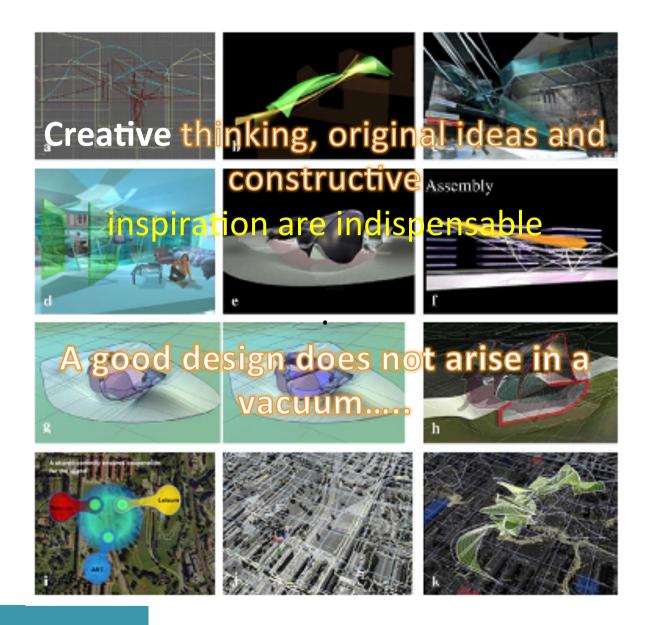
# MK. METODA DESAIN

# (Permasalahan Desain)

# "Design Problems"

Moediartianto, ST., M.Sc

http://www.unika.ac.id/staff/Moediartianto



**Planning process model**: define the problems  $\rightarrow$  then generate solutions to them  $\rightarrow$  then worry about finding resources and overcoming constraints for their implementation.

**Deductive model**: begin by generating solutions  $\rightarrow$  then derive possible problem definitions from these and test them against the situation  $\rightarrow$  then worry about implementation.

**Pragmatist model**: begin by looking at the available resources, the strings attached to them and other constrains on potential action  $\rightarrow$ generate a solution from within these constraints  $\rightarrow$  then derive an acceptable problem definition from this

**Level 1 – Linier Strategies** 

Generate information about all three elements without feeling we must make a commitment at any one stage. Then, through the subconscious procedure of trying to consider all three elements together, she hoped to achieve a resolution to all three at the same time. Suddenly, we would know the definition of the problems, the solutions and the means she would use to implement them.

**Level 1 – Holistic Strategies** 

Take some sub problems and generate a range of solutions to each of them, pretending that each was the most important. We do not worry about the fit between solutions until later. Then, once we generate a range of solutions to each, we worry about how to produce a composite solution into which one solution to each problem would fit.

**Level 2 – Separáte entity mechanism** 

Take some sub problems and generate a range of solutions to each of them, pretending that each was the most important. We do not worry about the fit between solutions until later. Then, once we generate a range of solutions to each, we worry about how to produce a composite solution into which one solution to each problem would fit.

**Level 2 – Separáte entity mechanism** 

Intuitive refers to thinking processes in which there is no attempt to translate the form or the content of thought into a rational language system.

A rational operation is defined as one in which deliberate procedures are carried out on named elements.

Level 3 – Intuitive and rational operation

accommodate or adjust the substantive knowledge to new evidence, then accommodate their operational knowledge.

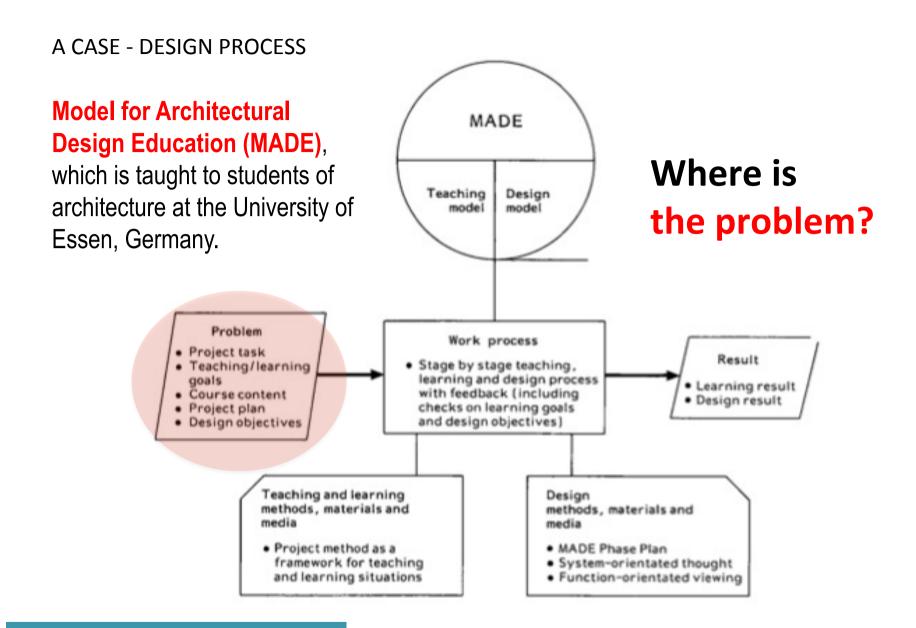
**Level 3** – Assimilating and accommodating operation

