DESIGN METHODS

Second Year - Second Semester

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The Nature of Architectural Design and Design Process

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THE NATURE OF ARCHITECTURAL DESIGN

Building design is the **keystone** of architecture practice.

It requires great **skills** as well as attention to broader **concerns**.

THE NATURE OF ARCHITECTURAL DESIGN

But most of all it requires **hours, months, and years of hard work**.

THE NATURE OF ARCHITECTURAL DESIGN

Translating :

needs and aspirations,
theories and technologies, and
schedules and budgets

Into →

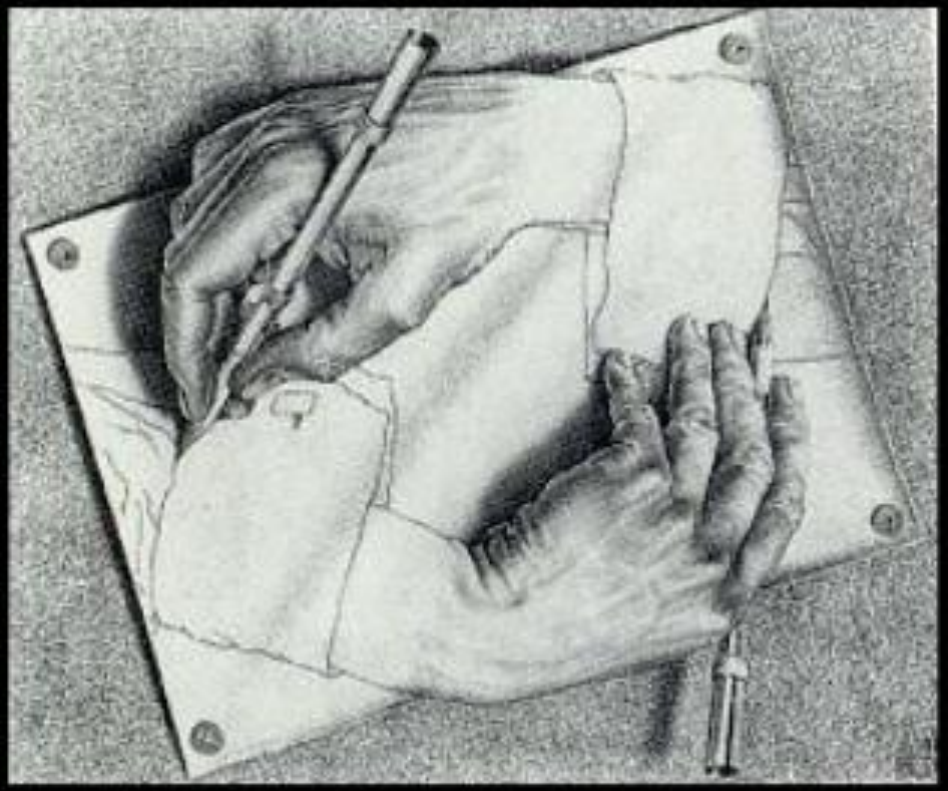
appropriate and exciting places and buildings

Aims and Objectives

The aim of this lecture is:

- To **explore** the domain of Design Methodology
- To **understand** the nature of architectural design methods

We shape our buildings, and afterwards
our buildings shape us.
-Winston Churchill

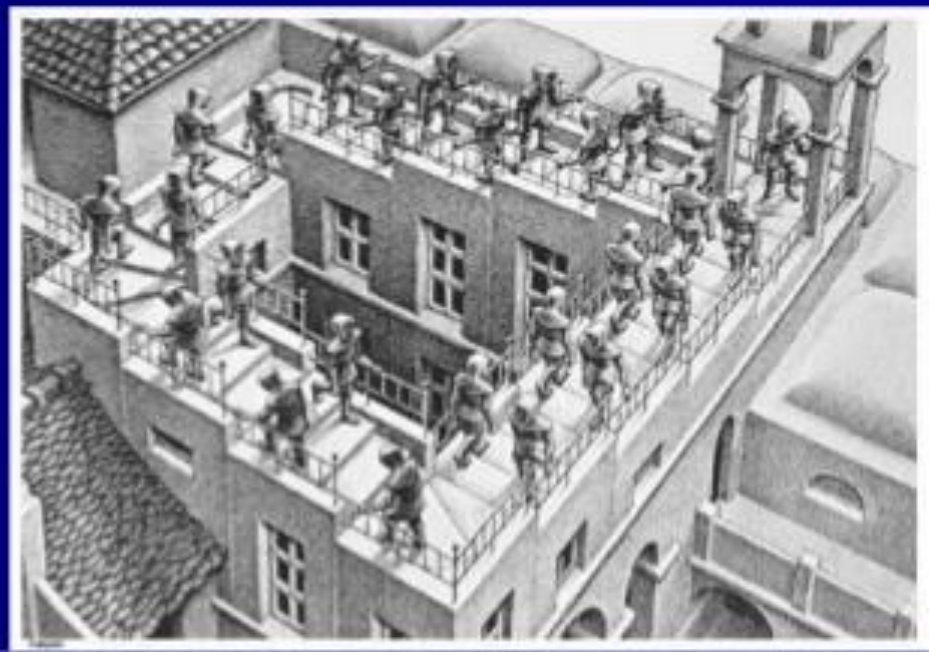


What is METHODOLOGY?

