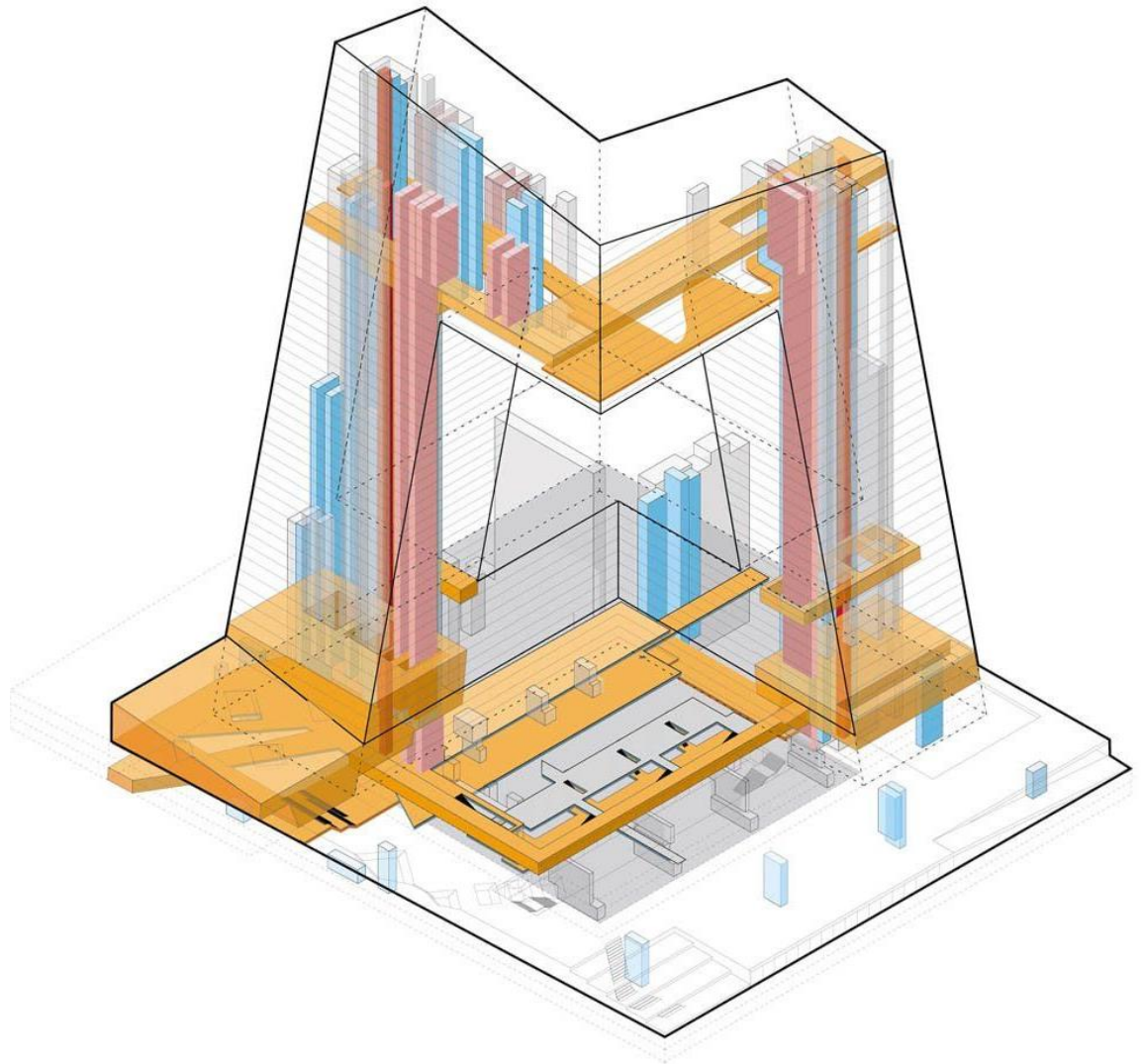


Lecture 4: Architectural Design Process



Introduction

Building design is a complex process that may be referred to as “Synthesis”, which means composition or combination, of ideas and thoughts about the parts, components, and systems of the building.