The act of reducing a set of concepts to a single one and the act of generating a range of relatable concepts from the stimulus of one.

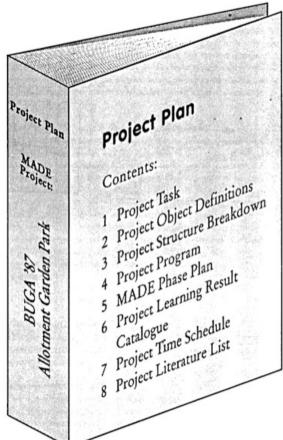
**Level 3 – Convergent and divergent operation** 

Do flexible in early phases, or escaped from restrictions later on, to define concepts in abstract terms. Get a focus and also a good deal of options for final choice.

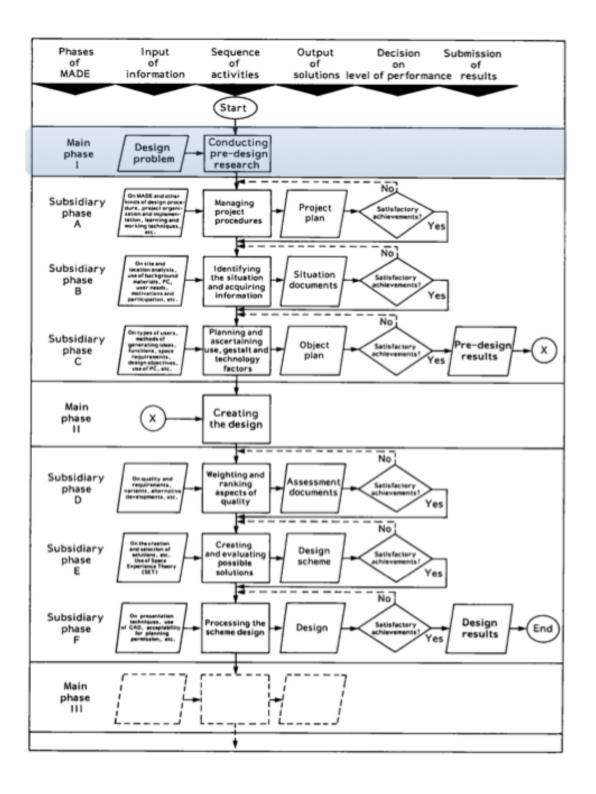
**Level 3 – Concretizing and abstracting operation** 



### A CASE - DESIGN PROCESS

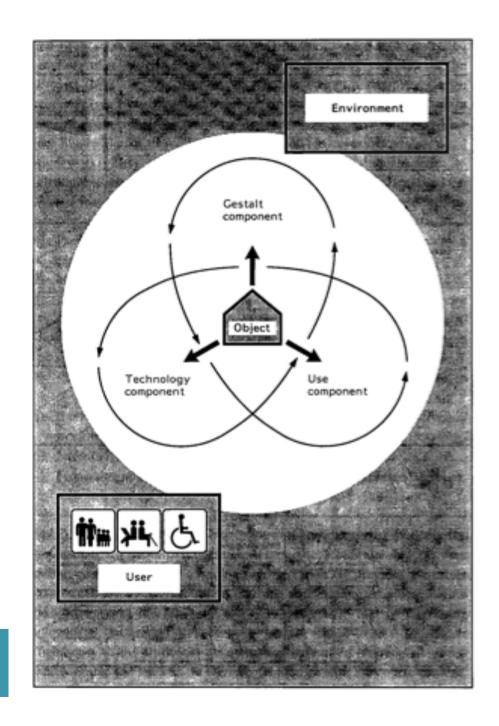


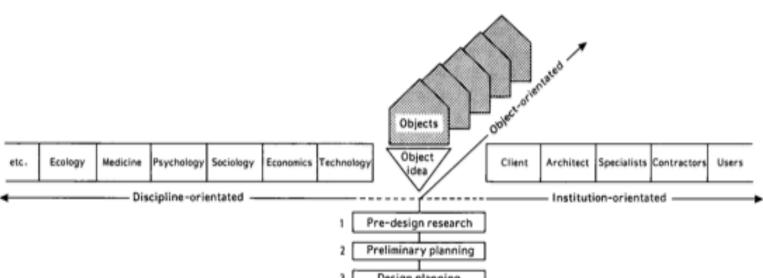
Where is the problem?



