Introduction to Architecture & Design

DEFINITION, CONCEPT, MEANING, PURPOSE, TYPES, ETC.

Introduction

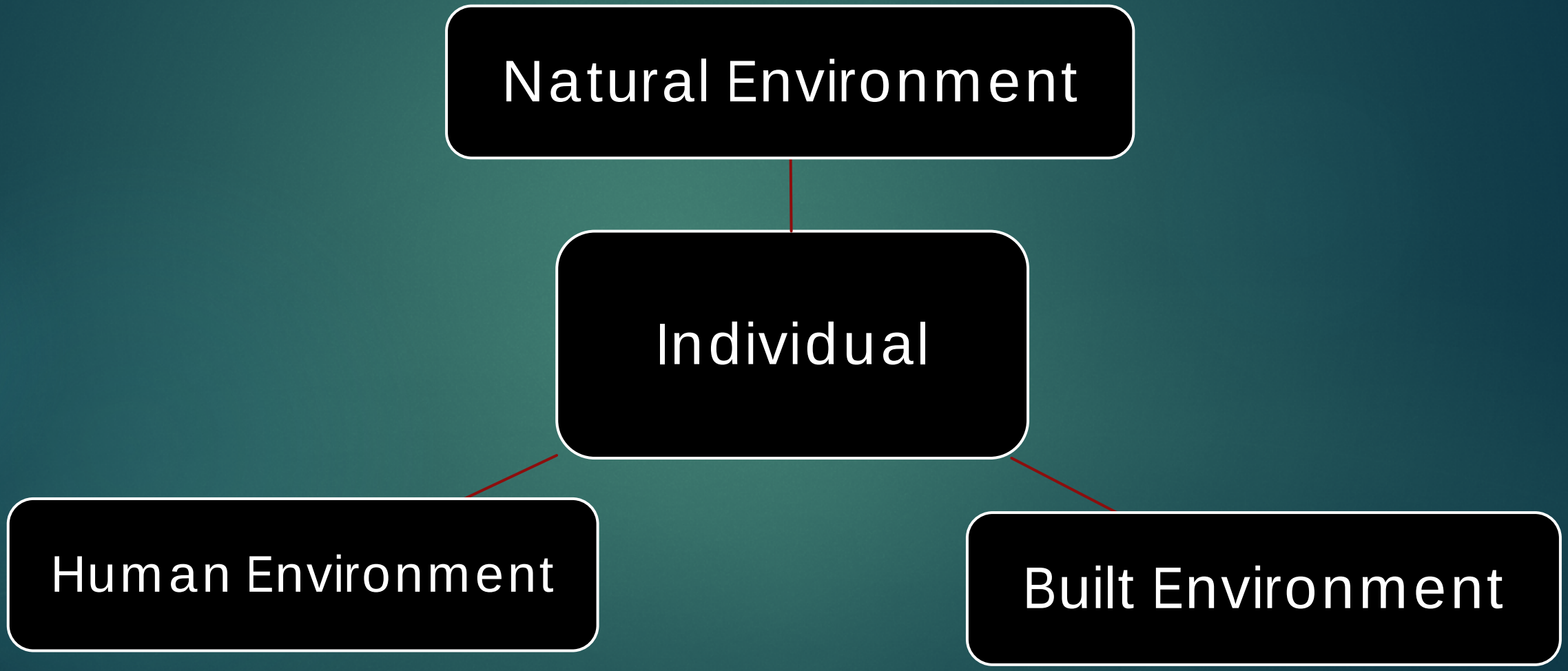
Content of the lecture slide

- **…. Architecture?**
- **…. Design?**

What is Architecture?

- A definition provided by the Roman architect *Vitruvius in the 1st century AD*
  - Architecture was a building that incorporated:
    - *Utilitas … firmitas … venustas*
    - *Commodities…firmness… delight*
    - *Function…technology…aesthetic*
    - *Utility… construction… appearance*

The context of Architecture



Architecture

- it **evolves** incrementally from **concept sketch** or **drawing** to **inhabited space or building**
- making a building requires **many layers** of **thinking** and **exploration**.