- The Greek origin of the term *METHOD* is "**way through**".
- Methodology is the **science** of method.
- The aim is to select the **appropriate way through a difficulty**.

DESIGN

- DESIGN is an **activity**, not a **product**.
- It is the **process** of designing that we call DESIGN, not the **product** that is designed.



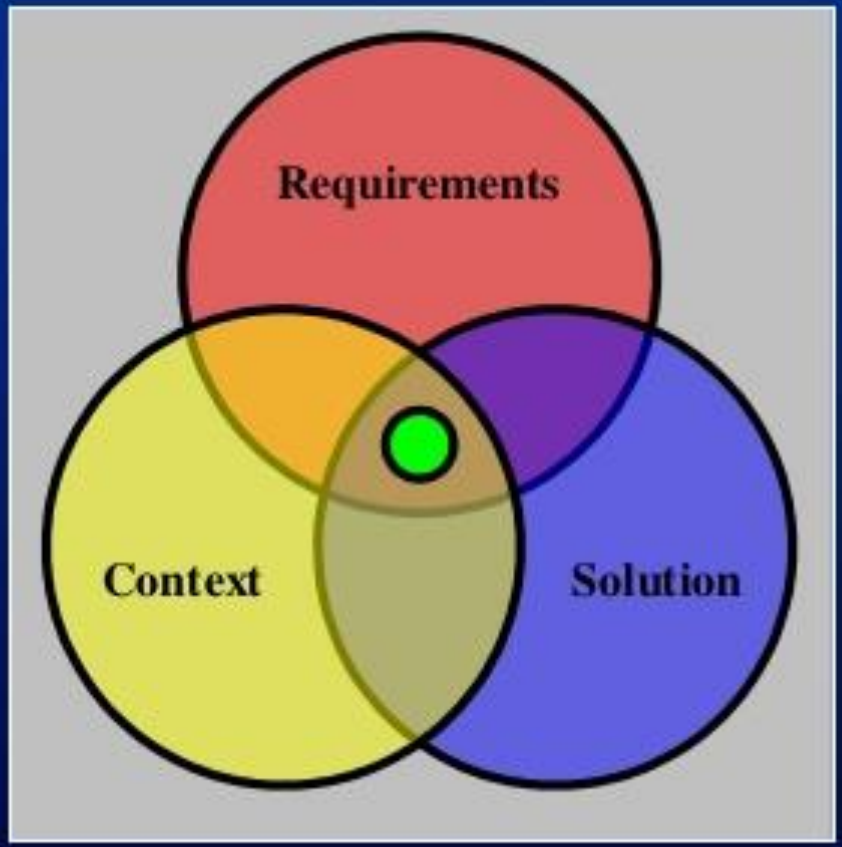
DESIGN

DESIGN is an **activity** aiming at:

- Developing an action plan that, if implemented, is expected to lead to a situation that has certain desirable characteristics and without unexpected and undesirable side effects.

THE NATURE OF ARCHITECTURAL DESIGN

- **Requirements**: describe the desired properties of the design
- **Context**: describe the environment of the design
- **Solution**: describe the design