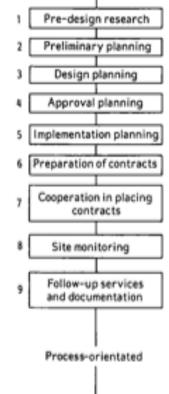
A CASE - DESIGN PROCESS

What is the problem?





# What is the problem?





user characteristics
type characteristics
purpose characteristics
inherent characteristics



# inherent characteristics

something about the external and/or internal appearance of an object as the bearer of a 'message' with which the owner or user identifies himself



Must objectives: are objectives which comprise regulations or given conditions.

Should objectives: are objectives which contain standards or agreements.



Can objectives, are objectives which contain requirements.

Wish objectives, are objectives which contain ideals

## TECHNOLOGY / STRUCTURE



Problem recognition is one of the key determinants of design and is, as often as not, posed by the designer's own perception rather than arising entirely from a given condition, even in engineering.

**Problem** 

Seeking

Renzo Piano & Richard Rogers, Ove Arup & Partners, engineers, Centre Pompidou, Paris 1971–77; gerberettes on the building revealing their sculptural quality

### **MATERIAL**



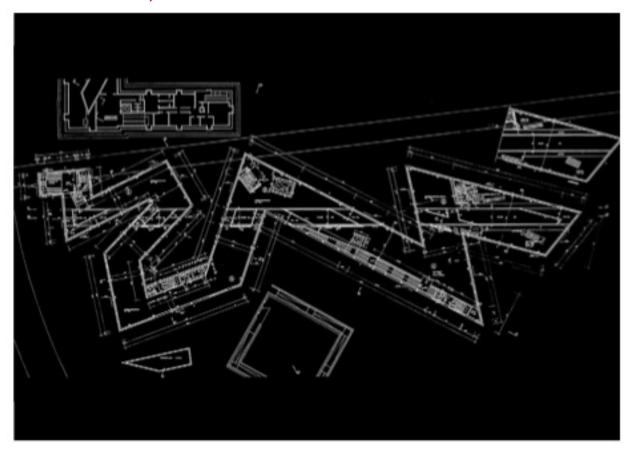
Behnish & Partners, Hysolar Institute, University of Stuttgart, Stuttgart, Germany 1987

Problem recognition is one of the key determinants of design and is, as often as not, posed by the designer's own perception rather than arising entirely from a given condition, even in engineering.

**Problem** 

Seeking

## STATEMENT, IDEOLOGY AND SO..ON



Daniel Libeskind, Jewish Museum, Berlin 1988–99; ground floor plan

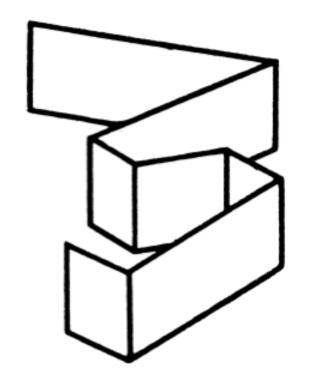
MK. METODA DESAIN

Some architects have made statements which relate to both the initial problem recognition, the general approach to the project, as well as to the eventual forms which were adopted



## STATEMENT, IDEOLOGY AND SO..ON

I felt that the physical trace of Berlin was not the only trace, but rather that there was an invisible matrix or anamnesis of connections in relationship. I found this connection between figures of Germans and Jews; between the particular history of Berlin, and between the Jewish history of Germany and of Berlin. I felt that certain people and particularly certain scientists, composers, artists and poets formed the link between Jewish tradition and German culture. So I found this connection and plotted an irrational matrix which was in the form of a system of squared triangles which would yield some reference to the emblematic of a compressed and distorted star: the yellow star that was so frequently worn on this site, which today is green.'



Jacob G. Tschernichow, Study of a multiple-fold from *Die Grundlagen der modernen Architektur; Ehrfahrungs mässige experimentelle Forschunge*n, 1930

Problem Seeking

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