Architecture and Building

- Architecture is Designed **buildings**, **spaces** and **environment**.
  - According to **Human needs**
  - Using **technology and science**
  - With **aesthetic qualities**

Architecture

- Architecture is a **visual language**
- and architects **communicate** through **drawings, models** and eventually through the **spaces and places** we construct.









Design Defined

- Design
  - is an ***active, planned process*** with a ***purpose, or a meaningful outcome.***
  - **creating physical form** from a **mental image**.

Design Defined

- Webster's dictionary says design is
  1) "to plan and make with skill. i.e., as a work of art,"
  2) "to form or make in the mind; conceive; invent," and
  3) ***"the organization of all elements into a unified whole."***

Design Defined

- It is a unique combination of
  - ***art,***
  - ***science,***
  - ***technology, and human intuition***,

collecting information from ***diverse areas*** and ***applying*** it to a ***specific situation.***

Design Defined

- in an **aesthetic sense**, design is
  - the o**rganization** of **elements and forms** in a particular manner to fulfill a **specific purpose or need**.

Design Defined

- Design is
  - an intrinsically ***conscious process***, and whether ***utilitarian or aesthetic***, it is the deliberate act of ***forming materials and ideas*** to fit a certain ***function, need,*** or ***composition***.

Design Defined

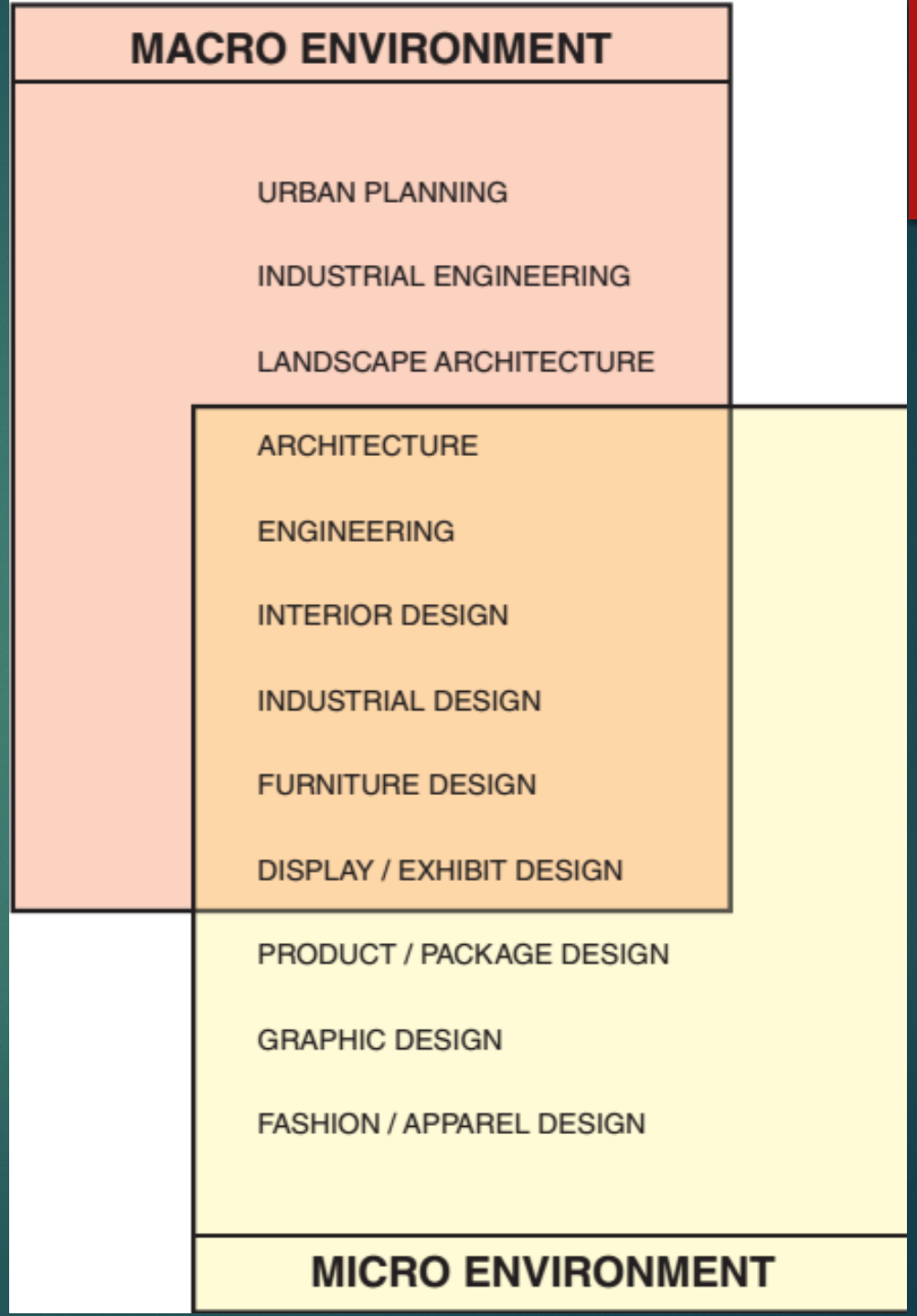
- The ***impact of a design*** will depend on its successful organization of ideas or elements into unified wholes—
  - the ***use of materials***,
  - the ***manipulation of form,***
  - ***aesthetic sensitivity***, and
  - ***satisfying a need.***

