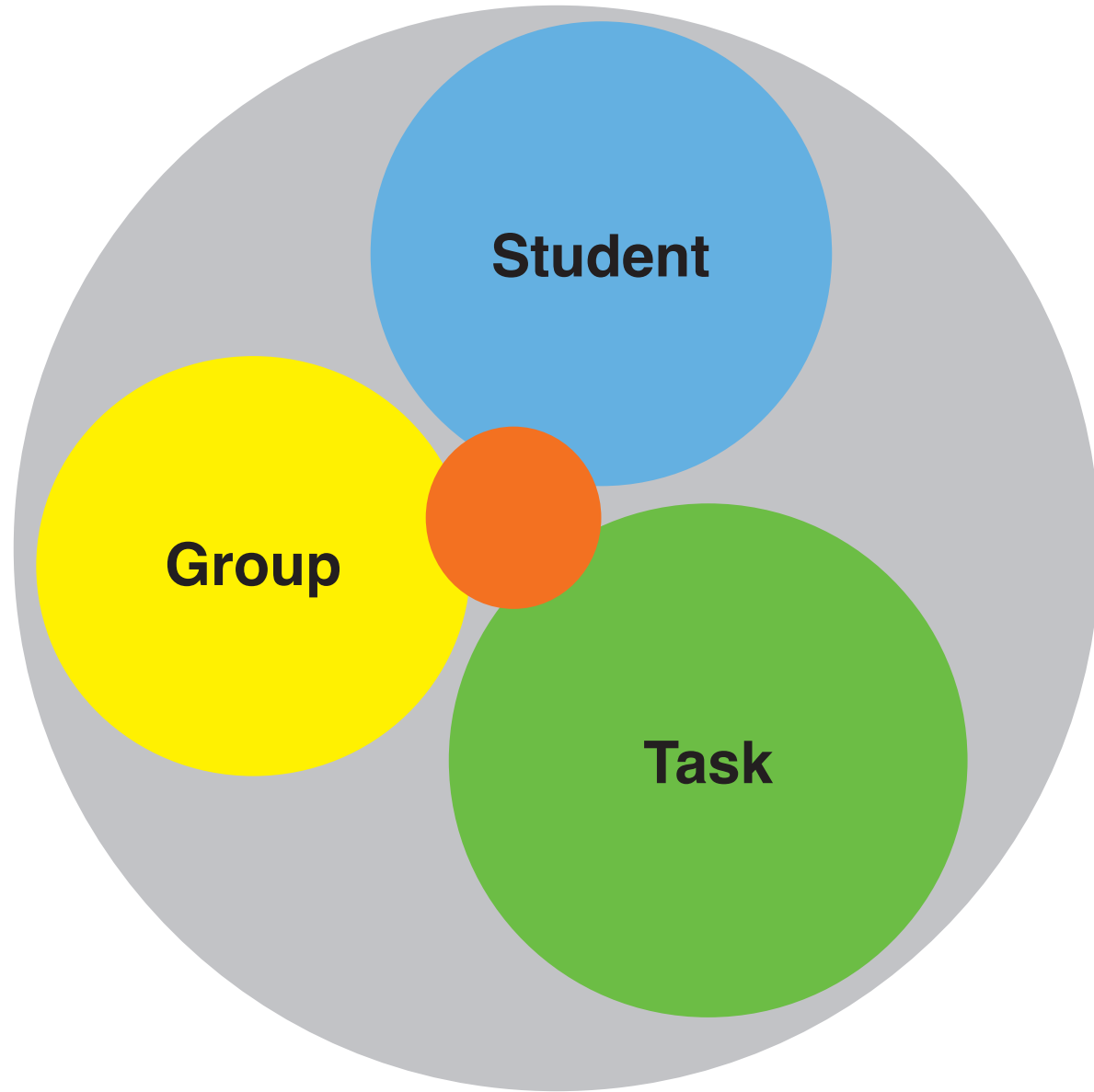








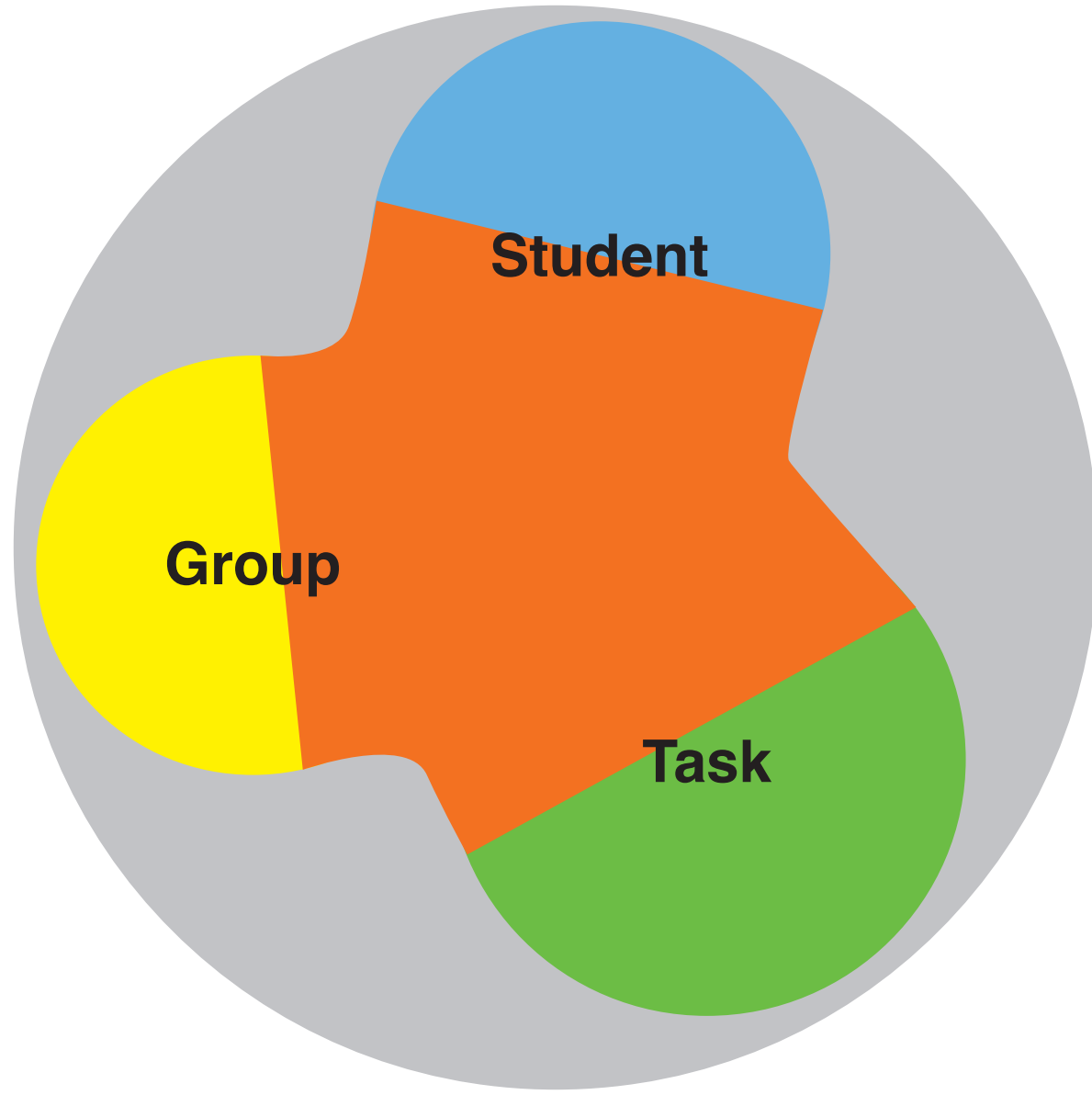


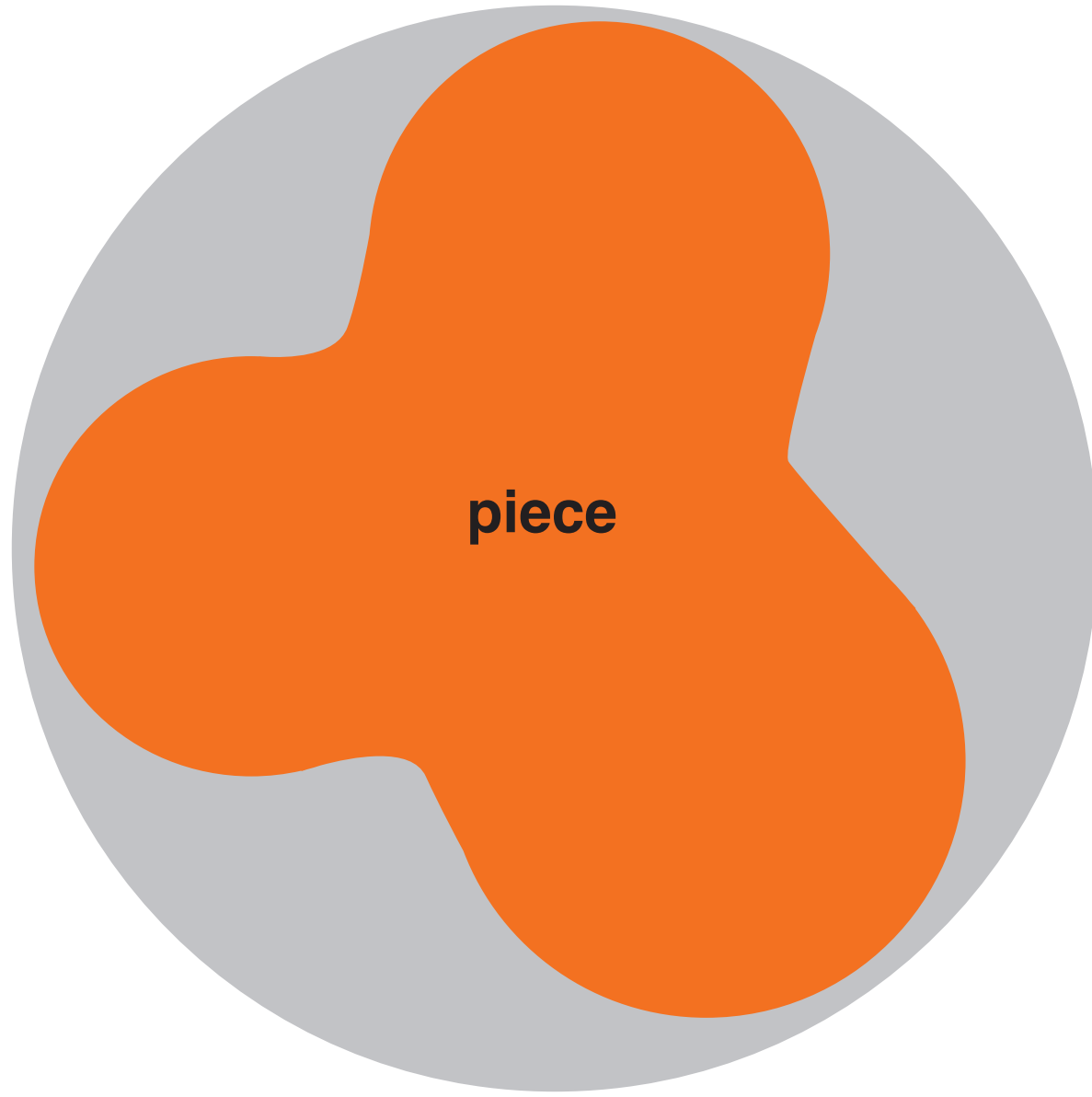


**Student**

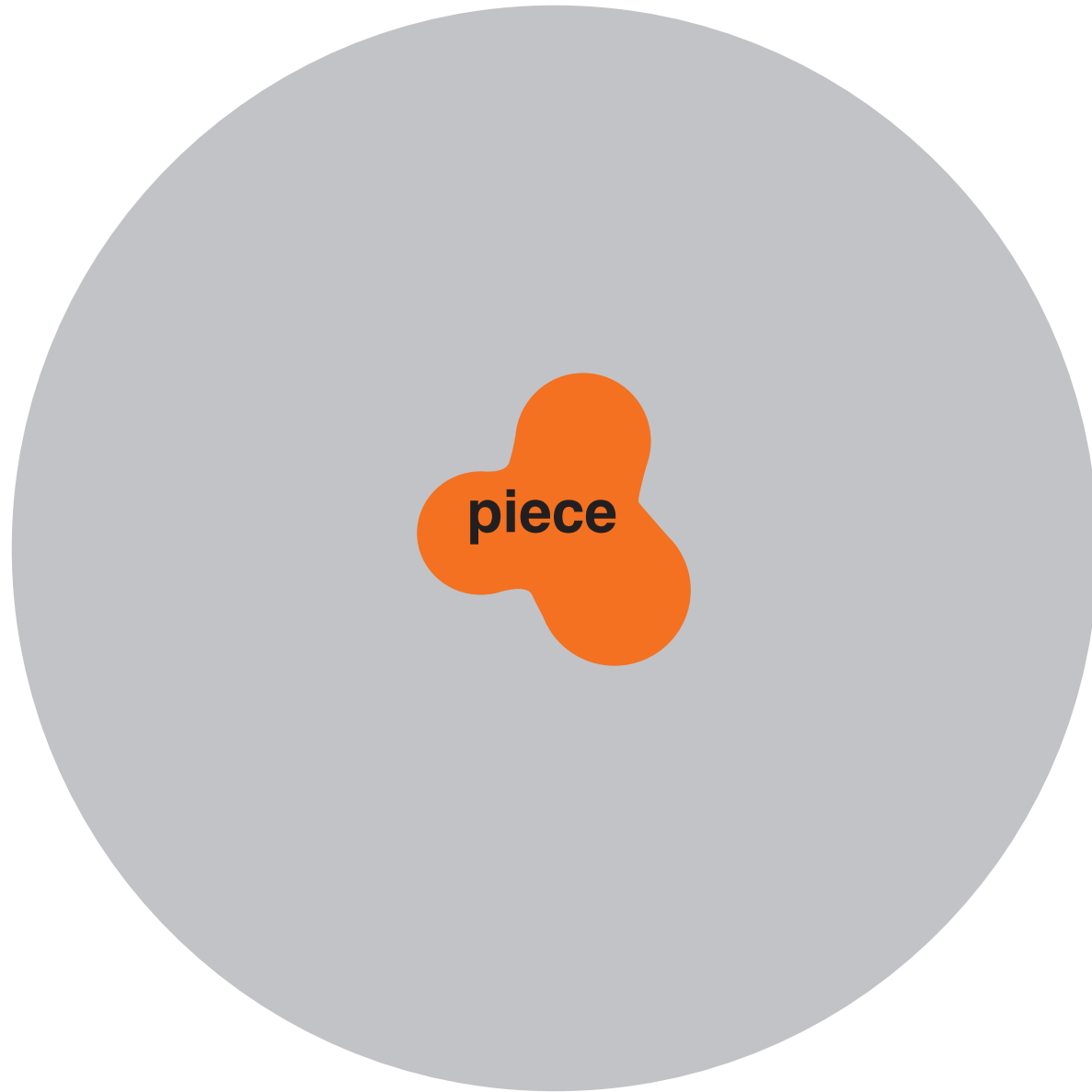
**Group**

**Task**

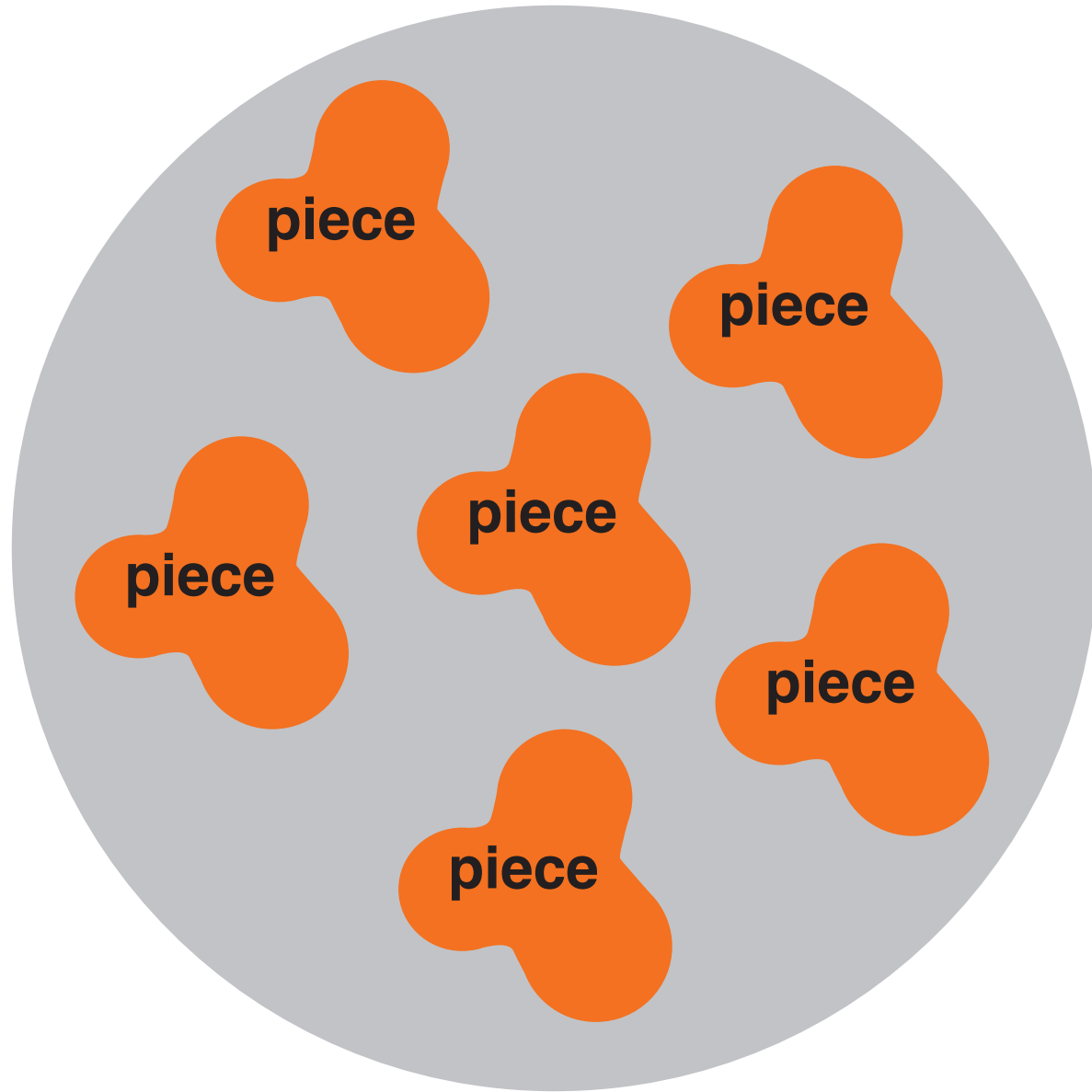




