

Space planning is a fundamental element of the interior design process.

It starts with an in-depth analysis of how the space is to be used.

The designer then draws up a plan that defines the zones of the space and the activities that will take place in those zones.

The space plan will also define the circulation patterns that show how people will move through the space.

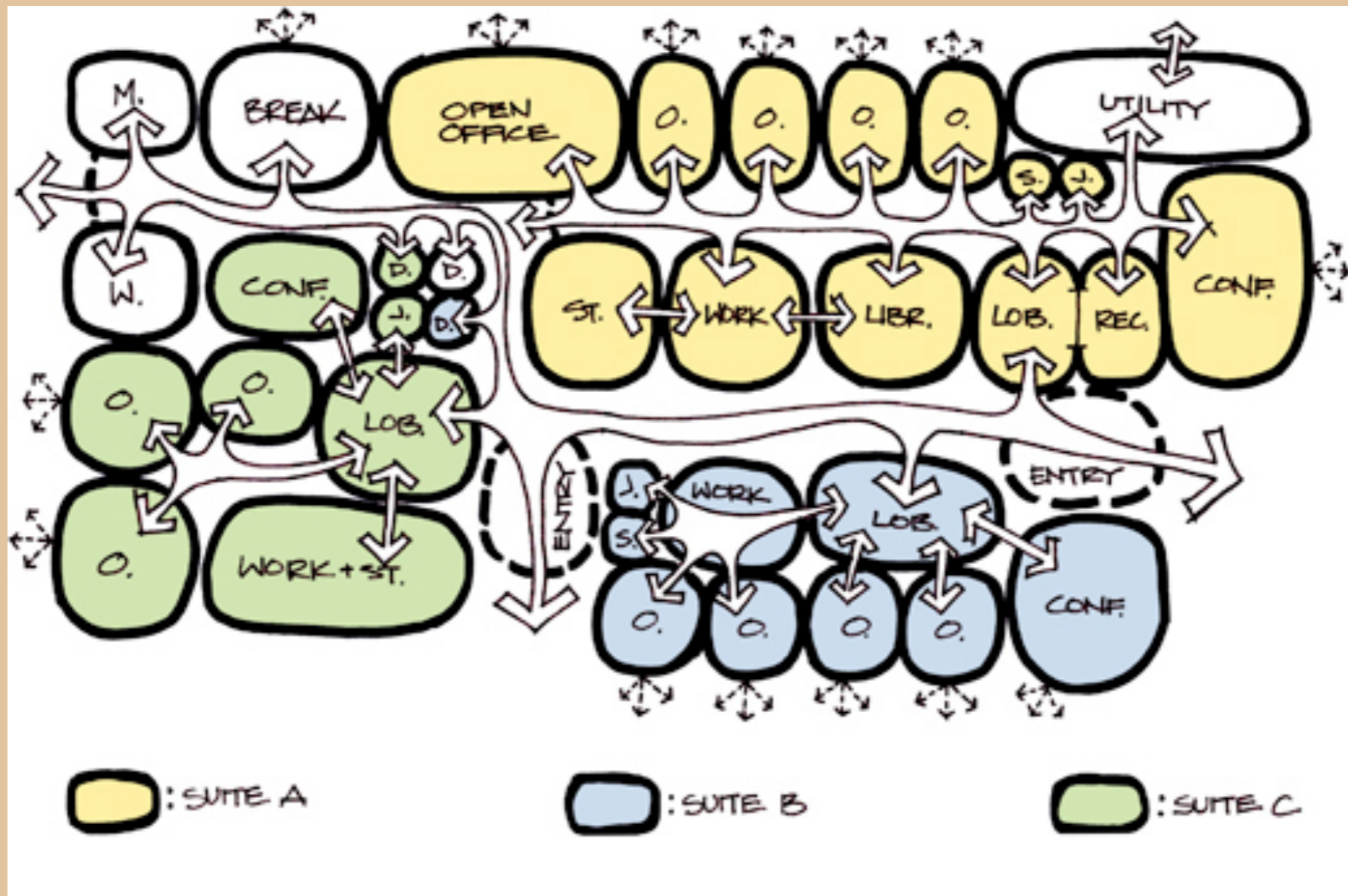
The plan is finished by adding details of all the furniture, equipment and hardware placement.