Design Defined

- Design involves
  - **bridging the gap** between **people and things**,
  - i**mproving** human **accommodation** with physical surroundings, and
  - increasing the **safety and satisfaction** of interactions between **people and their environments.**

Design Defined

- Design principles apply to all fields or related areas of design, although the scale and application may change.



underlying fundamentals in “design”

- One functional relationship is **derived from nature.**
- We can recognize the **rightness, order, and beauty** of **objects** and **living things** that please us
- **“order”** is the essence of any design.



underlying fundamentals in “design”

- Human beings instinctively feel that most things in the ***natural environment “fit” or have a sense of rightness,*** but there are also things that we do not perceive to be beautiful or good



underlying fundamentals in “design”

- On the other hand, some people find ***man-made, or “artificial,”*** designs ugly or poorly designed, including automobiles, buildings, and even cities.
- They may just be ***different from, or run counter to***, the general design trend at the time



underlying fundamentals in “design”

- Design ***moves through time*** and is ***influenced by time.***
  - The designs of **nature** have **survived, disappeared, or changed** according to the natural process in which **characteristics held fast, evolved, or became extinct** in r**esponse** to **various forces**.

underlying fundamentals in “design”

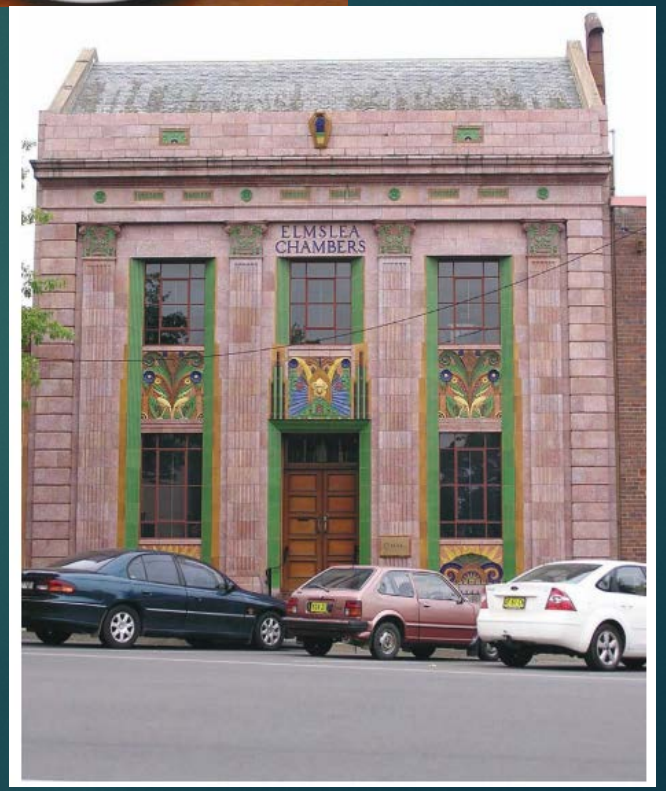
Originality in Design

- is generally associated with the **uniqueness** of **expression** or in the **problem solving** of the designer.
- is considered the **creation of something** totally **new**, or the **reinterpretation** of something **created before.**