**piece**



**piece**



**piece**

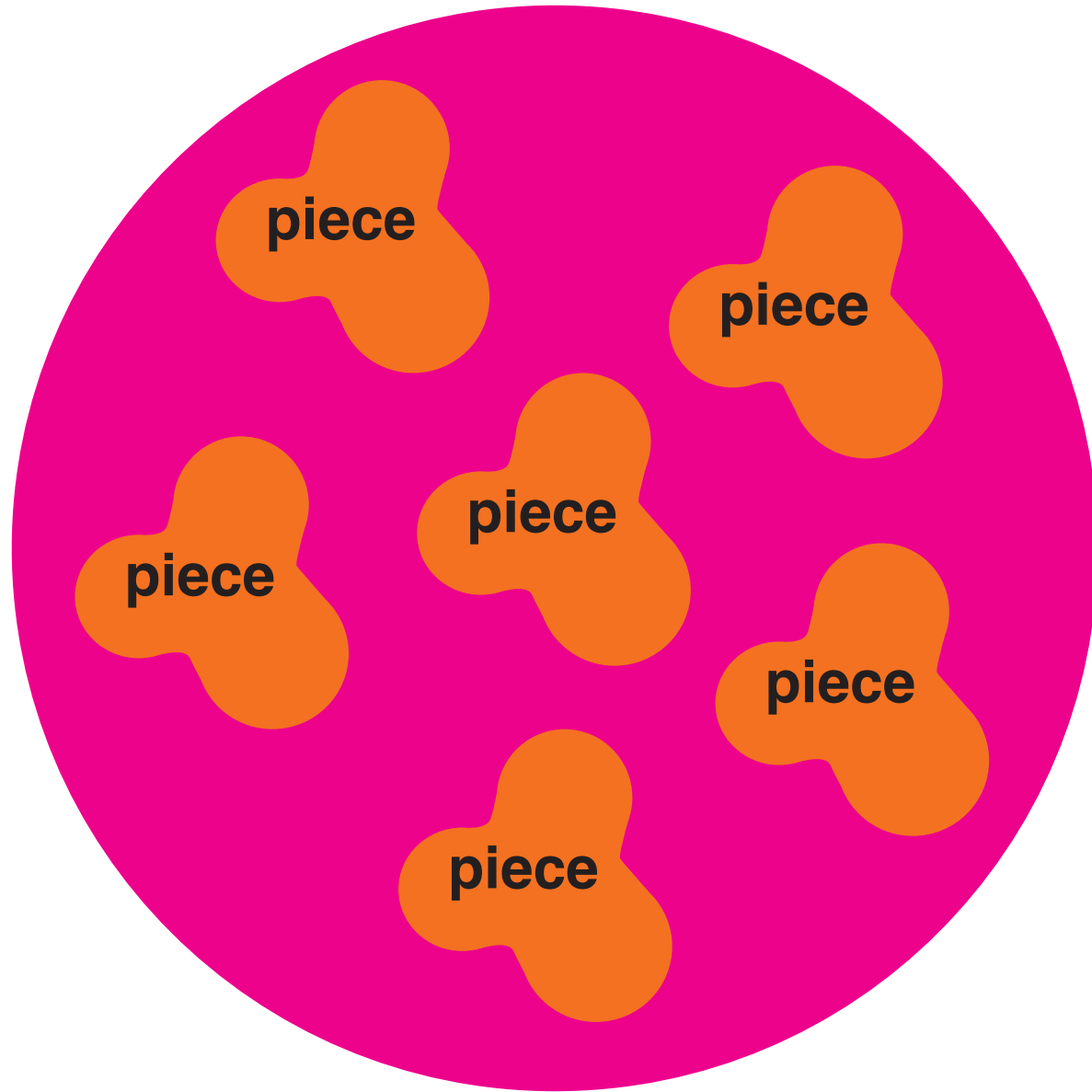
**piece**

**piece**

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**piece**

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**Prototype**



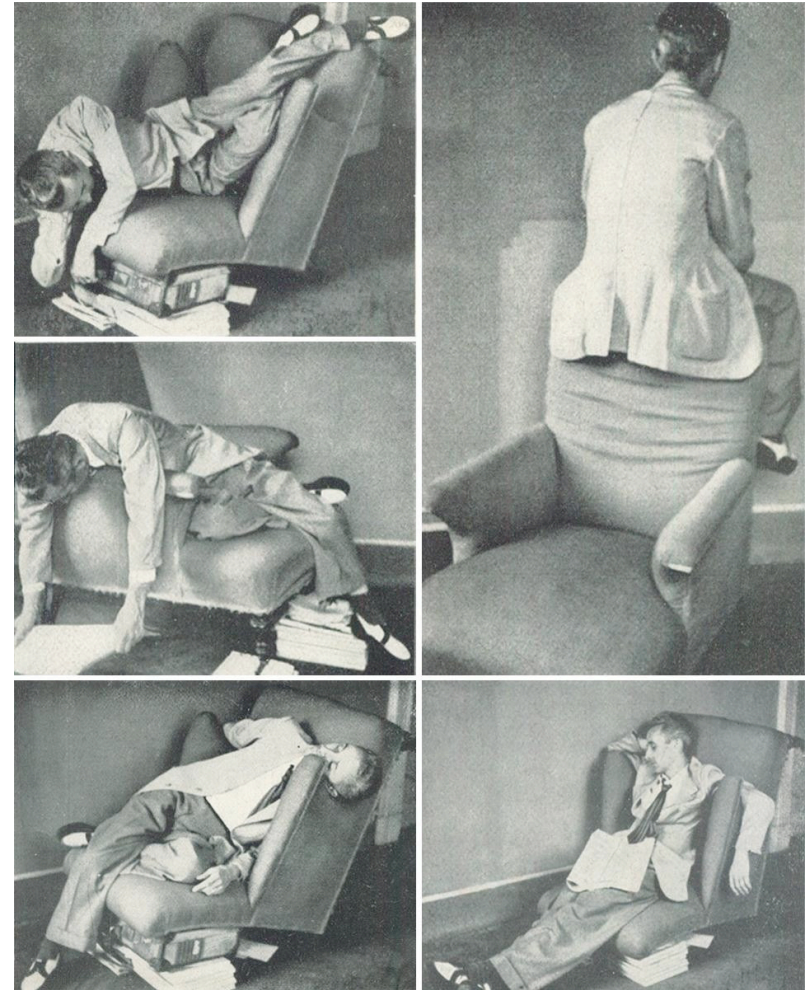