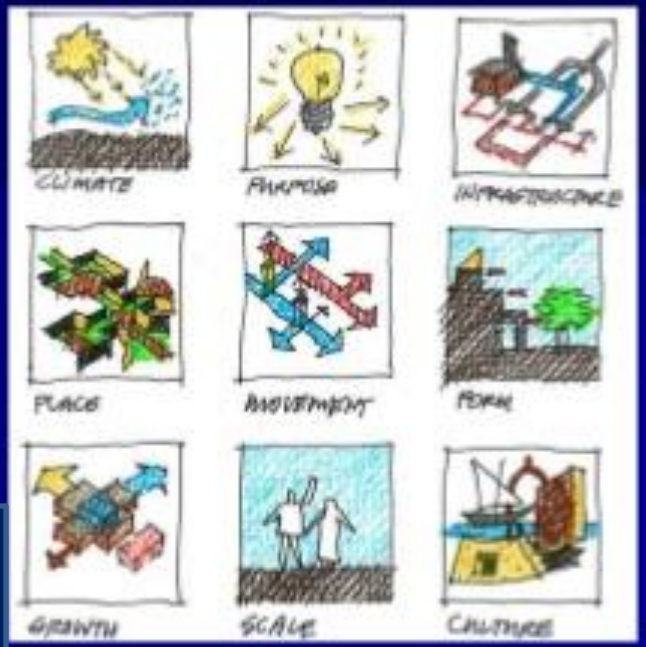


DESIGN

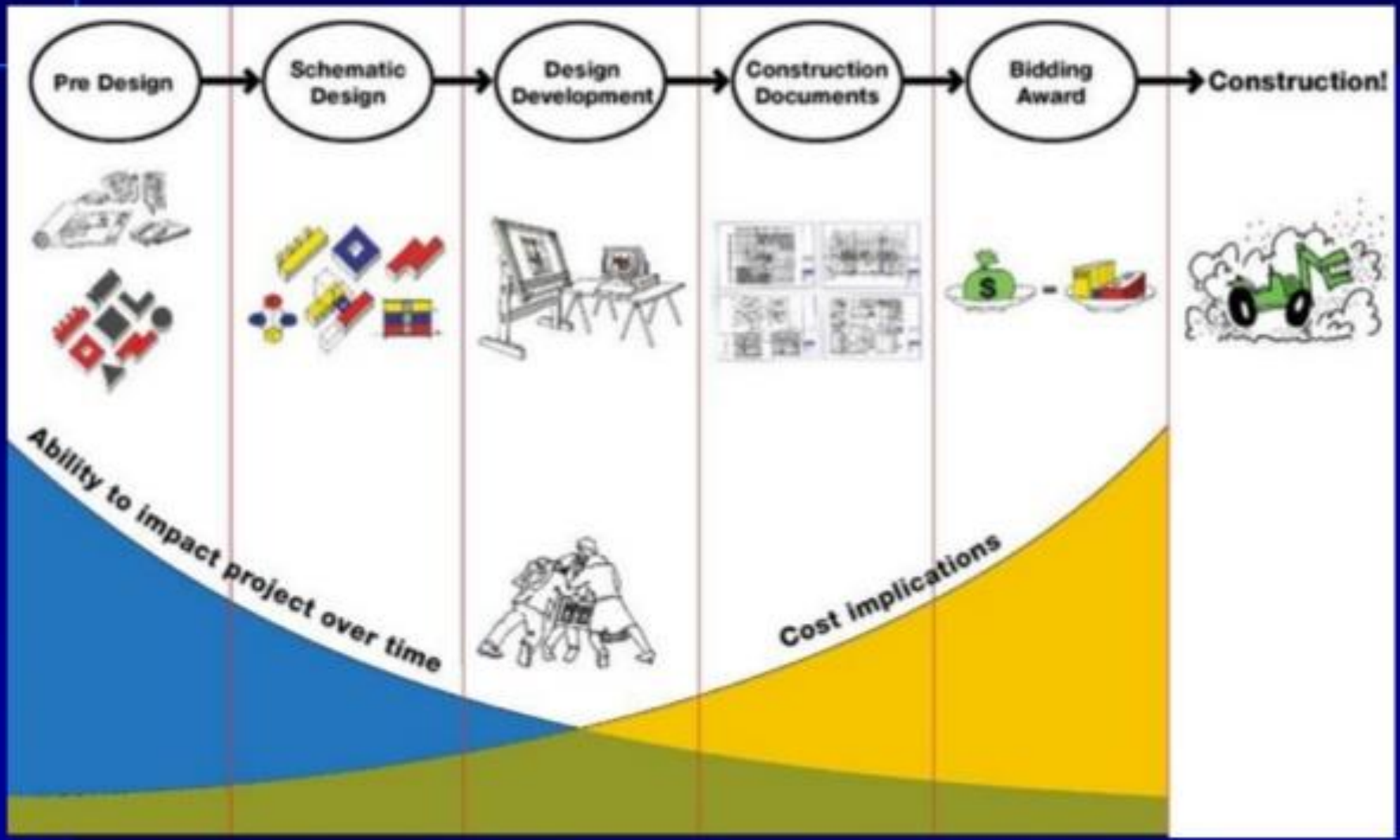
- DESIGN is **purposeful, goal-seeking activity**, and the purpose is a **plan of action**.
- DESIGN goals **change** during the process of designing and learning more about the nature of the problem.

What is Design?

- ***DESIGN*** is a both a verb (to design) and noun (a design).
- ***DESIGN*** a **process** and a **product**; the **process** of designing and **product** that is designed.
- **DESIGN develops an action plan that, if implemented, is expected to result in a situation with defined desirable characteristics and without unexpected and undesirable side effects.**



Impact of Design on Cost Implications



DESIGN Method

How

not

What !

Design Steps

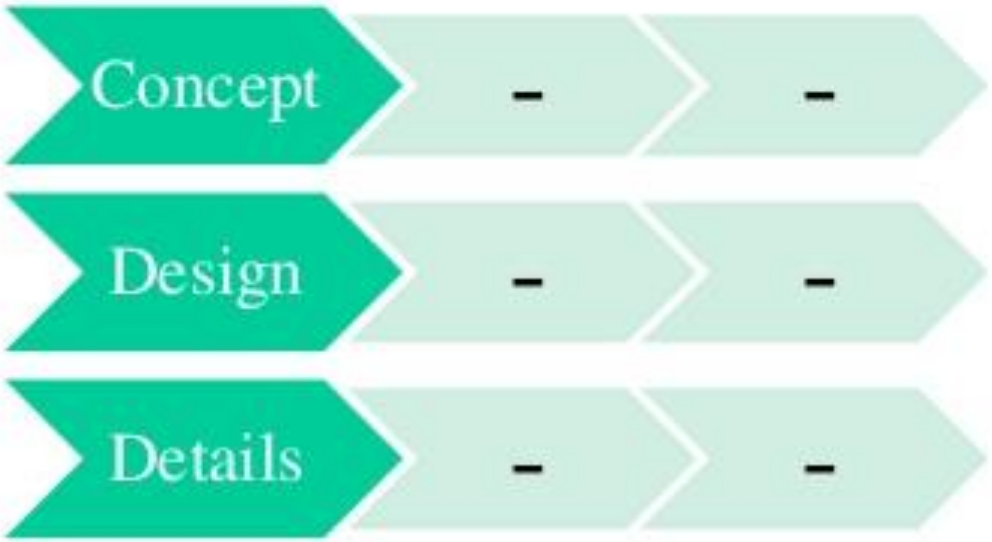
Step one:
Understand the Problem
Step two:
Gather Information
Step three:
Analyze Information
Step four:
Synthesize a Solution
Step five:
Present/Evaluate solution