Functional and Visual Design Concepts



- **Functional design** deals primarily with physical needs, and
- **Visual design** is basically aesthetic in nature and might not serve a physical purpose



Functional and Visual Design Concepts

- The two concepts are often **interrelated;** many functional designs are visually satisfying, and many visual designs may be functional



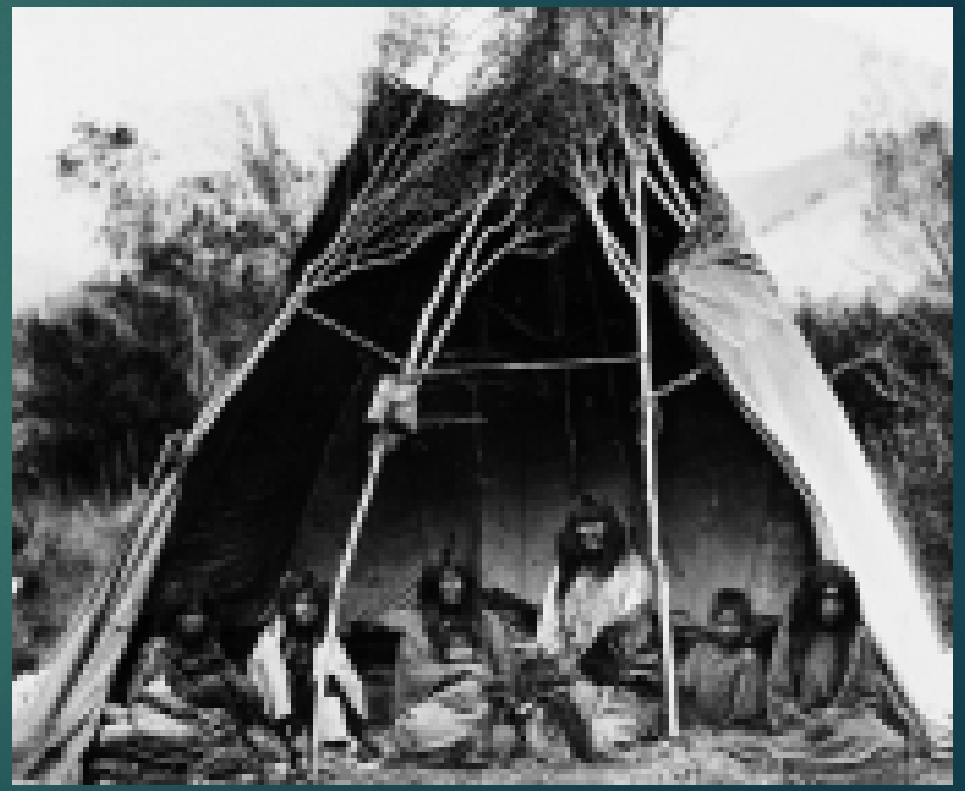
This cast-iron pot by Timo Sarpaneva (1959) is functional in purpose, yet has a distinct handle design that is a visual delight.

Functional and Visual Design Concepts

- In **functional objects**, such as furnishings, automobiles, or cooking utensils, the **purpose of the design is usually clear.**
- Primitive people's shelters, tools, and even weapons were a **utilitarian form** of **functional design** that served their immediate needs for survival.

Functional and Visual Design Concepts

- The **visual aspect** of these pieces **reflects their workings.**
- In other words, the **objects look like what they should do**, with no **ornamentation or aesthetic intent**.
- In these objects, **function has a direct influence on design.**



Functional and Visual Design Concepts

- **Visual designs**—paintings, sculpture, and other art forms—are created **to elicit a response** from the viewer and are mostly nonfunctional.
- An **artwork** can be created to **excite, please, shock, intrigue, attract, or even repel a viewer.**
- If the creation evokes the **intended response**, it must be considered an effective design.