**Be free to experiment.  
It helps you move step-by-step,  
clarify ideas and can reveal  
unexpected results.**



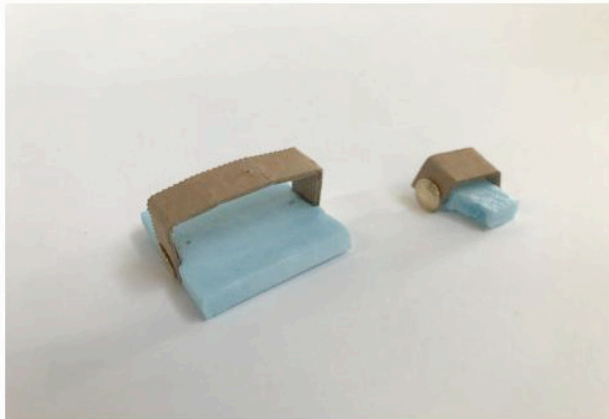
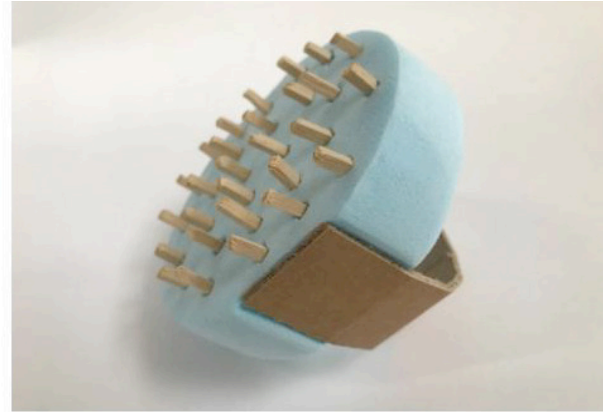
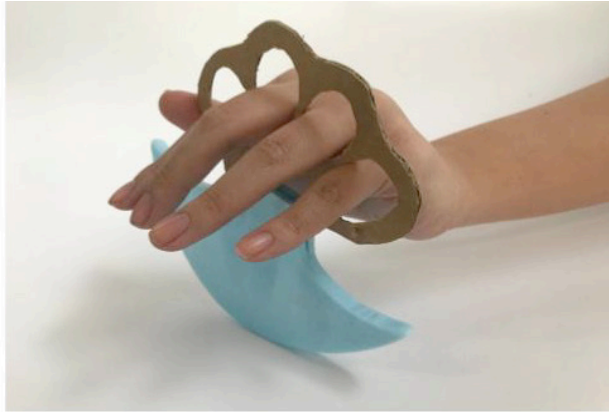