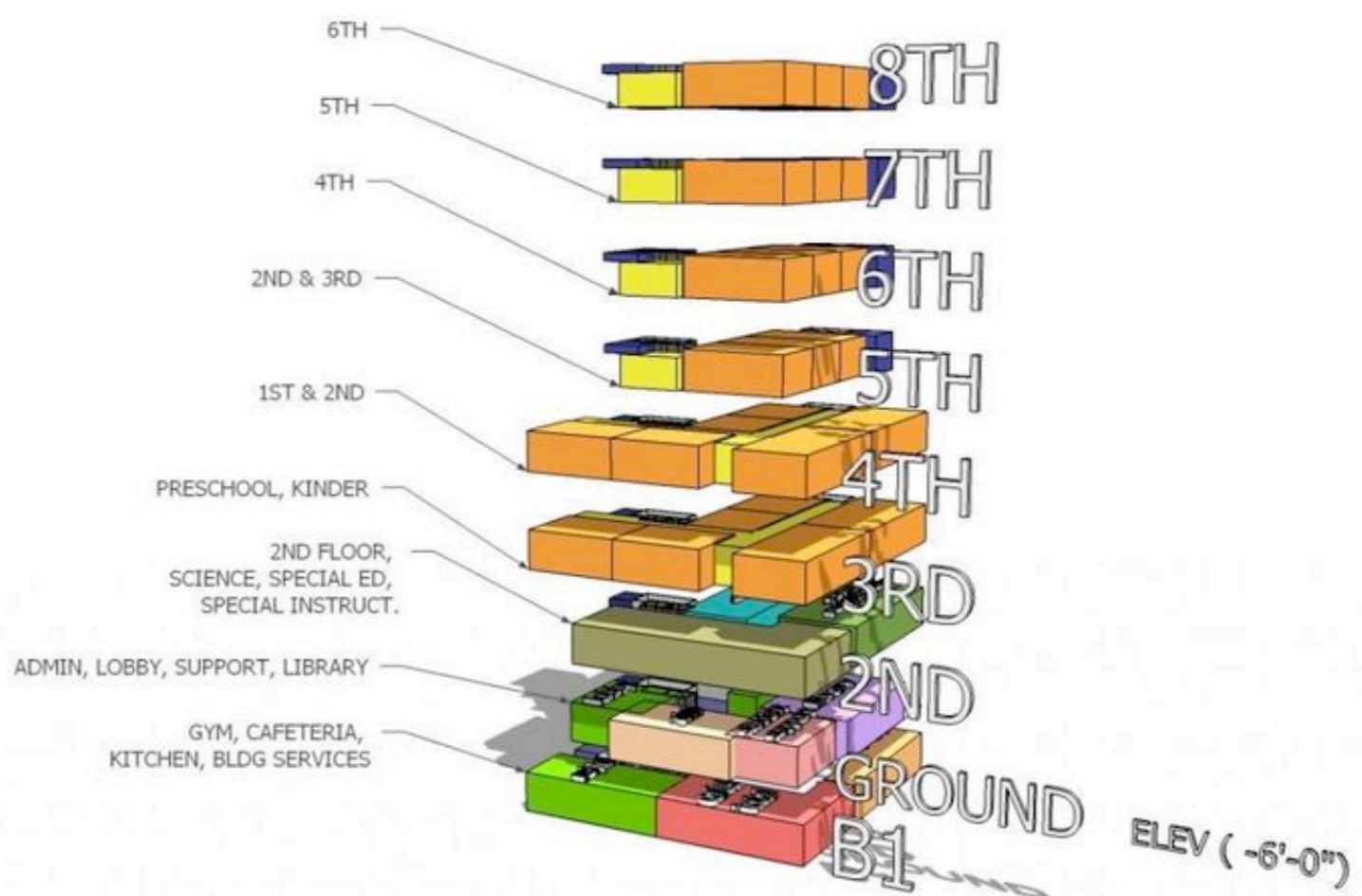
[What is Space Planning?](#)

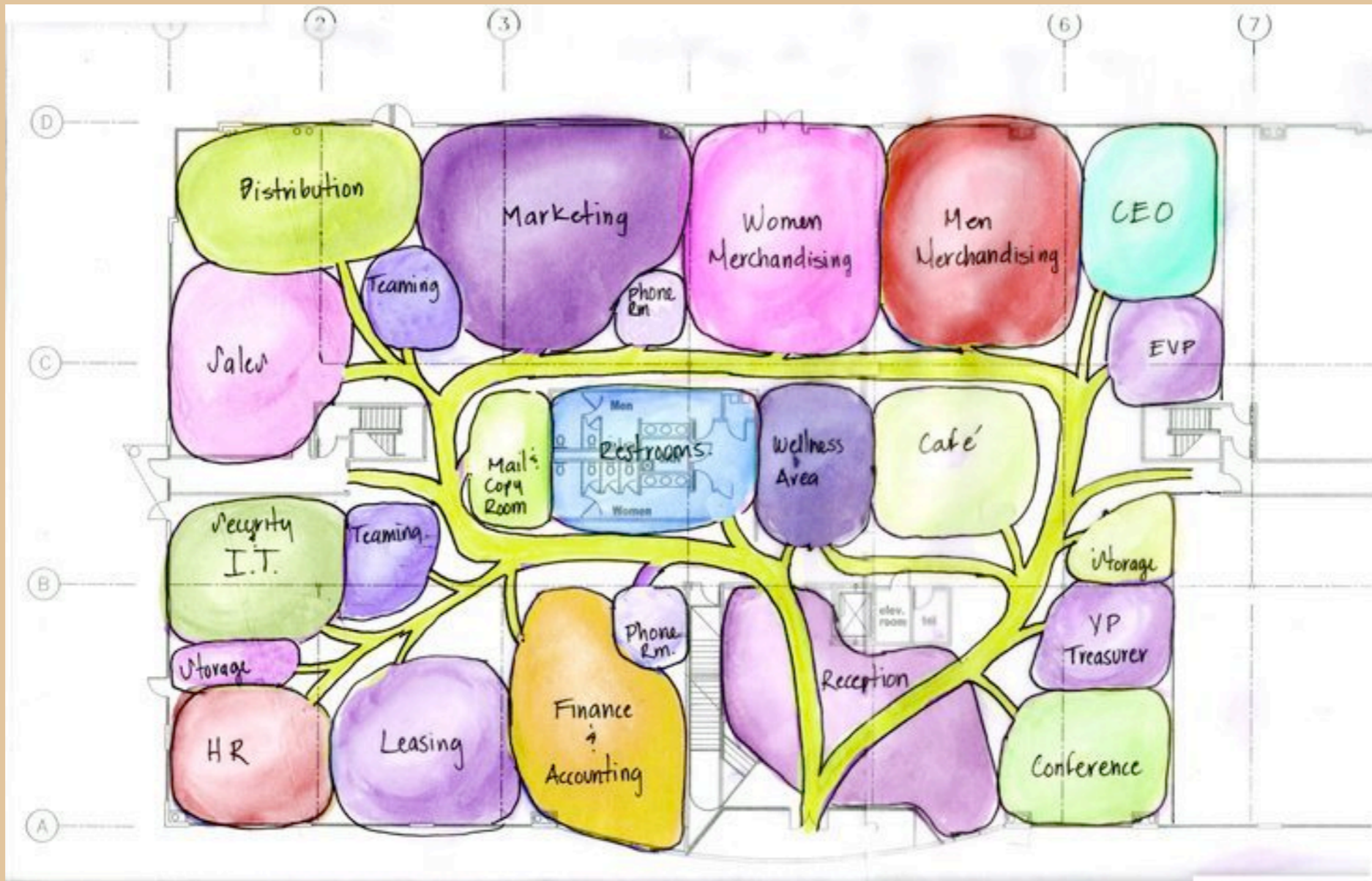
[Real Time Physics for Space Planning: NBBJ](#)