Design

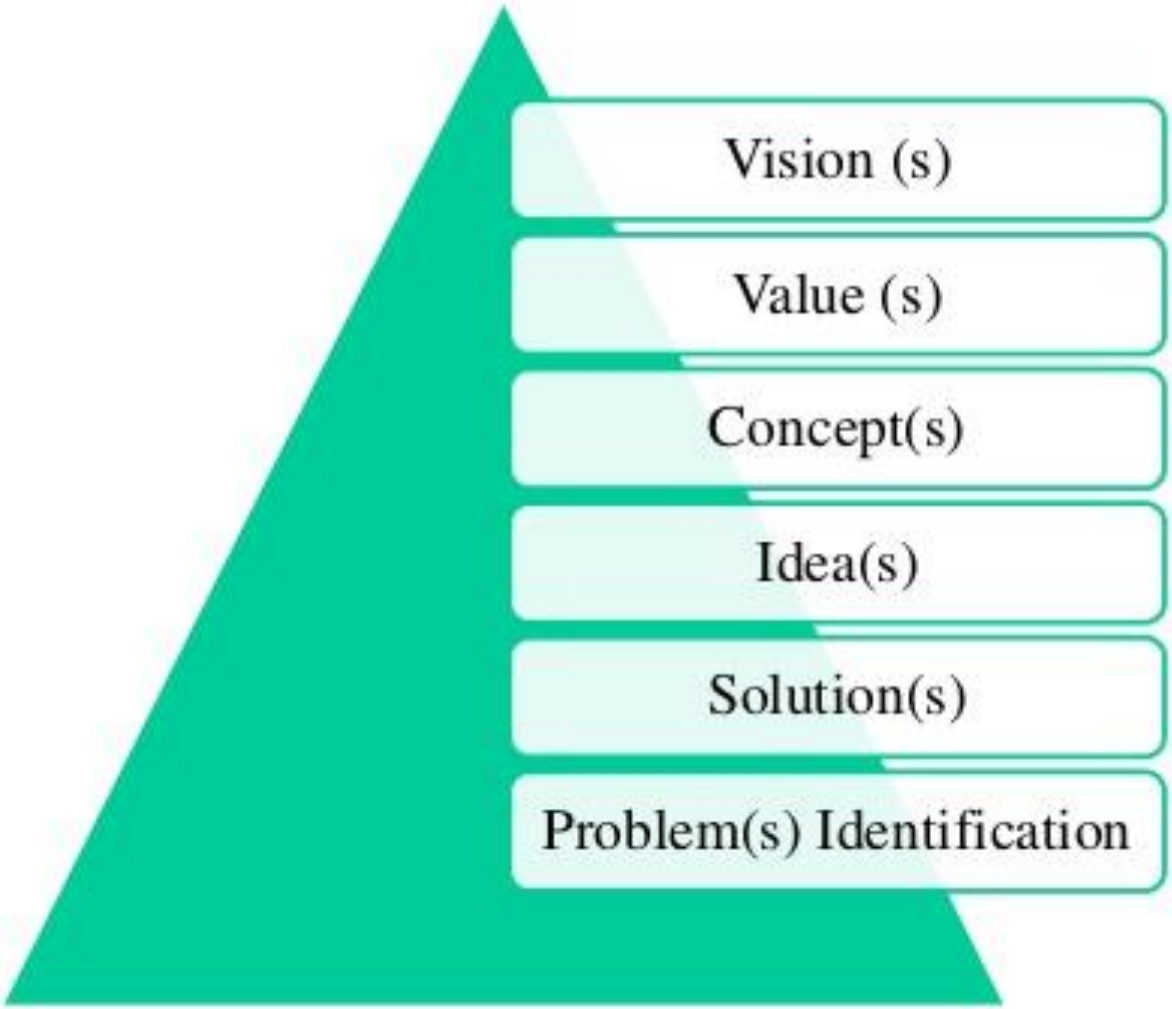
Design Process

The design process works with information and ideas simultaneously on many levels.

Designing is a reciprocal action and reflection.