Global Tools



"Finding comfort in an uncomfortable chair" by Bruno Munari

**..creating quick prototypes  
help learning how to  
proceed.**



Fixperts

**Curiosity**

**IF YOU WANT TO  
BE INTERESTING,  
BE INTERESTED.**

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**Aalto University**

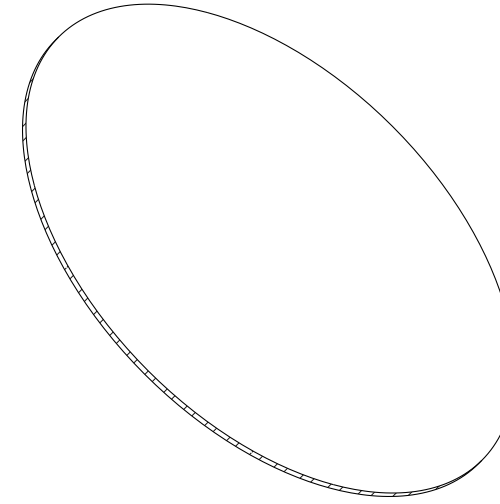
# **Crystal Flowers 2021 Exhibition Design Brief**



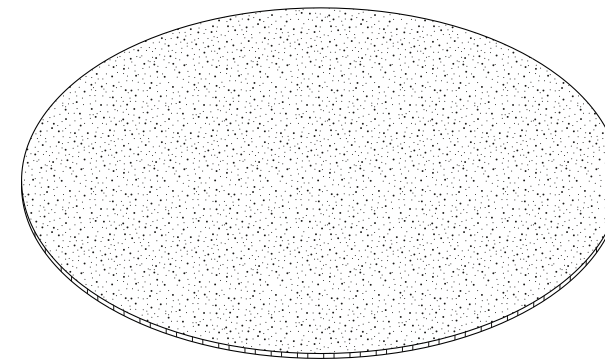
**Exhibition Brief**

Exhibition Site

Framework



# Collineation Grounds



## **Exhibition**

Crystal Flowers in Halls of Mirrors  
Otakaari 1  
Summer 2021 and beyond

## **Exhibition Design**

Marco Rodriguez  
Markus Holste  
Luiza Sevele

## **Exhibition Brief**

Crystal Flowers 2021

## **Spring 2021 course online / at Design Factory**

### **Teachers**

Kirsi Peltonen (SCI, Mathematics)

Taneli Luotoniemi (ARTS)

Laura Isoniemi (ARTS)

### **Exhibition Design**

Marco Rodriguez (ARTS)

Markus Holste (ARTS)

Luiza Sevele (ARTS)

### **Students**

From freshmen to PhD students (All schools of Aalto)

### **Theme of student projects**

Interpretations from low dimensional geometry and topology

### **Outcomes**

Artworks that communicate between art and mathematics

### **Form**

Sculptures (lightweight), installations (small scale), physical puzzles, games, digital, etc.

## **Project goals**

- **Make maths approachable through art.** To advance and share human understanding of mathematics.
- **Solid and artistically high-level exhibition.** Seeing mathematics as a source of inspiration for visual practice.
- **Engagement of wide audience.** From Arts to Maths and more
- **Collaboration and interdisciplinarity.** Knowledge and interpretation of multidisciplinary student teams.

## **Main purpose**

- **Artistic expression.** The students present a mathematical phenomenon or a concept with a strong artistic expression.
- **Added value to the site.** The exhibition creates added value to the site highlighting the experience of visiting exhibitions.

**Exhibition Brief**  
Concept tool for students

Senses

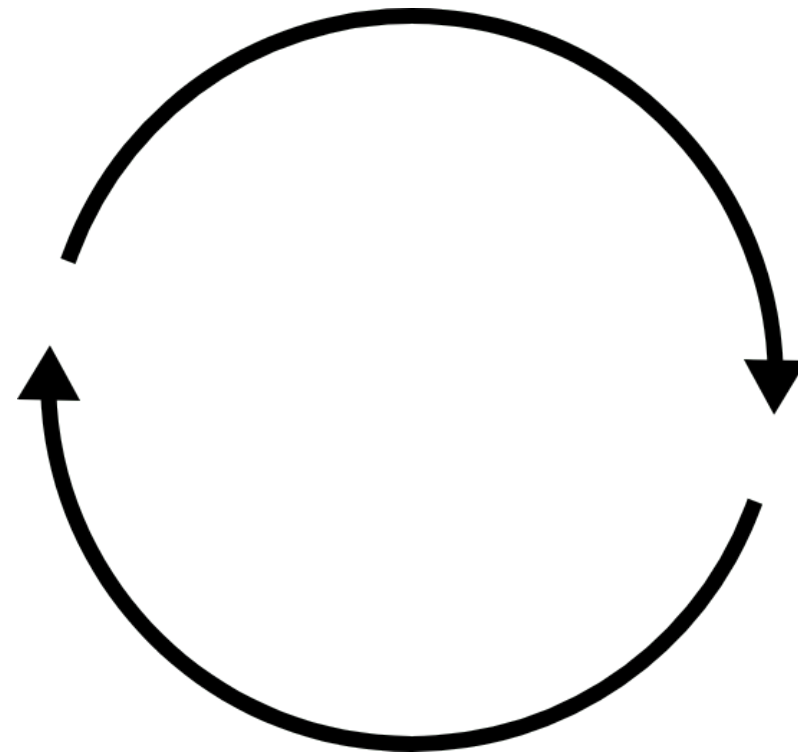
Instinct

Feeling

Patina

Touch

**Emotional**



**Rational**

Reason

Data

Research

Knowledge

History

**Exhibition Brief**

**Exhibition Site**

**Framework**

## Exhibition Site

Site info



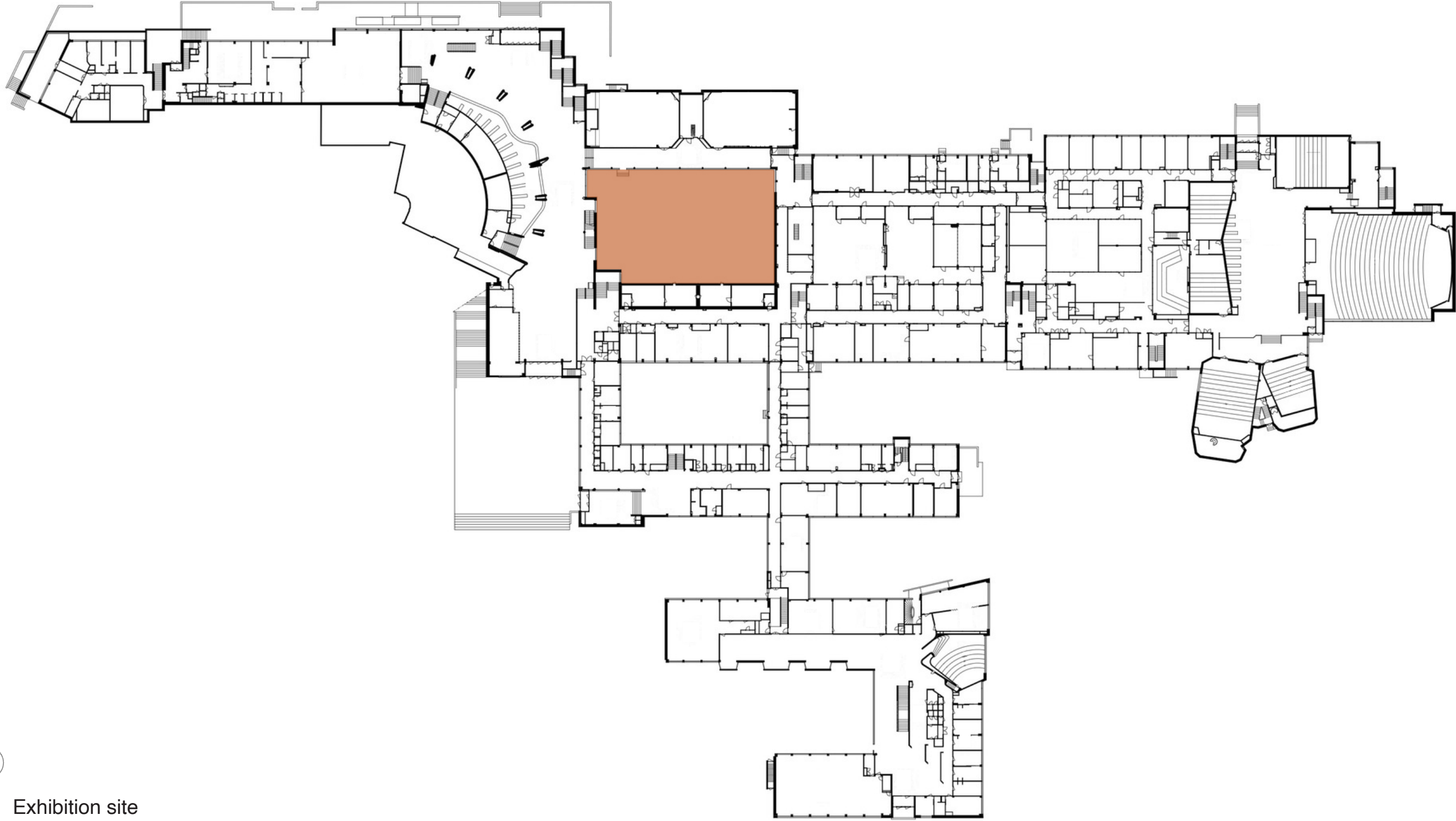
### Aalto University Undergraduate Center (Otakaari 1)

‘Completed in 1964, the Undergraduate Centre designed by Alvar Aalto was previously known as the University of Technology main building, and it is still a landmark on the Otaniemi campus. The south side of the building houses the architectural masterpiece of the campus, a terraced festival square. The culturally and historically significant, protected Undergraduate Centre houses 11 medium-sized halls. The foundation was laid in 1962 and the building was completed in 1964.’ (*aalto.fi*)