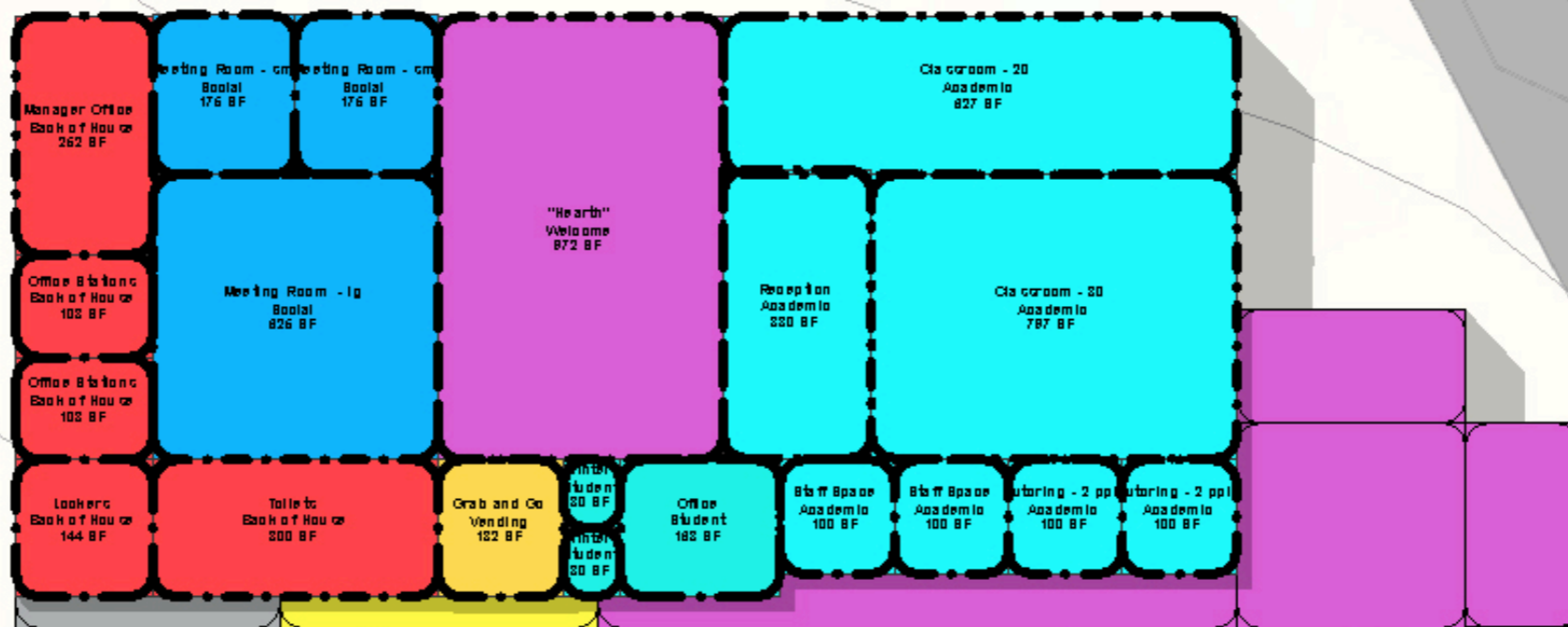
[Residential Space Planning Example](#)