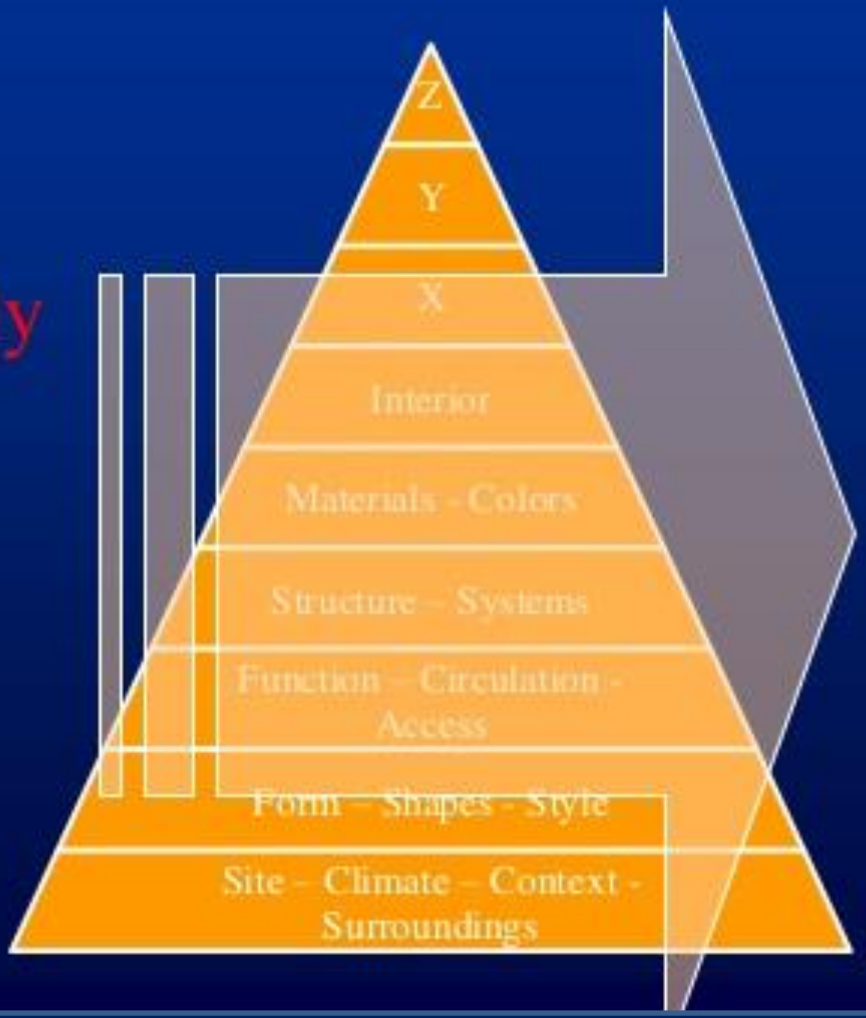


Design Vision



THE NATURE OF ARCHITECTURAL DESIGN

Design works with information and ideas simultaneously on many levels.