# Exhibition Site

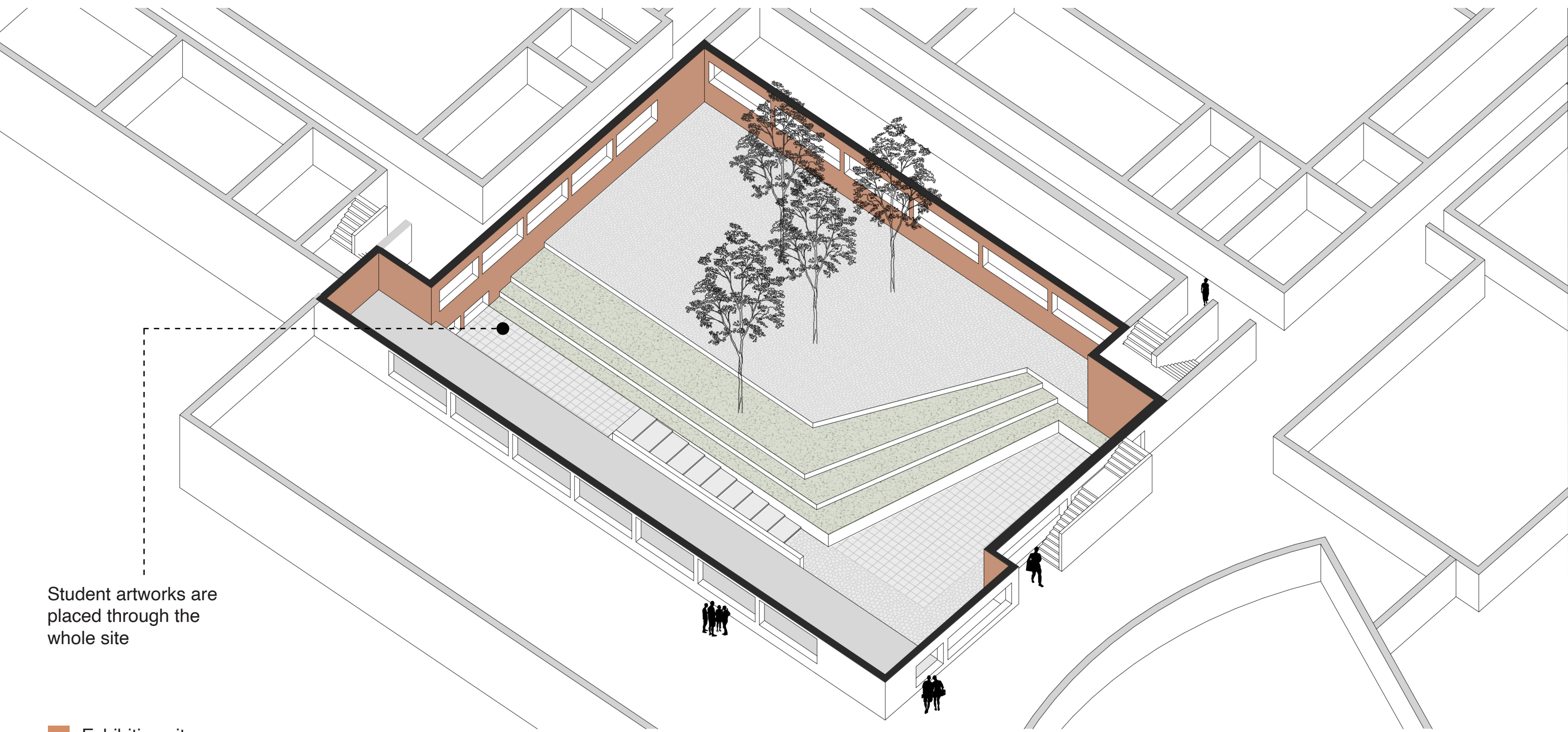
Location



Exhibition site



**Exhibition Site**  
Site view



Student artworks are placed through the whole site

■ Exhibition site



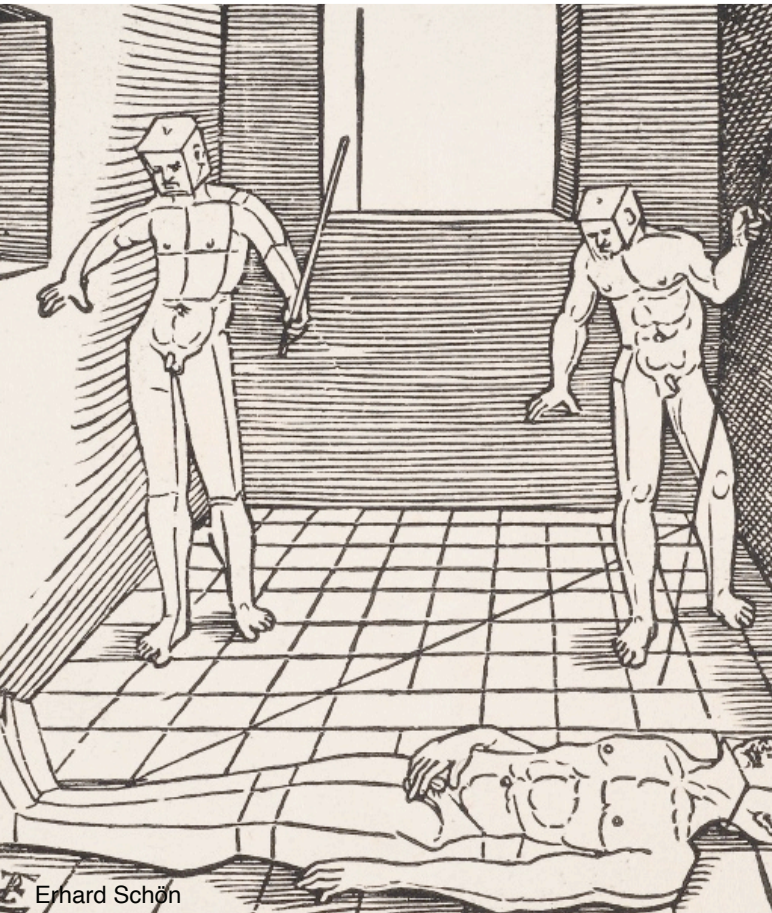
**Exhibition Site**  
Site view





## Exhibition Site

Referencing the site in design



## Collineation Grounds

‘Collineation Grounds’ is an arena to capture material representations of topics from low dimensional geometry and topology. The exhibition provides a framework to show a continuity/larger scale of mathematical concepts with a sense of materiality and an emotionally strong expressions of a rational process, or vice versa.

## Referencing The Site: Consider Time

The site, inner courtyard of Otakaari 1, works as a canvas where to reference from for the materiality of the artworks, especially in relation to space and time. This invites the students to explore matters as tangibility and connection of physical objects and natural space when finding their way of creating an artwork fit for the site and mathematical theme.

**Exhibition Brief**

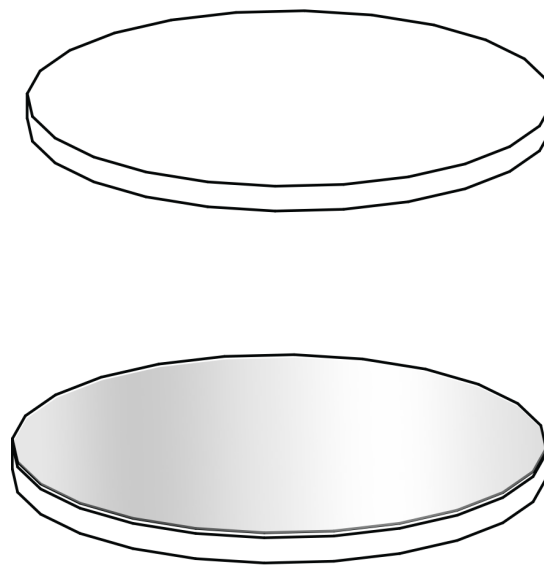
**Exhibition Site**

**Framework**



## Platform

Students use 1-1,5m base platform to create a standing artwork



**Exhibition setup** invites students to create an artwork either standing from a base plate or as lightweight structure between two platforms.

The two surfaces emphasise:

- artworks physical presence in its surroundings,
- concepts continuity outside of it (a collineation/projection 'caught' in place).

## Student Artworks

Students create artworks (sculptures, installations, physical puzzles, games) based on the theme: Interpretations from low dimensional geometry and topology.