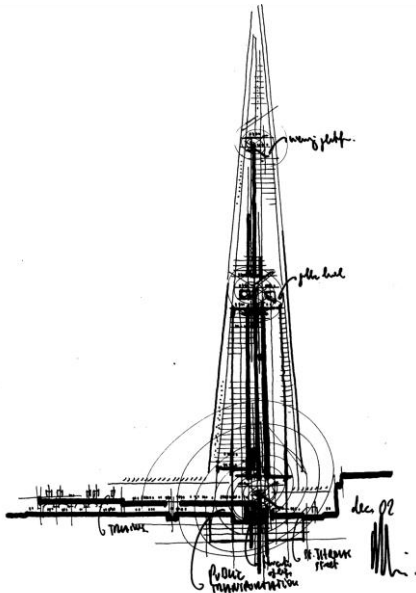
Building Diagram, OMA

What is Architectural Design?

The design is the activity of generating proposals for changing the conditions of something to better ones.

Initial state

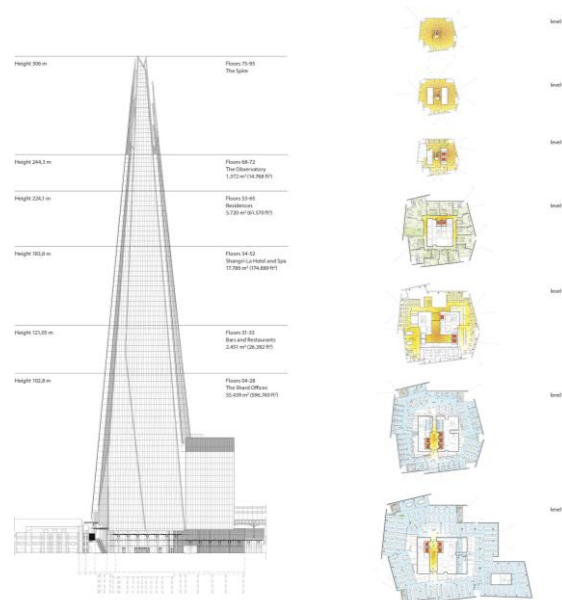
Identifying the problem is the key to start the design process. learning more about the problem helps create the initial thought that lead to the solution of the design problem.



Conceptual Sketch

Transformation

Building drawings indicate the methods of solving the design problem. They contain the concepts and details of how every part of the building is going to be built.



Building Section

Final state

Realizing the building is the ultimate goal of starting the design process, and it's the final state to which the design transform.



*The Shard, Renzo Piano
London, UK*

Design in Education

The idea of **integrated design** that mixes the design of all forms of art and architecture has been introduced by the **Bauhaus** school in Berlin in 1950. This idea challenged the cherished methods of design adopted by the **Beaux Arts** school since 1800.

The Bauhaus focused on learning the abstract principles of design from the classic architecture but looked into new forms, materials, and methods of construction.

Changes in the architectural education:

- Many specializations, construction, management, environment...
- Study of human behavior science.
- Experimental education techniques.
- Teaching the processes of design as a guide for the mental activity.

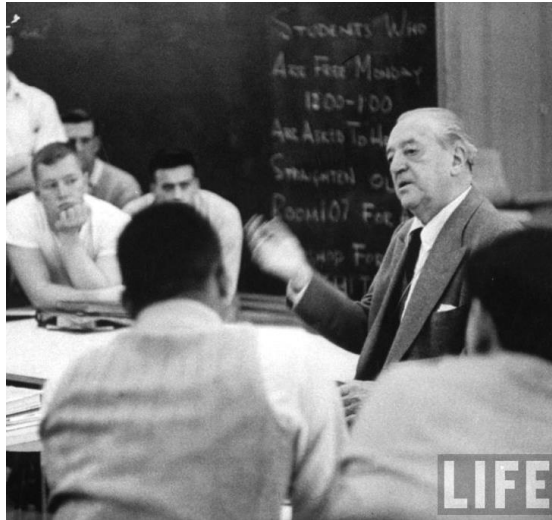
Gund Hall, Harvard graduate school of architecture



Design Process Theory

Four different approaches to architectural education:

- Learning for individuals
- Functional architecture
- Symbolic architecture or user satisfaction
- Schools directions.



Mies Van De Rohe, Learning from genius architects



Stein de Monzie, Function is the priority



La Grande Arche, Buildings are symbols



Educational direction

Perceptual and activities territories

The Design Process

The design process is composed of five main steps:

- Initiation
- Preparation
- Proposal Making
- Evaluation
- Action



Client meeting

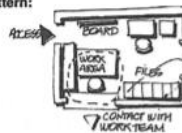
Space no: 17
Amount:
Occupants:
Floor: Ground floor
Area: approx. 170 sq. ft.