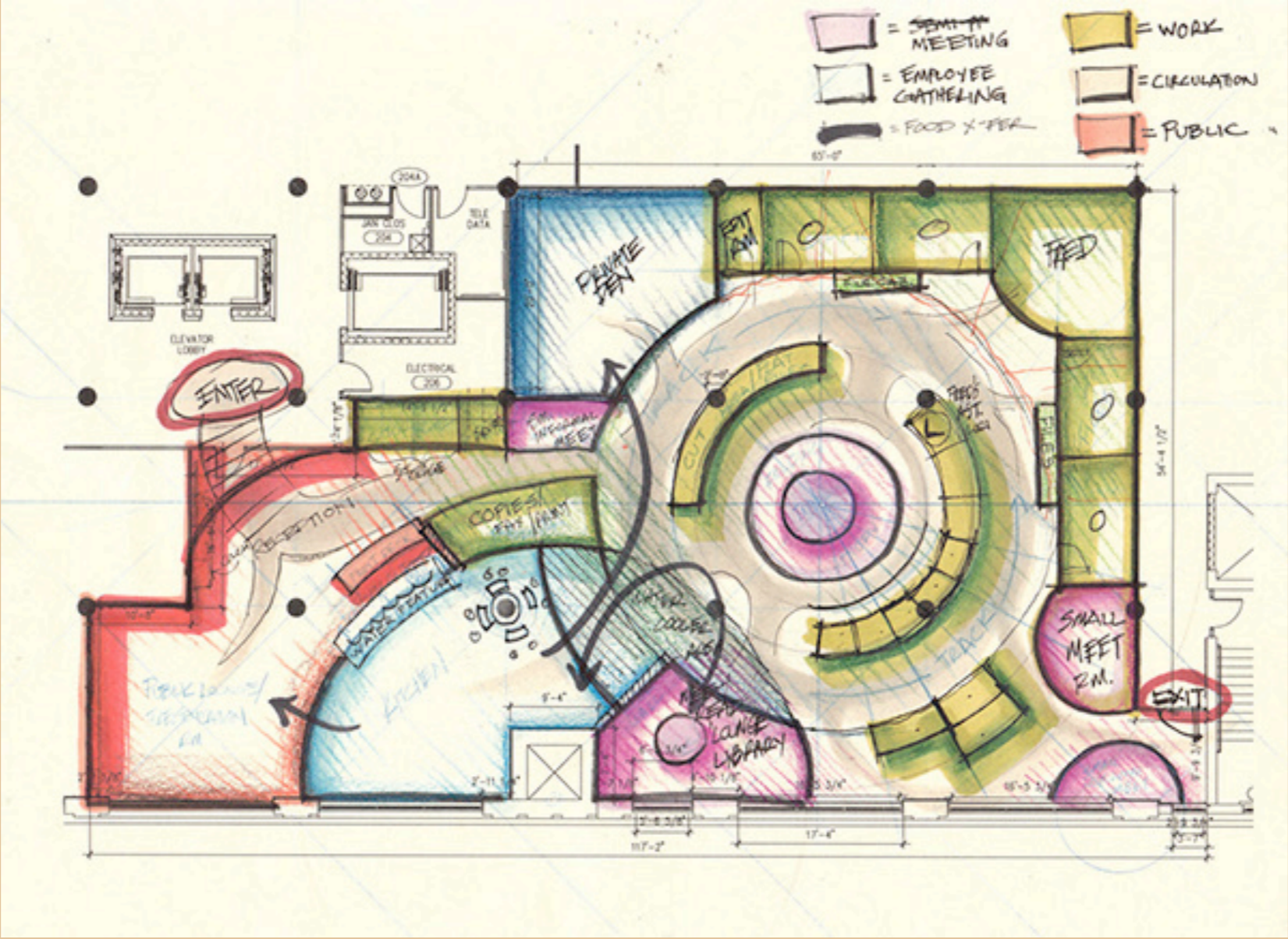
[Test Fits & Space Planning](#)



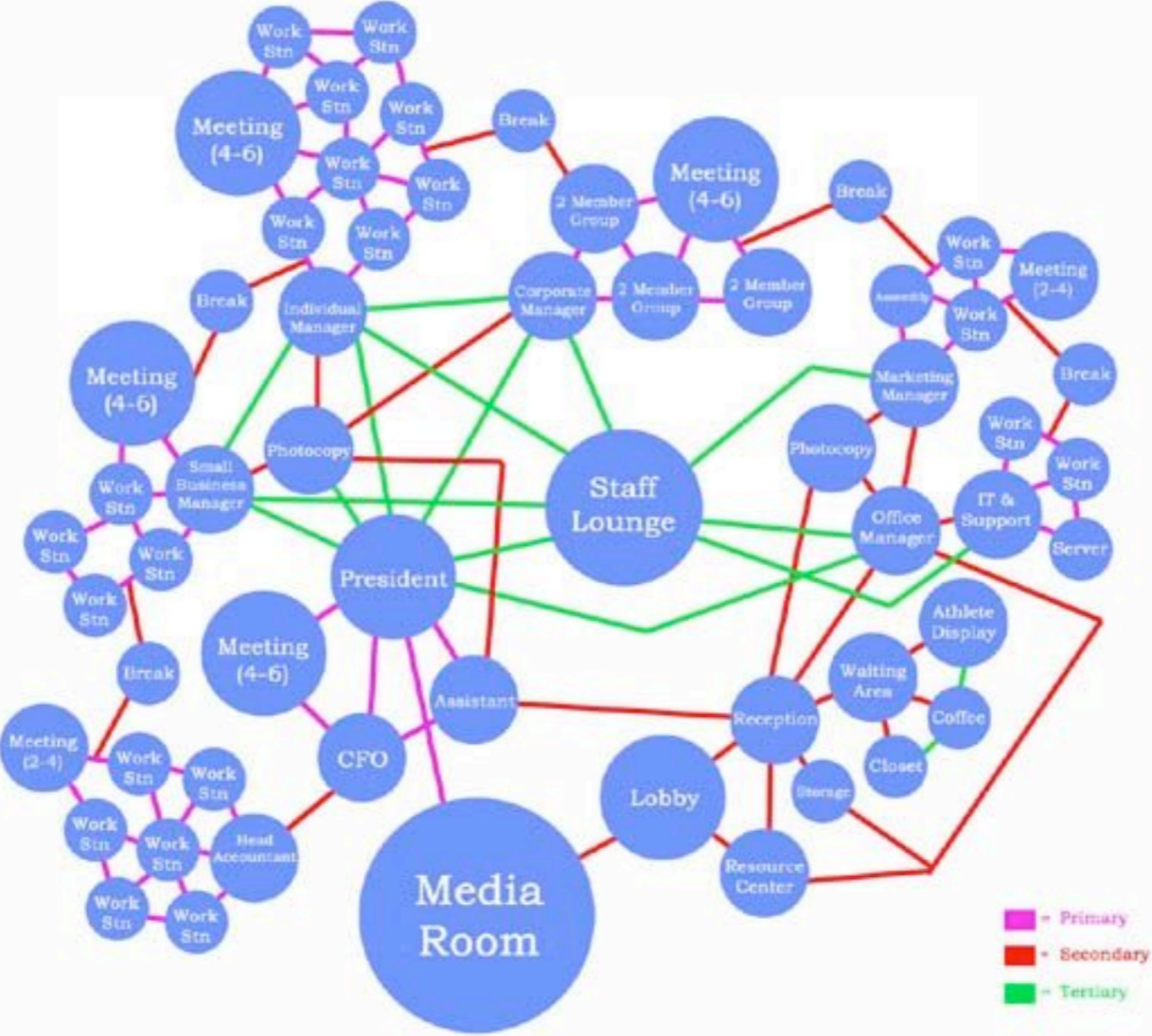








Office Project  
Adjacency Bubble Diagram





The goal of space planning is to create efficiency.