Design Process

Linear Quality

Analysis → **S**ynthesis → **E**valuation

Non-linear Qualities

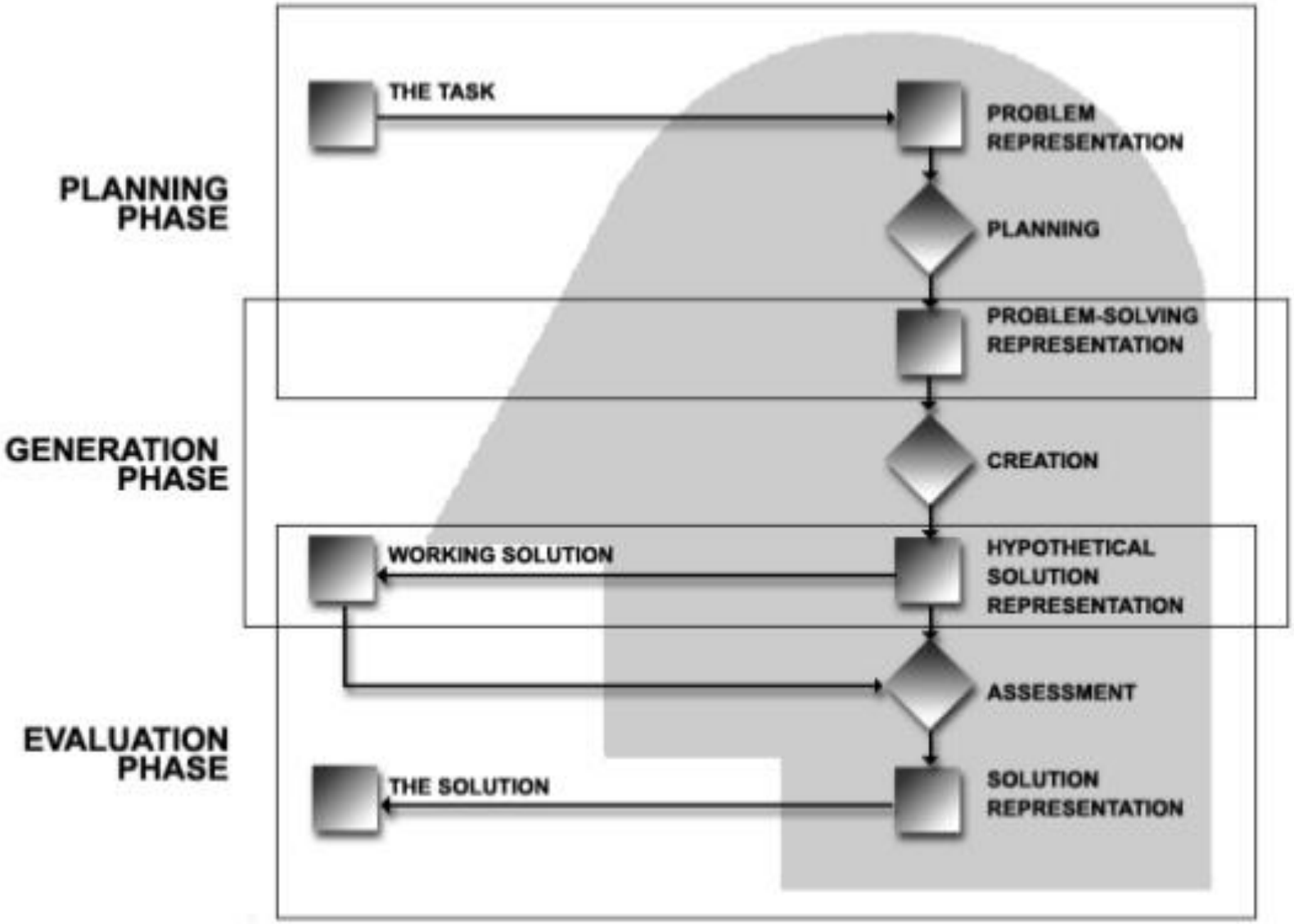
Flashes of insight … Creative leaps

THE NATURE OF ARCHITECTURAL DESIGN

- Non-linear Qualities

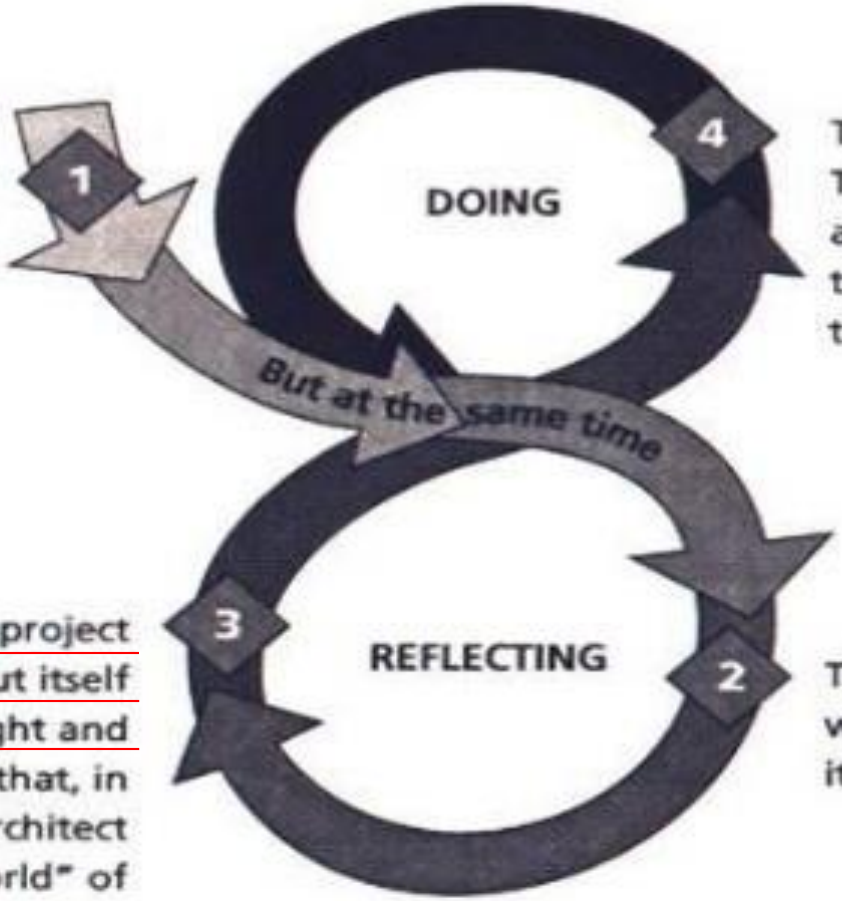
Flashes of insight … Creative leaps

DESCRIPTIVE REPRESENTATION OF A DESIGN PROCESS