Comments:
•Well located; near Roll Call Room -Good visibility to lobby/Reception Area
•Good visibility to Communications Center
•Dimension too small
•Disorganized space
•Office occupied 24 hours/day with shifts from 5 Patrol Unit Commanders

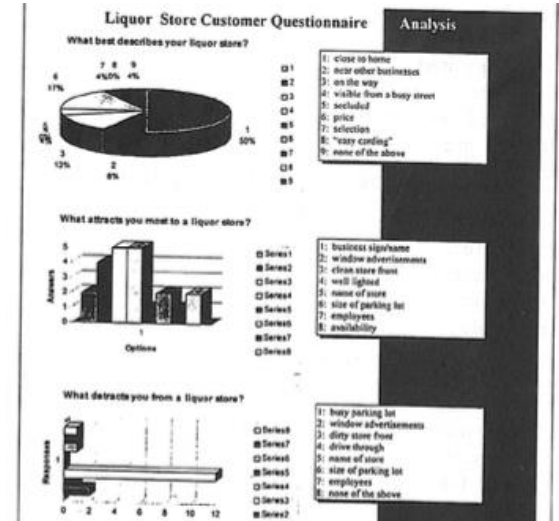
Nature of activities;

•Supervision of patrol
•Team briefing (up to 10 people)
•Writing information for public meetings

Pattern:



Generating ideas



Data Collection

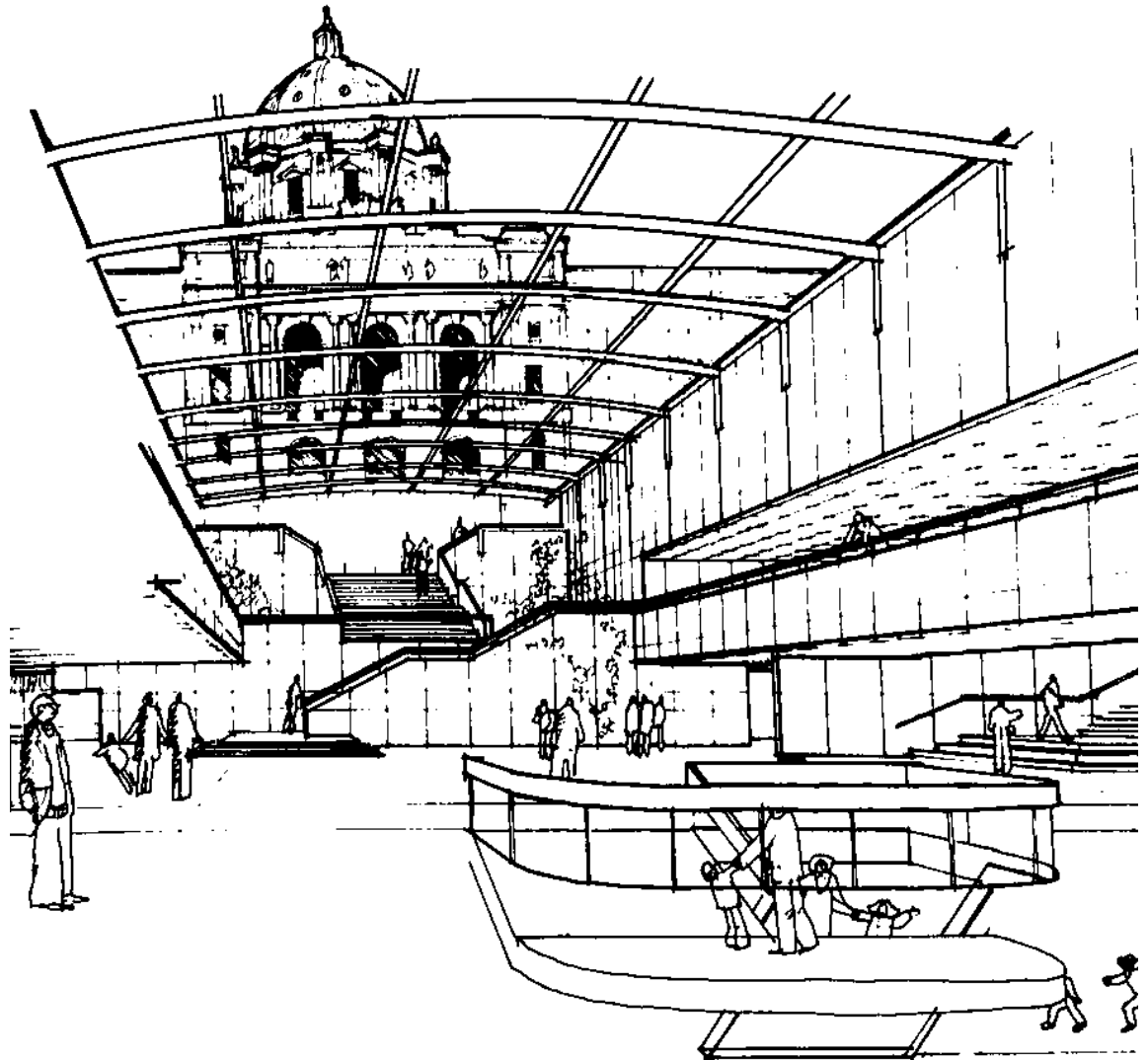


Evaluation and actions

Standard Practice

In standard practice, building design under go the following stages:

- Schematic Design
- Design Development
- Construction Documents
- Bidding and Negotiations
- Construction Administration
- Additional Services

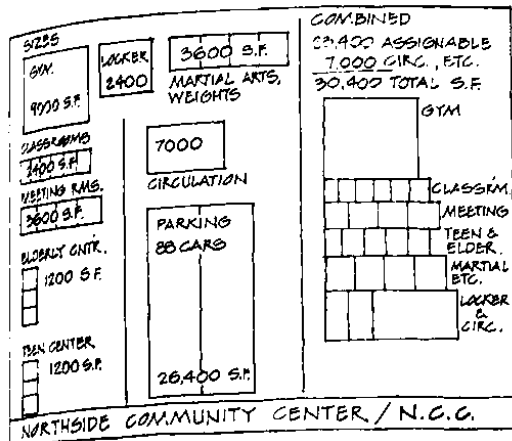


Sitting, topography and ventilation

Proposal Graphics

Spatial studies:

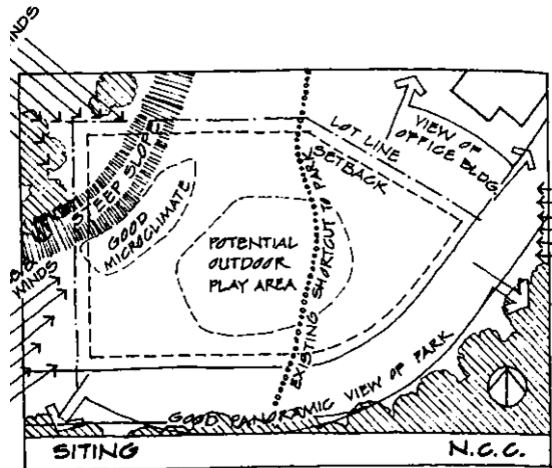
Analyzing space size, shape, division



Room sizes

Site studies:

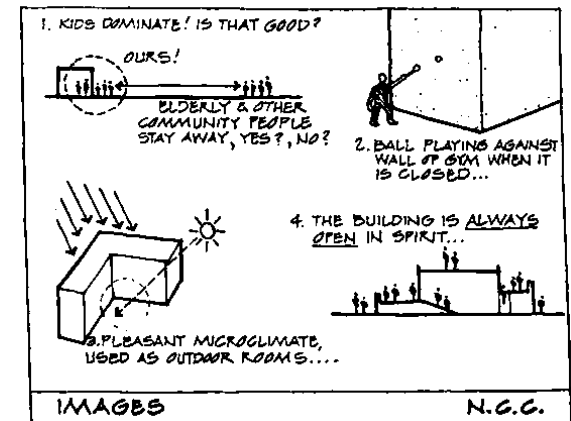
Analyzing the behavioral, spatial, and perceptual environments



Site analysis

Conceptual studies:

Creating initial images, sketches, drawings

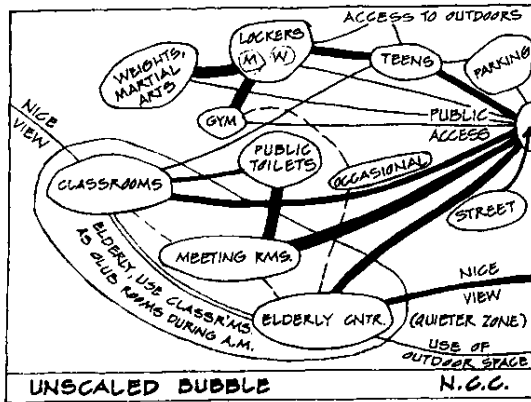


Conceptual diagrams

Proposal Graphics

Bubble Diagram:

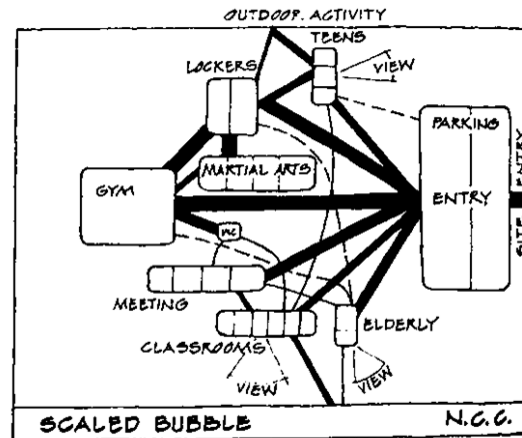
Creating a general layout of the spaces on the site map.



General rooms layout

Functional diagram

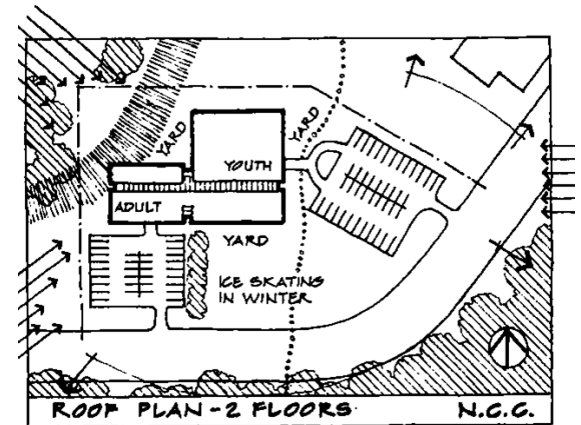
Formally arrange the spaces in a more defined layout.



Scaled room layout

Zoning diagram

Creating the preliminary project layout.

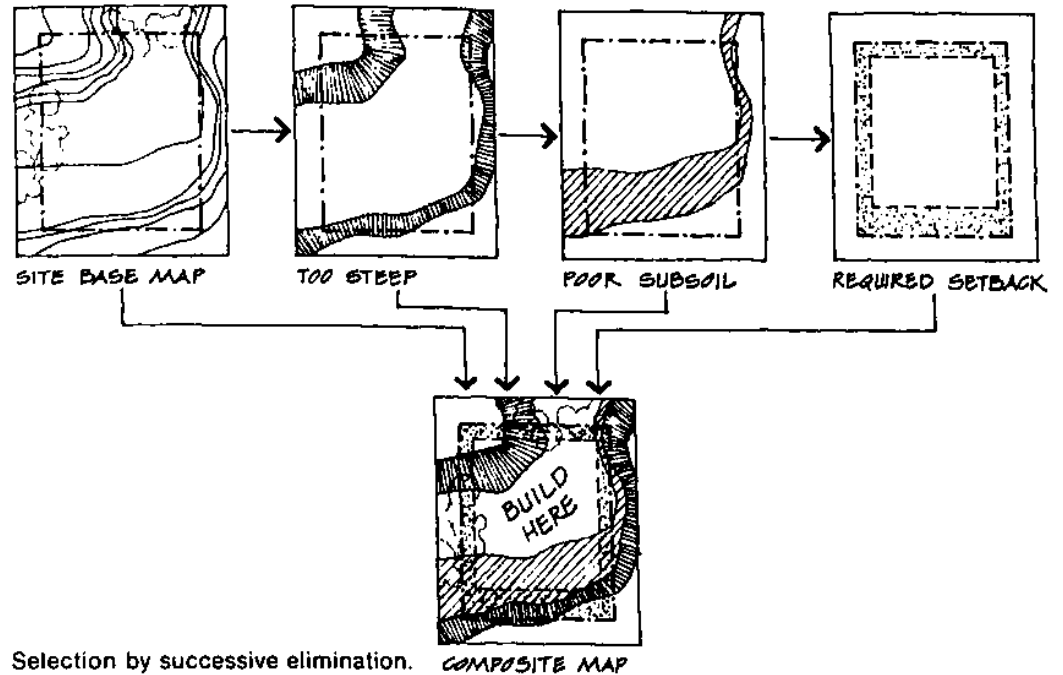


Project layout

Design Skills

Every student should work on possessing these skills:

- Graphic skills
- Intellectual skills
- Self Criticism



References

Snyder & Catanese, Introduction to
Architecture, McGraw Hill, 1979

Disclaimer:

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the internet, and used only for demonstration
and educational purposes.