Space planning includes blocking out interior spatial areas, defining circulation patterns, and developing plans for furniture layout and equipment placement.

How people actually, through observation of their physical behaviors, use their spaces.

The design of a building or space will have numerous requirements from the client or end user.

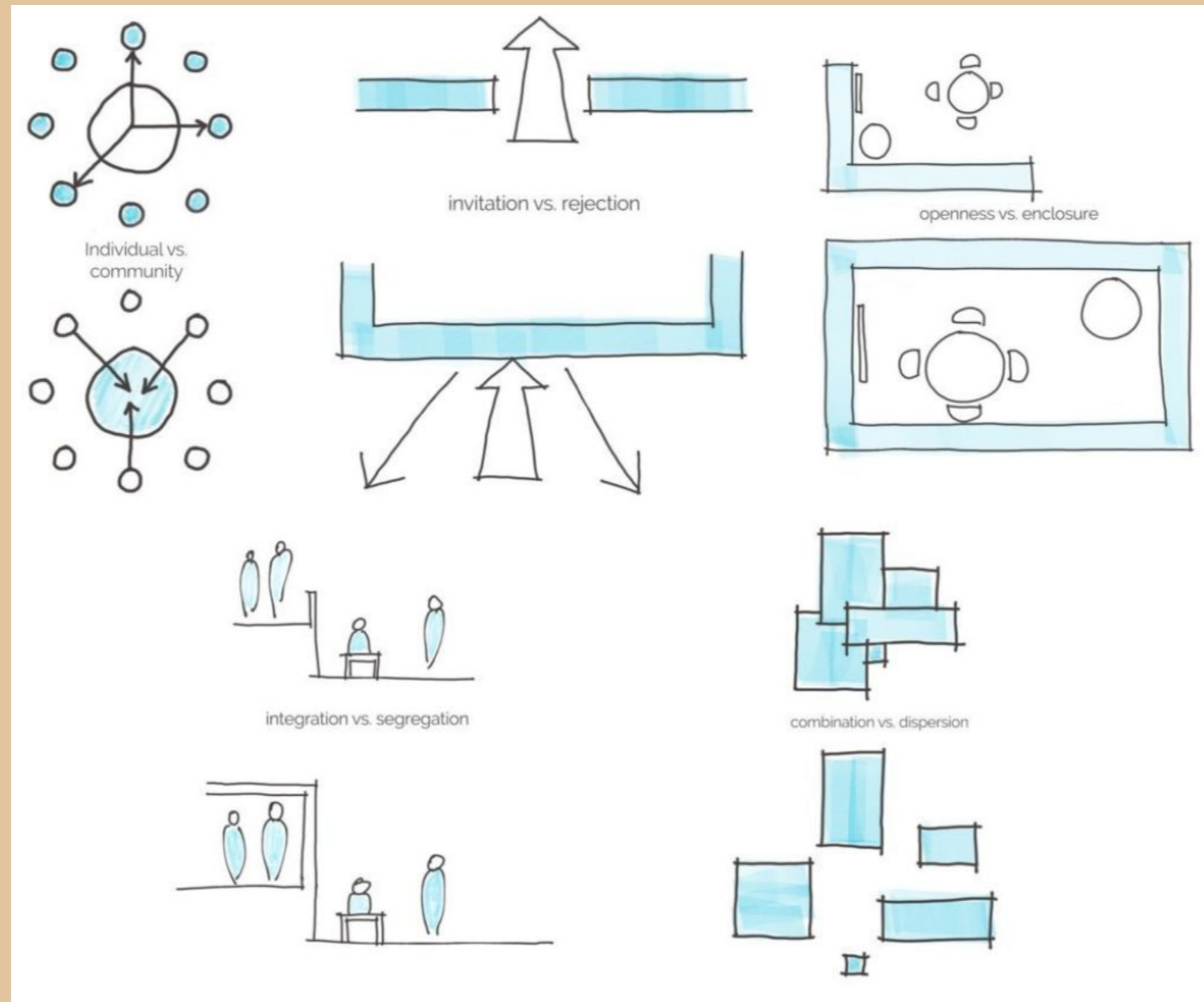
It is important in the very early stages of design to carry out in depth research and consider as many aspects of the use of the spaces as possible.

Some considerations can include:

- Do the spaces have specific functions or need to be particular shapes or forms?
- Do the spaces need to be **flexible**?

- Is it possible to create a logical and specific sequence of spaces?
- Do the spaces have different requirements in terms of light, ventilation, view, accessibility, acoustics, security?
- Do the spaces need to have access to outside spaces?
- What relationships must each space have with one another, and the external environment?
- How should the spaces be connected? Open plan, corridors?
- Which rooms need to be adjacent to one another and which rooms need to be apart?

# Visual examples of space planning considerations.



## Spatial Relationships

How can spaces be related to one another?