In his books, *The Reflective Practitioner* and *The Design Studio*, Donald Schön describes the process of designing as "reflection-in-action," a double-loop system such as the one drawn.

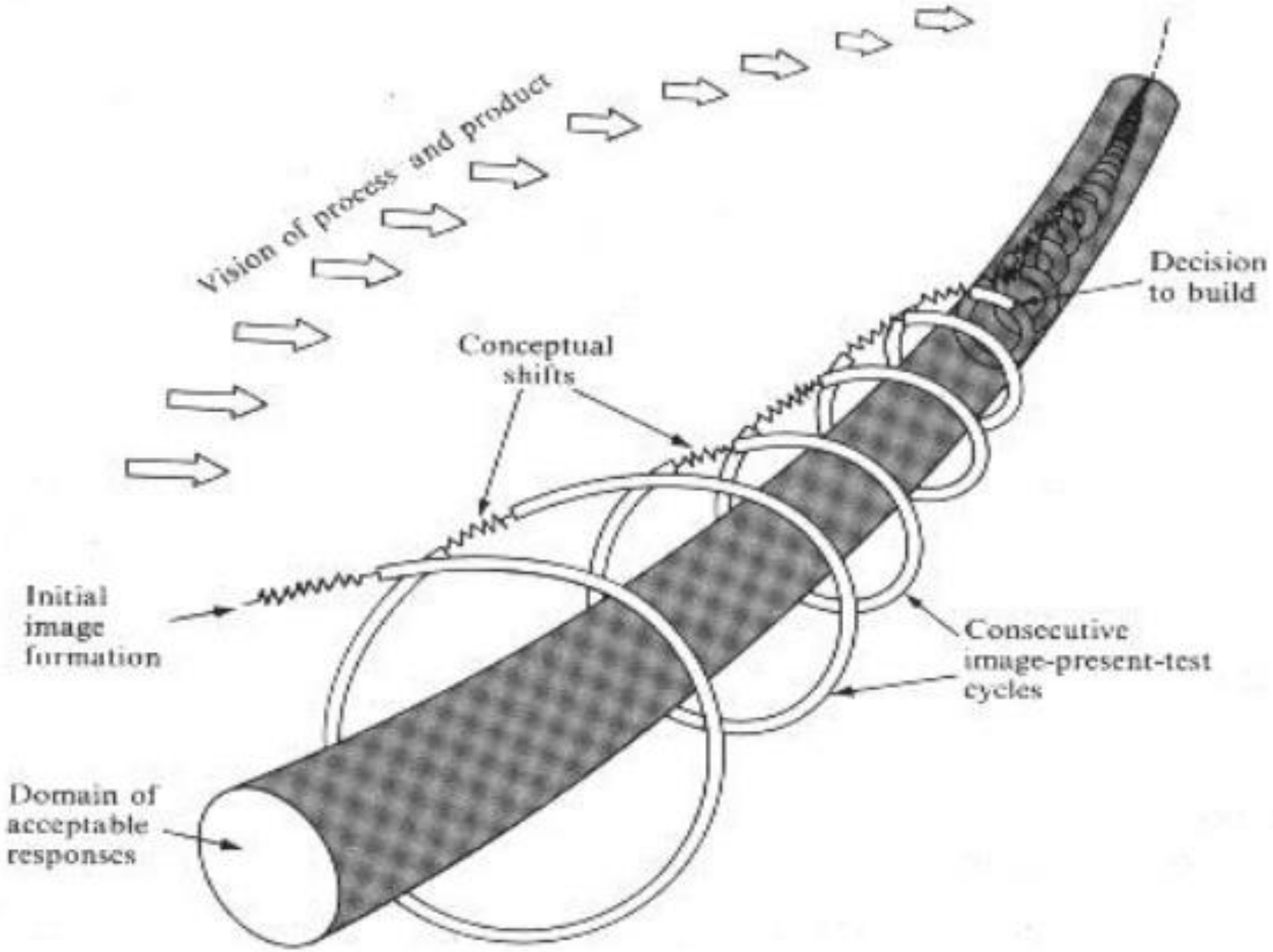
Working from an experiential inner image—a sense of what might be—the architect starts to design.