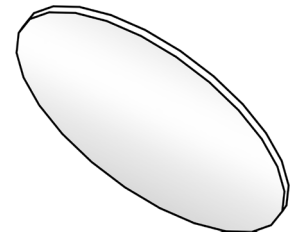
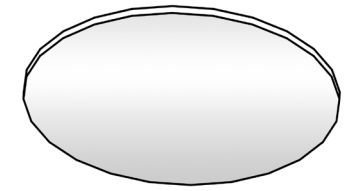
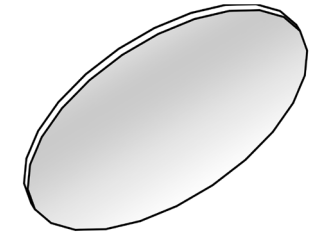
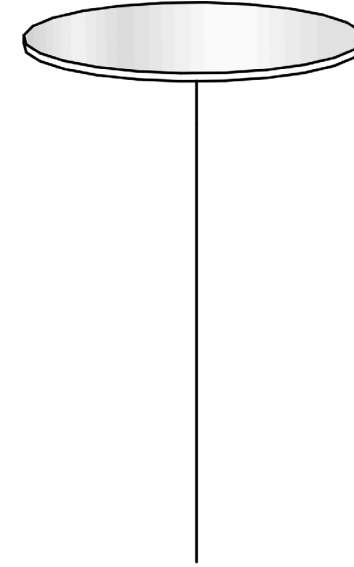
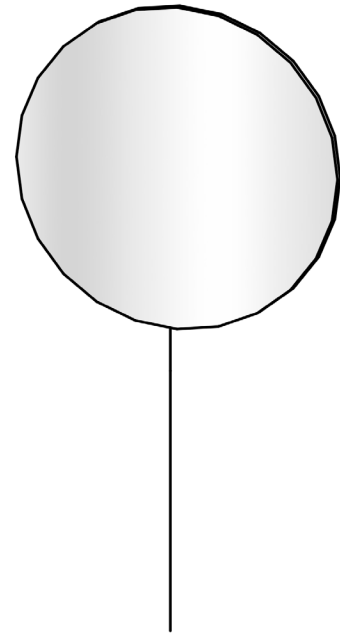
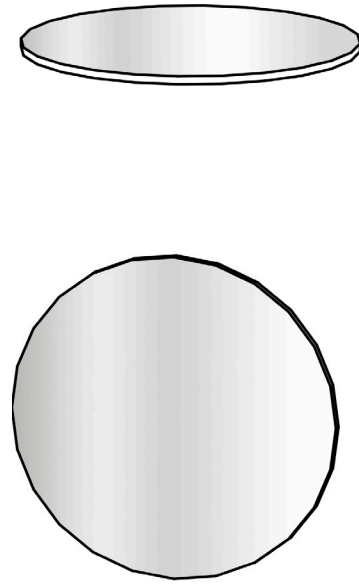


**Material examples:** wood (coated, laminated, airplane plywood...), rods (metal, wood, other?), textiles and strings, ice paper or translucent sheets, ceramics (small scale), recycled materials etc.

Materials for the student artworks focus on material experimentation, lightweight sculptures and - structures. Overall, the artworks consider also time and sensibility in the material expression of mathematical idea. Aim of the material choices are to connect the artworks further to the site and create a sensual approach to mathematics. It will be crucial to understand also the effects of outdoors to the chosen materials and structures (wind, water, sun etc.).

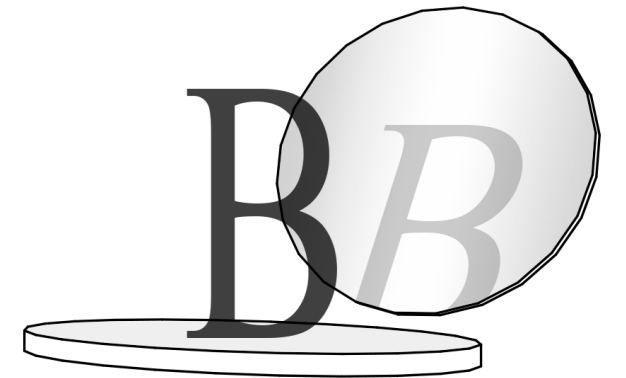
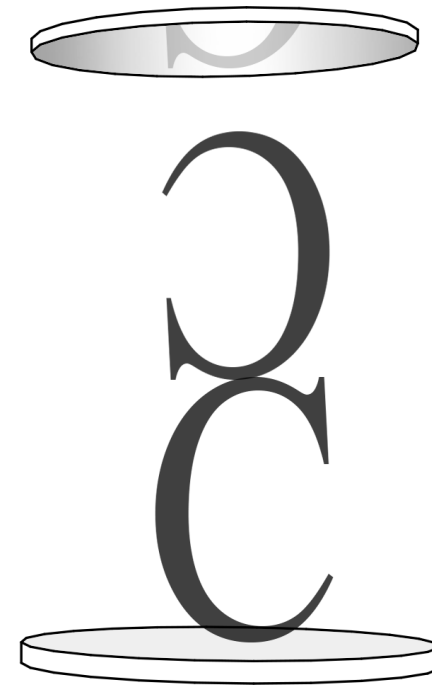
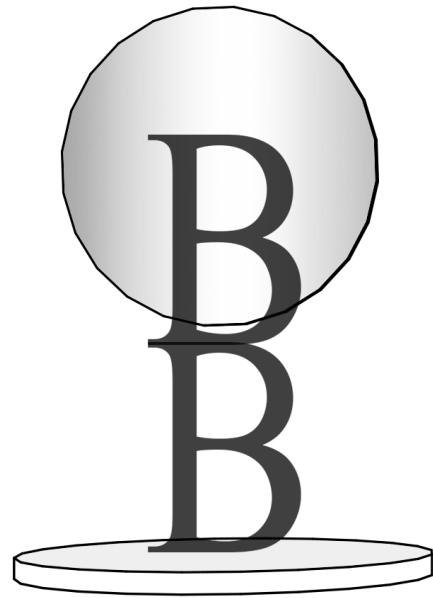
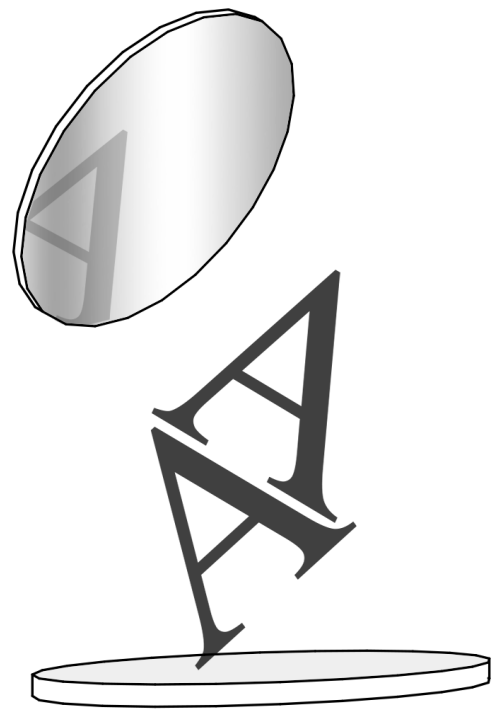
## Mirrors

Round mirroring surfaces are used as unifying components in exhibition. Mirrors are used in different quantities, angles and directions - emphasizing artworks and the surrounding.