Space within a space

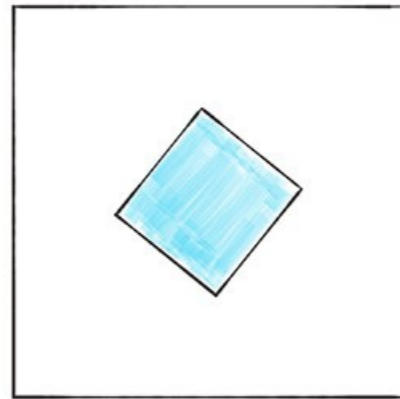
Interlocking spaces

Spaces linked by a common space

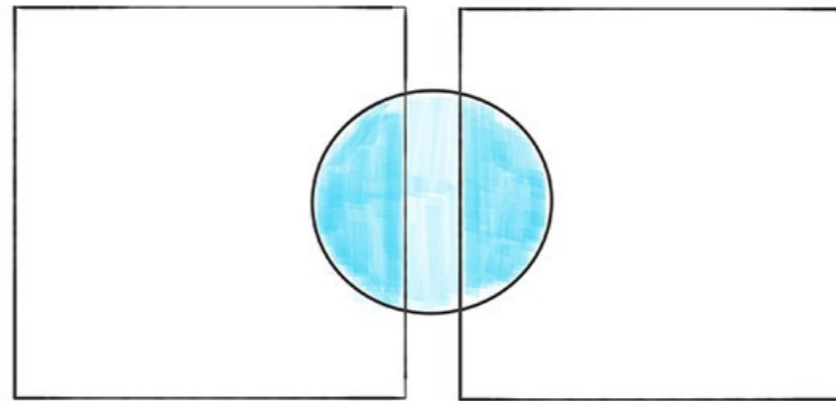
Adjacent spaces

# Spatial Relationships

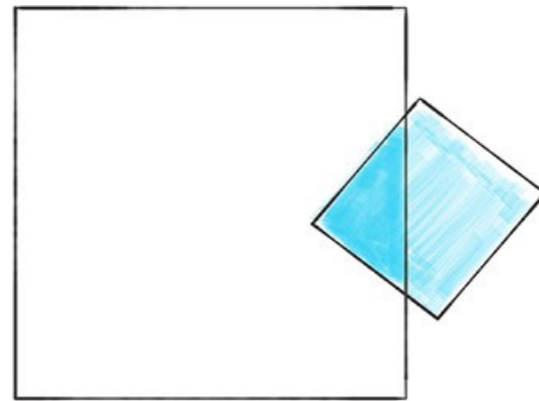
## Spatial Relationships



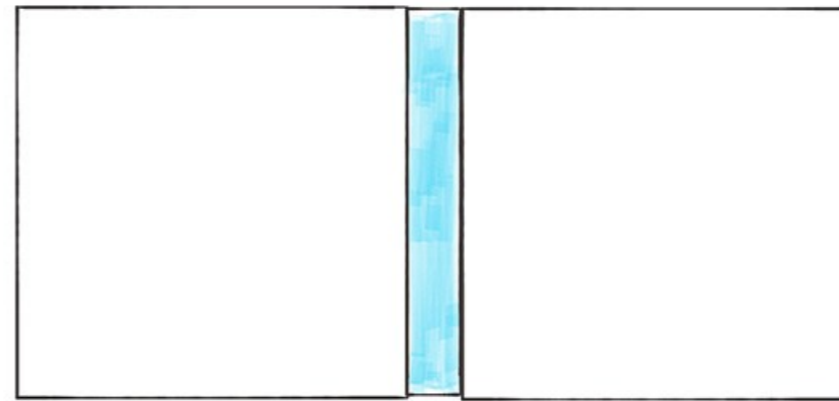
space within a space



spaces linked by a  
common space



interlocking spaces



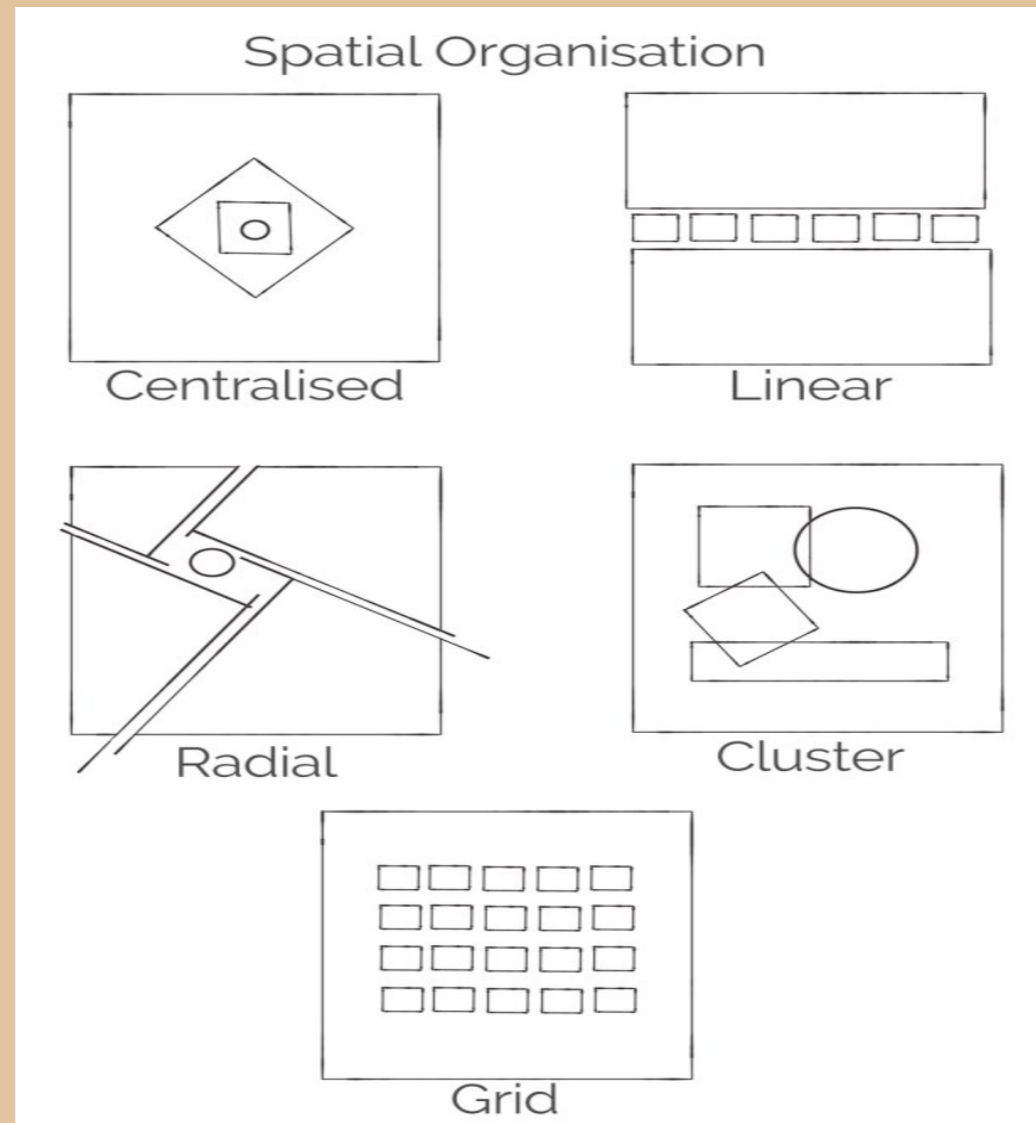
adjacent spaces

## Organizing the space

You can consider a varying forms of spatial organization, some of which are more naturally suited to particular uses than others:

- Centralized organization
- Linear organization
- Radial organization
- Clustered organization
- Grid organization