The process is interactive. The doing/reflecting are not sequential steps; they go on at the same time.

This process lets the project teach the architect about itself at several levels of thought and experience. Schön says that, in order to design, the architect enters the "virtual world" of the project. Through the use of sketches, models, and computer simulations, the designer truly experiences the project as though it were built.

The architect reflects on what is happening *while* it's happening.

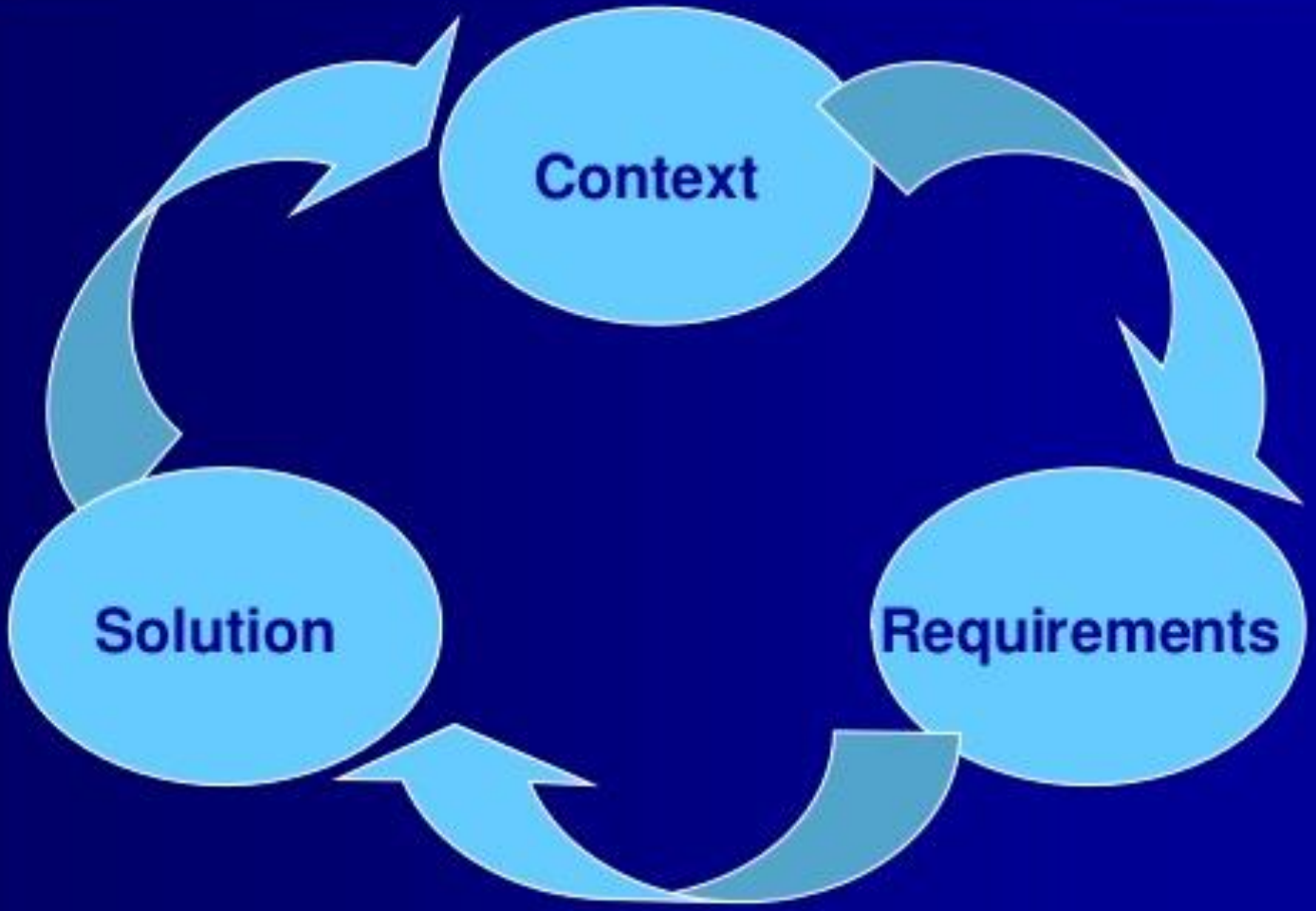


Spiral design development

Design Cycle

- **Context**: describe the environment of the design
- **Requirements**: describe the desired properties of the design
- **Solution**: describe the design

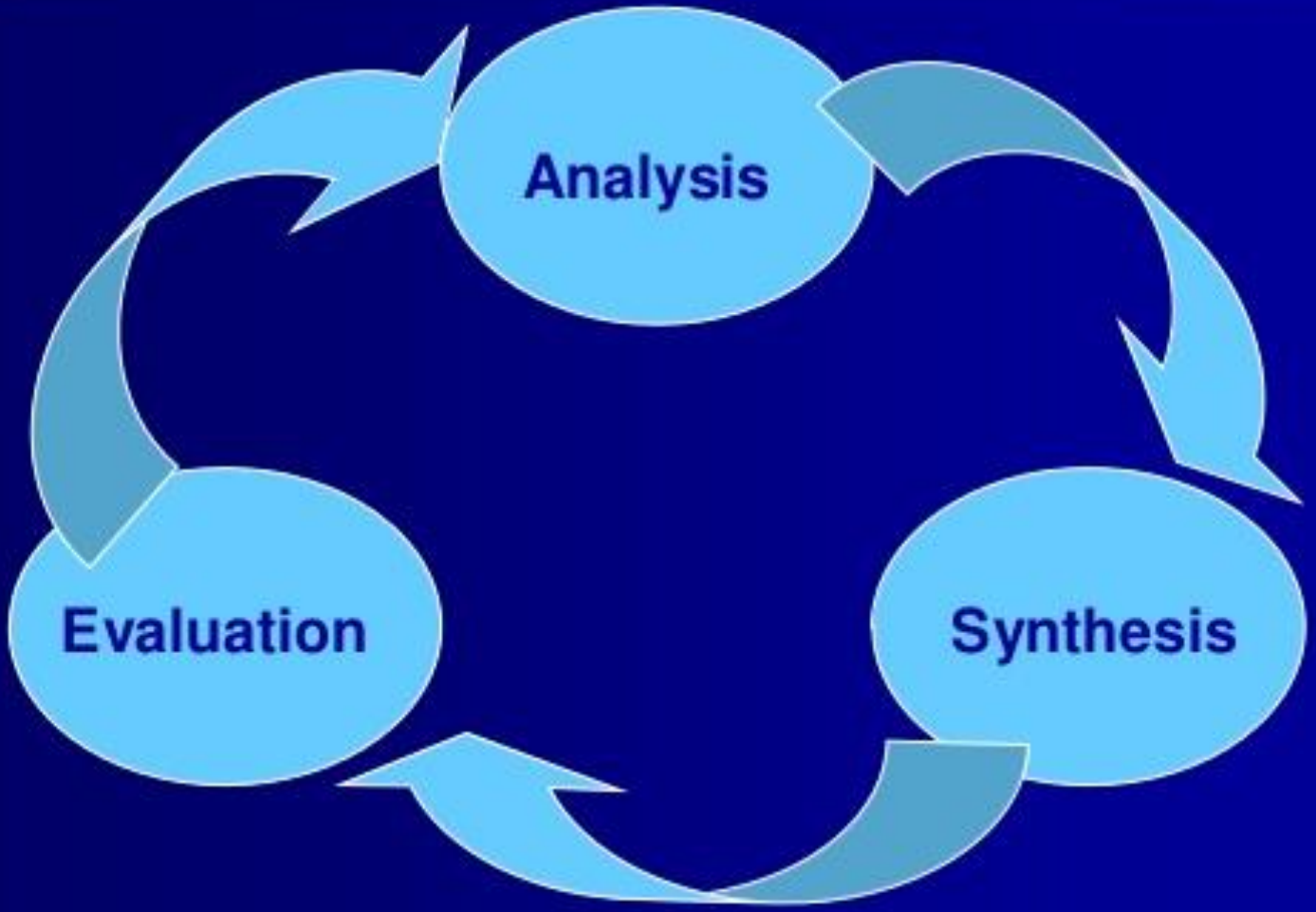
Design Cycle



THE FIRST GENERATION: THE SYSTEMATIC METHODS

- **Step one**: Understand the Problem
- **Step two**: Gather Information
- **Step three**: Analyze Information
- **Step four**: Synthesize a Solution
- **Step five**: Present/Evaluate solution

THE FIRST GENERATION: THE SYSTEMATIC METHODS



THE SECOND GENERATION: THE ARGUMENTATIVE MODEL

- The **argumentative model** is based on doubt, and is carried out step by step, a cycle of **positions, argumentation, decision**, repeated over and over.

THE SECOND GENERATION: THE ARGUMENTATIVE MODEL