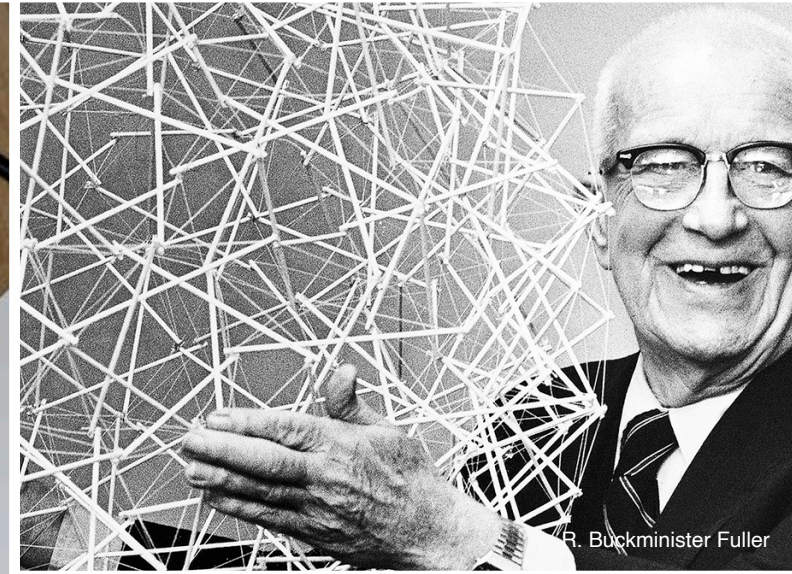
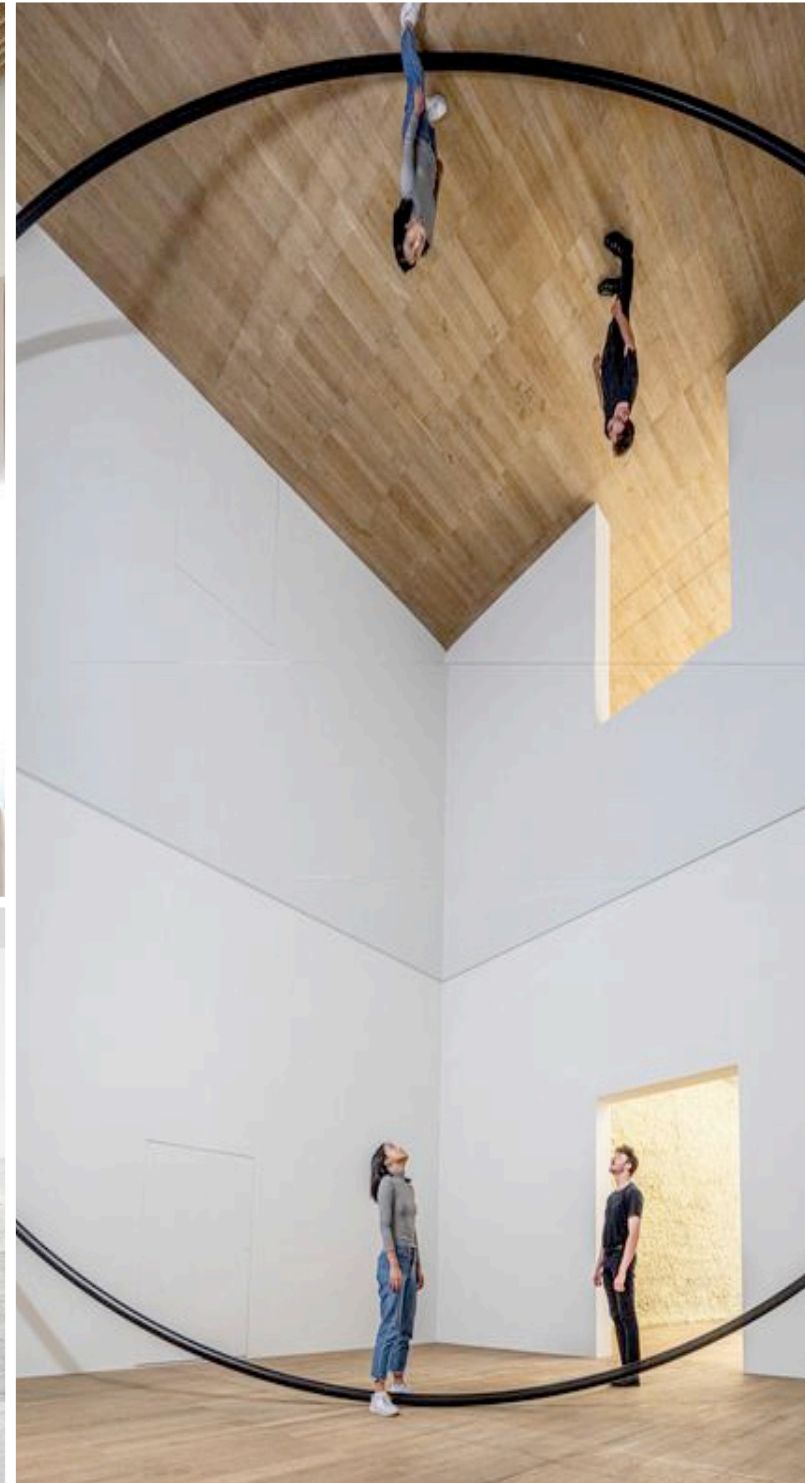
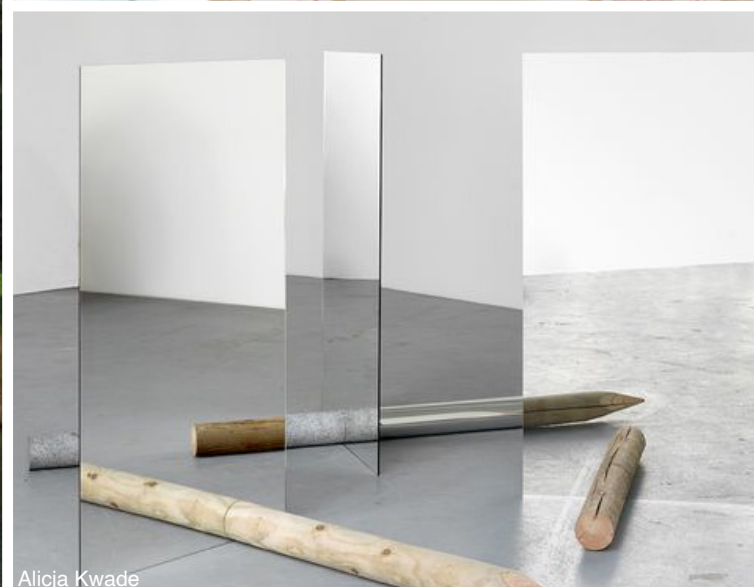
**Why mirrors or other reflective surfaces?** The use of mirroring surface extends the artwork as a wider concept and alters the experience of viewing art differing by changing angles/distance.