# Spatial Organizations





Consider some of the following in planning out spaces:

How does the envelope affect the internal spaces?

How will the contents of the room be arranged?

Do the rooms connect?

What is the flow of the circulation?

Are the proportions of the spaces comfortable?

# Developing circulation

How people move around the building from room to room is just as important as the destination.

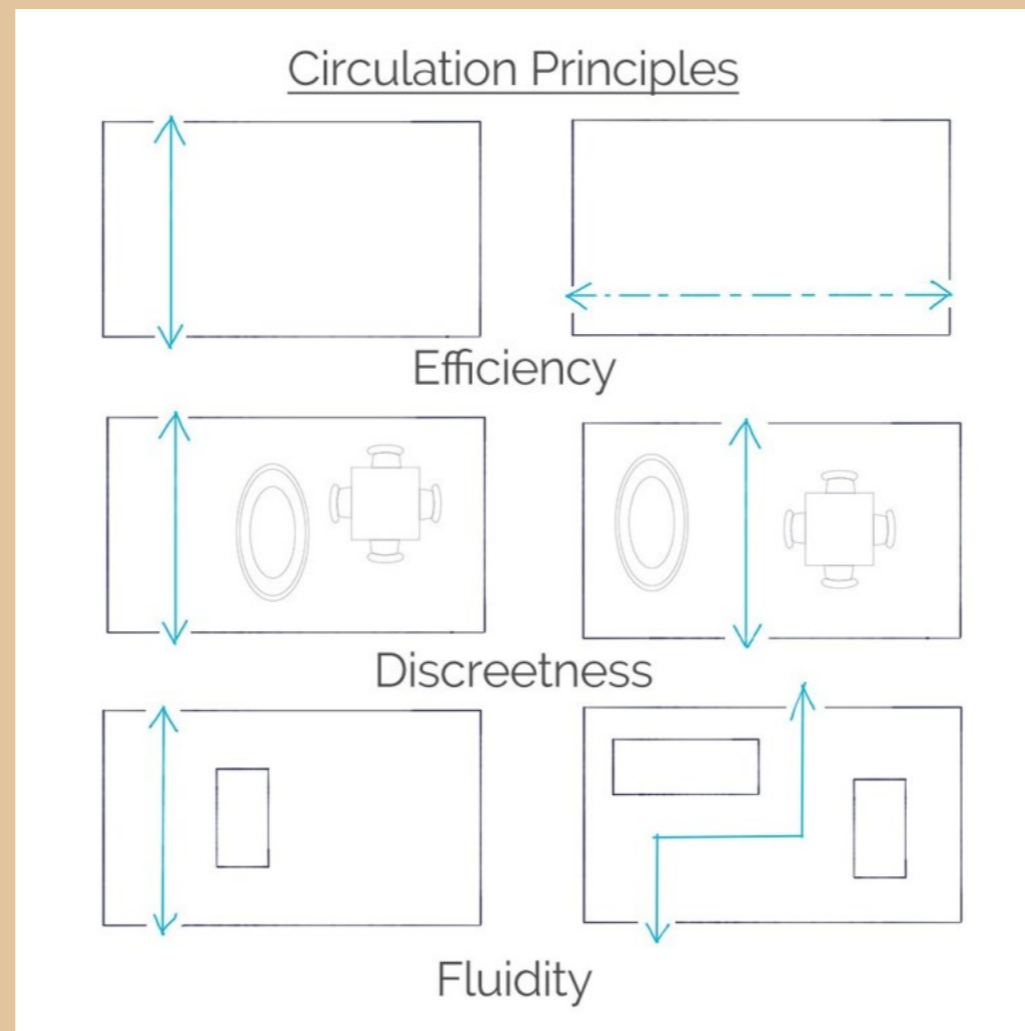
When developing a circulation structure we can look at a few basic principles.

How efficient is the circulation in getting from point A to point B  
Is the circulation discrete?

What is the fluidity of the circulation? Is there a smooth flowing route or a more direct route?

Does the circulation route clash with furnishing requirements?