Design definition fundamentals summarized

- Visual Organization
- Creative Problem Solving
- Form and Content Defined



Visual Organization

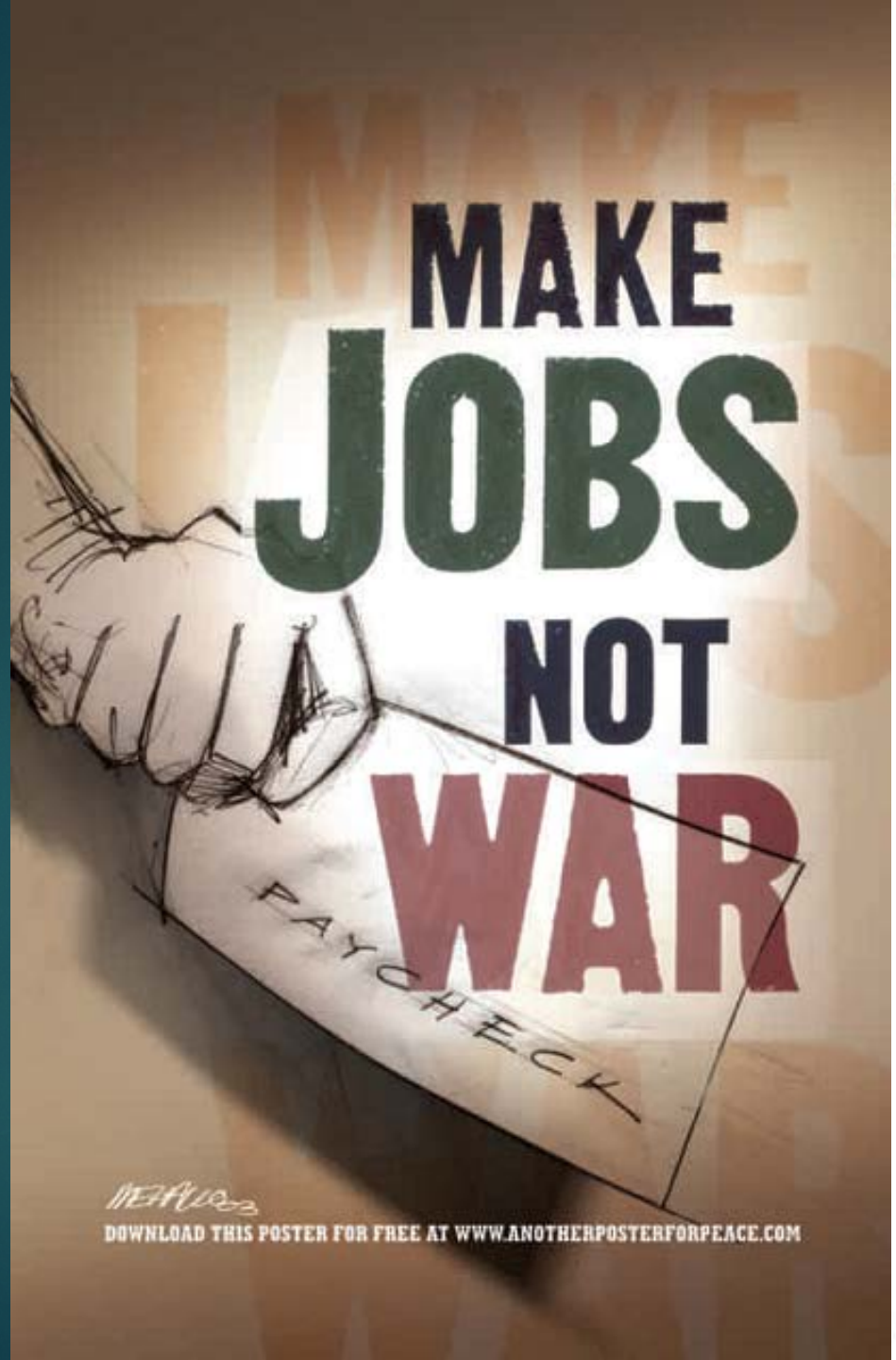
- artist or designer plans the **arrangement** of **elements** to form a **visual pattern**.
- these elements will **vary**—from **painted symbols** to **written words** to **scenic flats** to **bowls** to **furniture** to **windows and doors**.
- Art seeks **visual solutions** in what is often called the **design process**.