**Framework**  
Exhibition setup



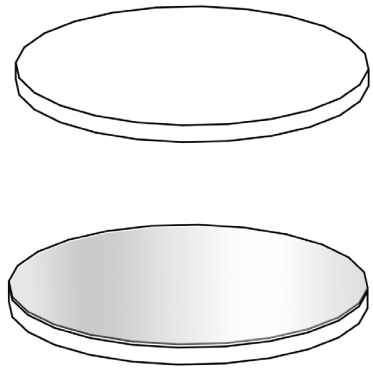


**Framework**  
Materiality moodboard

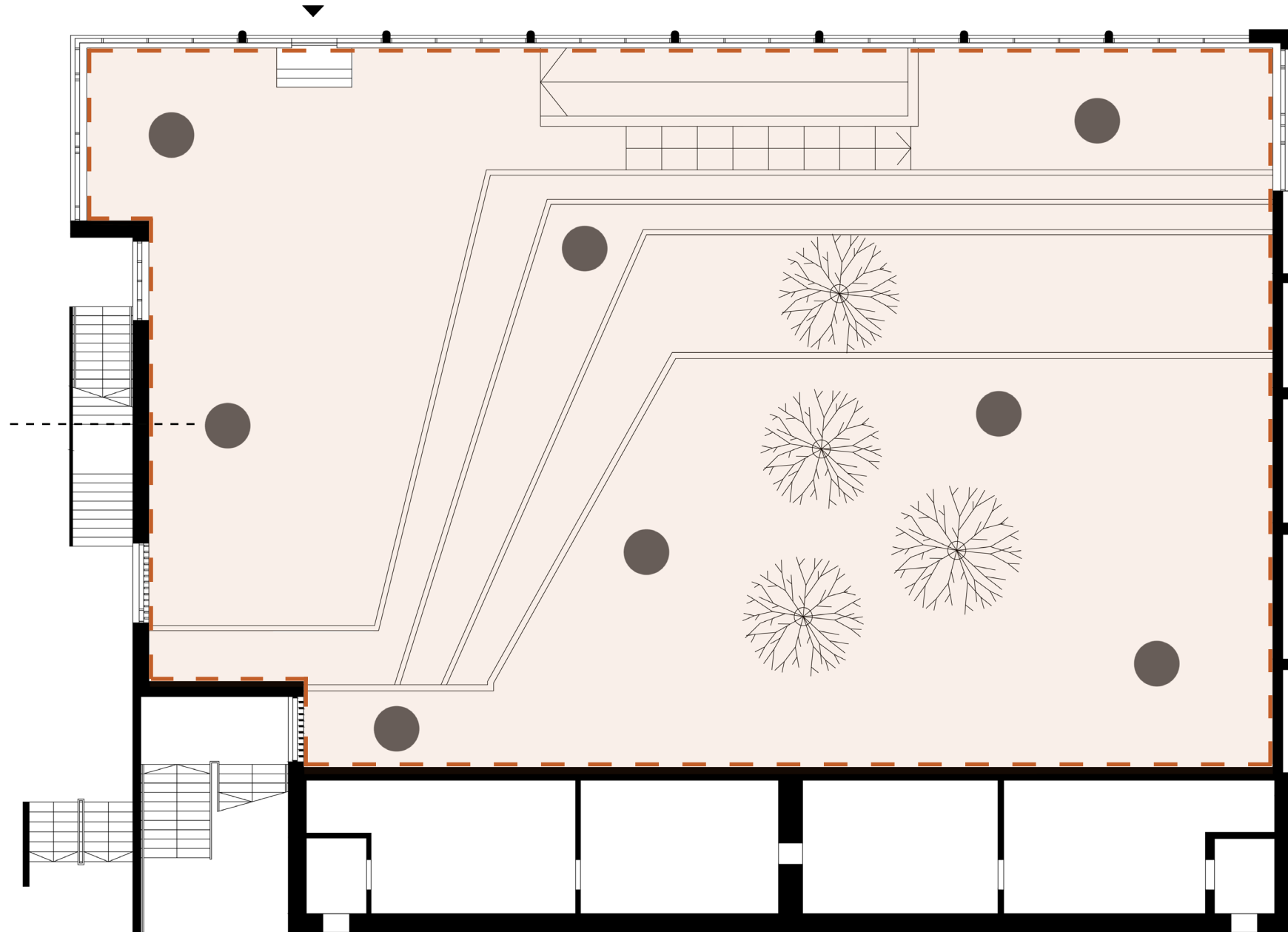




**Framework**  
Spatial design



1-1,5m platforms

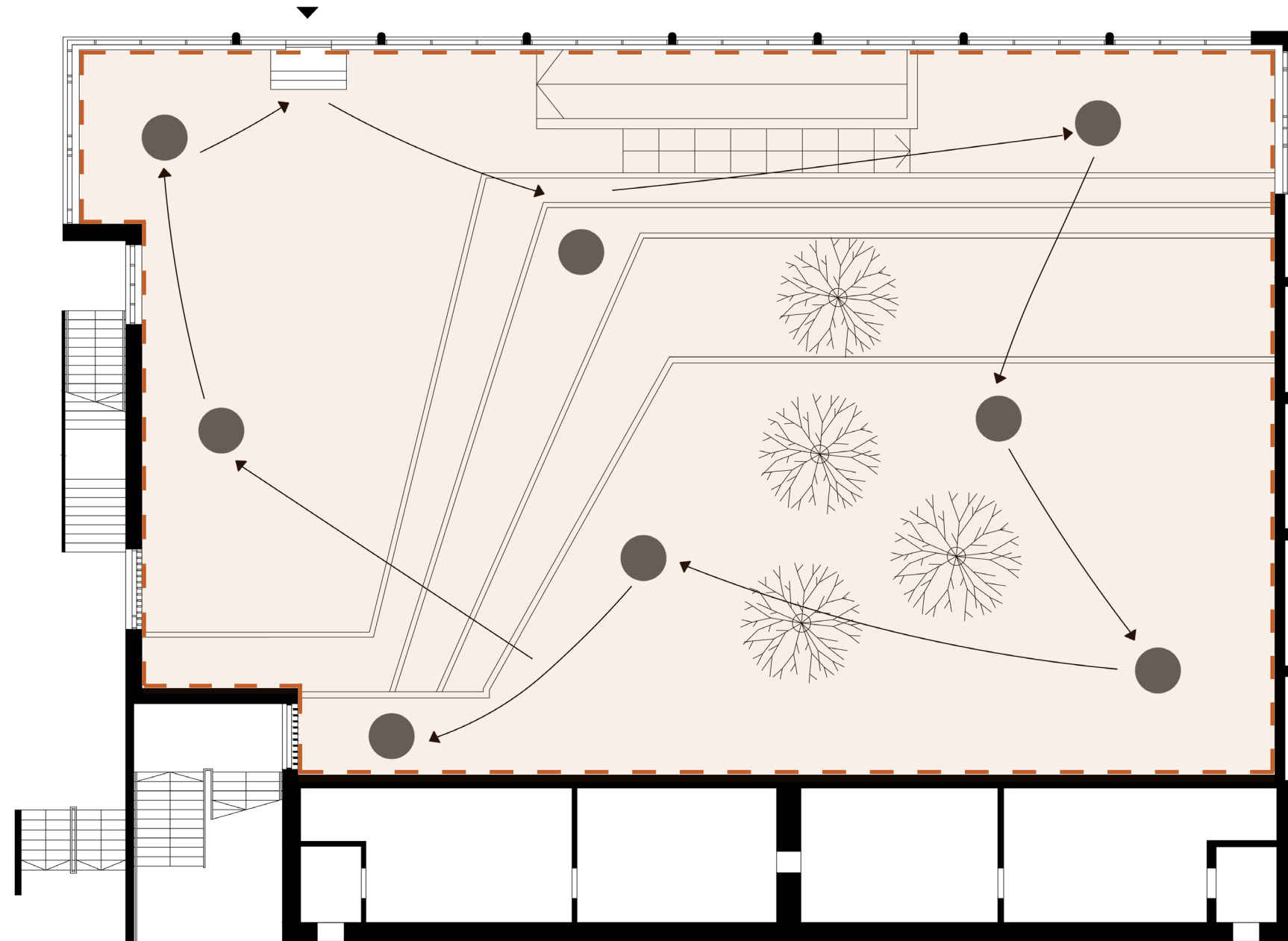


● Platform 1-1,5m<sup>2</sup>

▭ Exhibition area

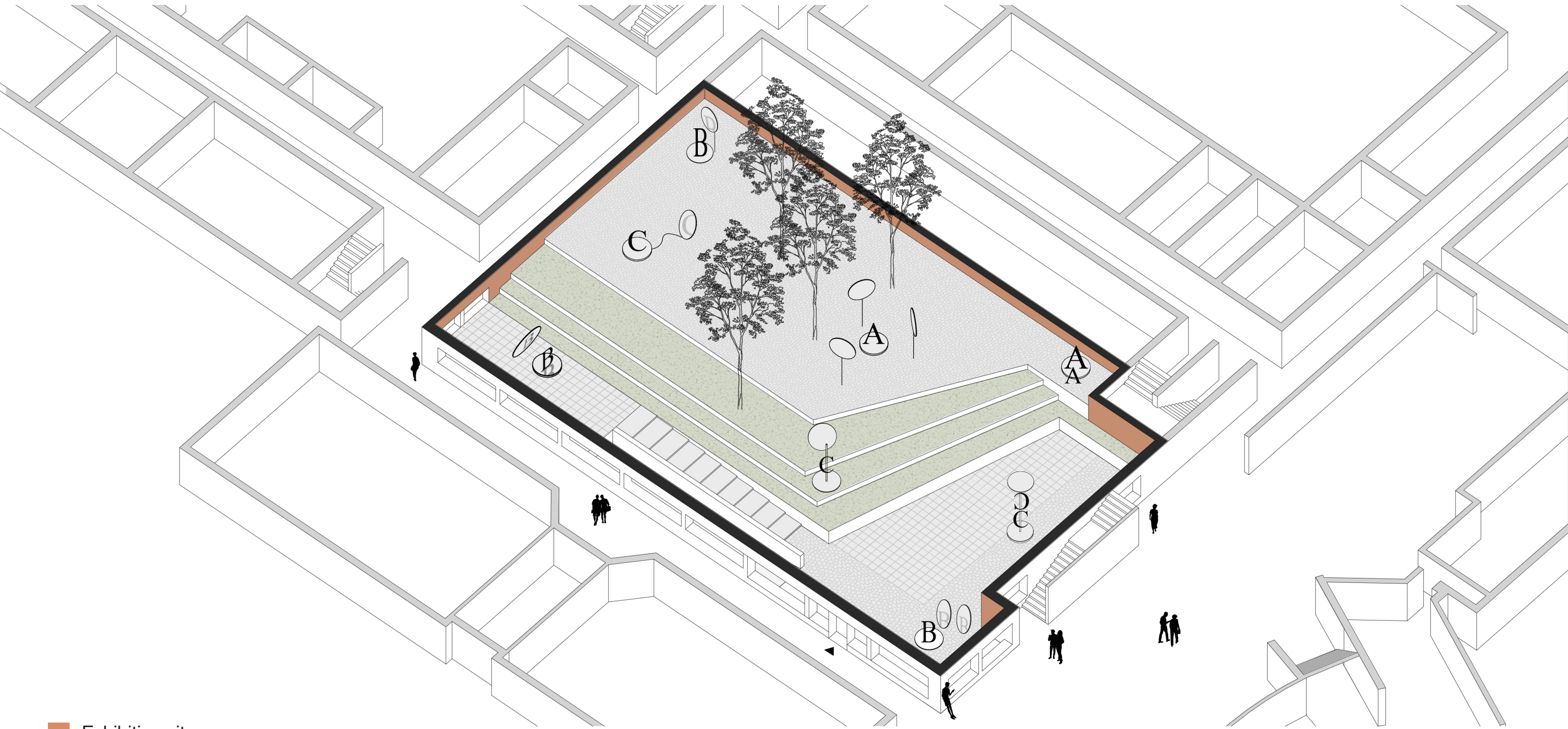
# Framework

Spatial design + circulation



- Circulation
- Platform 1-1,5m<sup>2</sup>
- ▭ Exhibition area

Framework  
Spatial design



Exhibition site



Framework  
Spatial design





## Timetable

**Task 01 (19.01-28.01) / Research and collect**

**Task 02 (28.01-16.02) / Preliminary concepts**

**Task 03 (16.02-16.03) / Main proposal**

**Task 04 (16.03-20.04) / Final presentation**

**Production and setup (20.04-23.05)**

	JANUARY	FEBRUARY	MARCH	APRIL	MAY
<b>TASK 01</b>	19.01.2021 Handout Task 01				
<b>TASK 01, 02</b>	28.01.2021 Deadline Task 01 Handout Task 02				
<b>TASK 02, 03</b>		16.02.2021 Deadline Task 02 Handout Task 03			
<b>TASK 03, 04</b>			16.03.2021 Deadline Task 03 Handout Task 04		
<b>TASK 04</b>				20.04.2021 Deadline Task 04	
<b>PRODUCTION</b>				Production pieces	Production pieces
<b>SETUP OF EXHIBITION</b>					Set up exhibition 12.05.20-23.05.21
<b>OPENING</b>					25.05.2021

**Thank you! Questions?**

# Exercises (40min)



# Exercise 1

**TEAM:** \_\_\_\_\_

TEAMWORK	COURSE GOALS	OUR RULES AND COMMITMENTS
<b>What skills and experience we have?</b>	<b>What do we want to achieve personally/as a group?</b>	
<b>How to best use our experience and skills?</b>	<b>How do we achieve our goal?</b>	
<b>What challenges can come and how to overcome those?</b>		

## Exercise 2

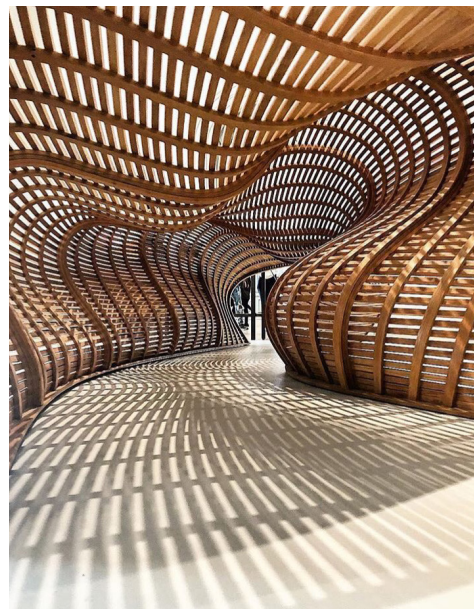
### Quick group research in breakout rooms

Each group looks for 2-3 examples that could fit into some of the following subjects. Research the concept, main idea, specific factors and details.



#### Subject 1

Artworks and design works based on geometry or mathematics.



#### Subject 2

Architecture and spatial design.



#### Subject 3

Reflections and mirrors in art and design.



#### Subject 4

Lightweight structures and materials.



#### Subject 5

Mathematical art.

**Thank you!**