# Circulation Principles

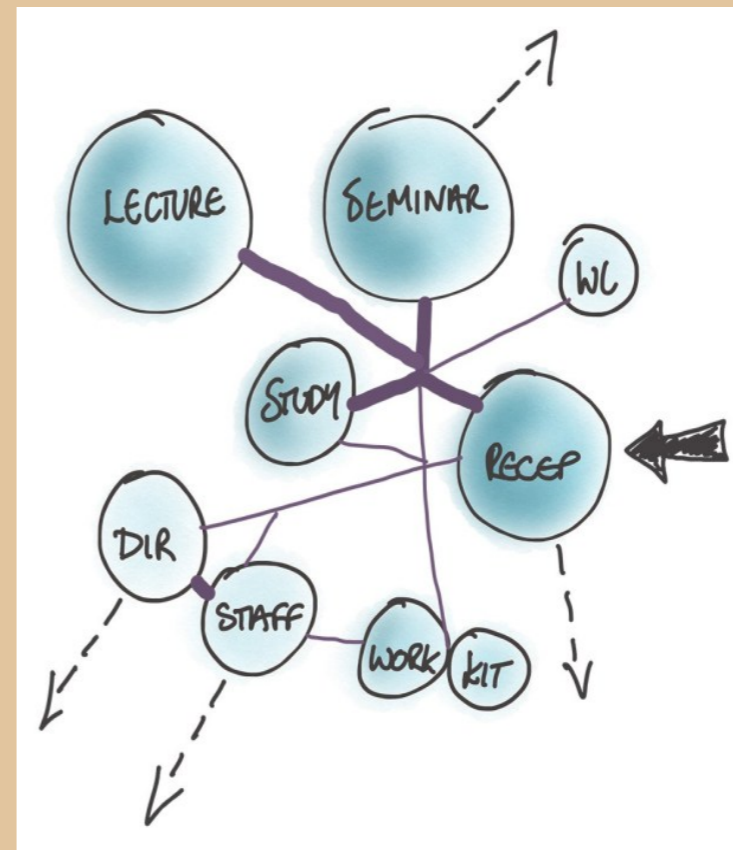
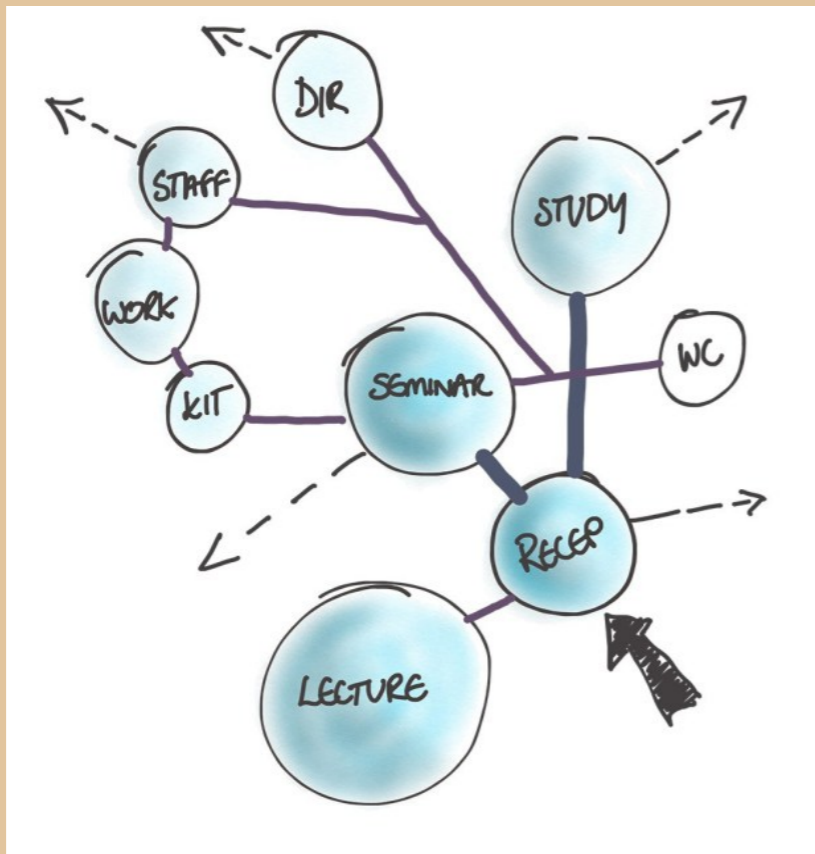


Once the spaces have been considered and the requirements have been studied it is time to start sketching out relationship diagrams.

The relationship diagram takes the design from existing as 'data' to a more visual look at physically planning out space. It is abstract, and rough but enables you to develop an understanding of the requirements and visualize how the spaces will work together and how the circulation may flow between them.

At this stage the diagram does not need to represent the building size or space, more a look at how each room relates to one another, sizes and so on. Lets look at some examples:

# Relationship Diagrams



The bubble diagram helps make the connection between basic spatial requirements and a fully drawn out floor plan. It is a trial and error method of exploring configuration and relationship options.

As sketch diagrams develop you can begin to build a rough plan of the project spaces, this is known as 'bubble diagramming'.

If you are working within the constraints of an existing building you can print out the floor plan and work on that.

During this process it is important to keep referring back to the initial data collected and the relationship diagram to ensure you are considering all aspects of the design requirements.

Once some design proposals have been sketched out it is then possible to review these and look for areas that require improvement. Things to consider when we look at a residential scheme:

- How will the occupants move from room to room?
- Does the circulation cut up the space?
- Does guest traffic flow through private areas?
- Are the doors and windows in suitable positions? Do they interfere or add to the overall spatial plan?
- Does the plan orient itself correctly with the site?
- Do the rooms work well in relation to one another?

Once you have reviewed your initial sketches and ideas the plans can be developed further by adding more detail and refining your drawings.

It is key to refer to any building regulations, codes and standards that will have an impact on your space planning to ensure that your design is compliant from an early stage.