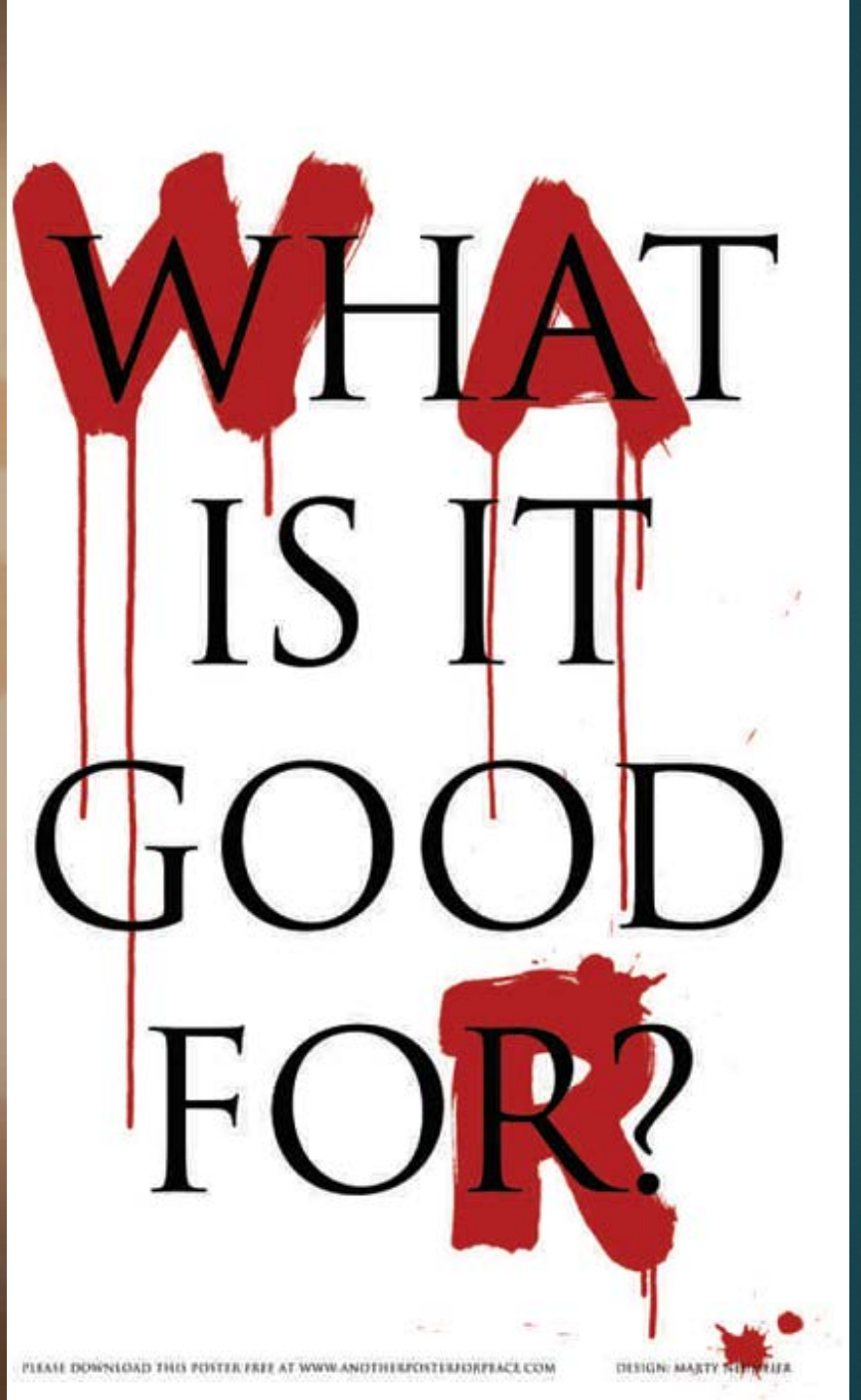
Visual Organization



Art as Communication

- designer is **saying something** to the **viewer**.
- Here the **successful solution** not only is **visually compelling** but also **communicates an idea**.


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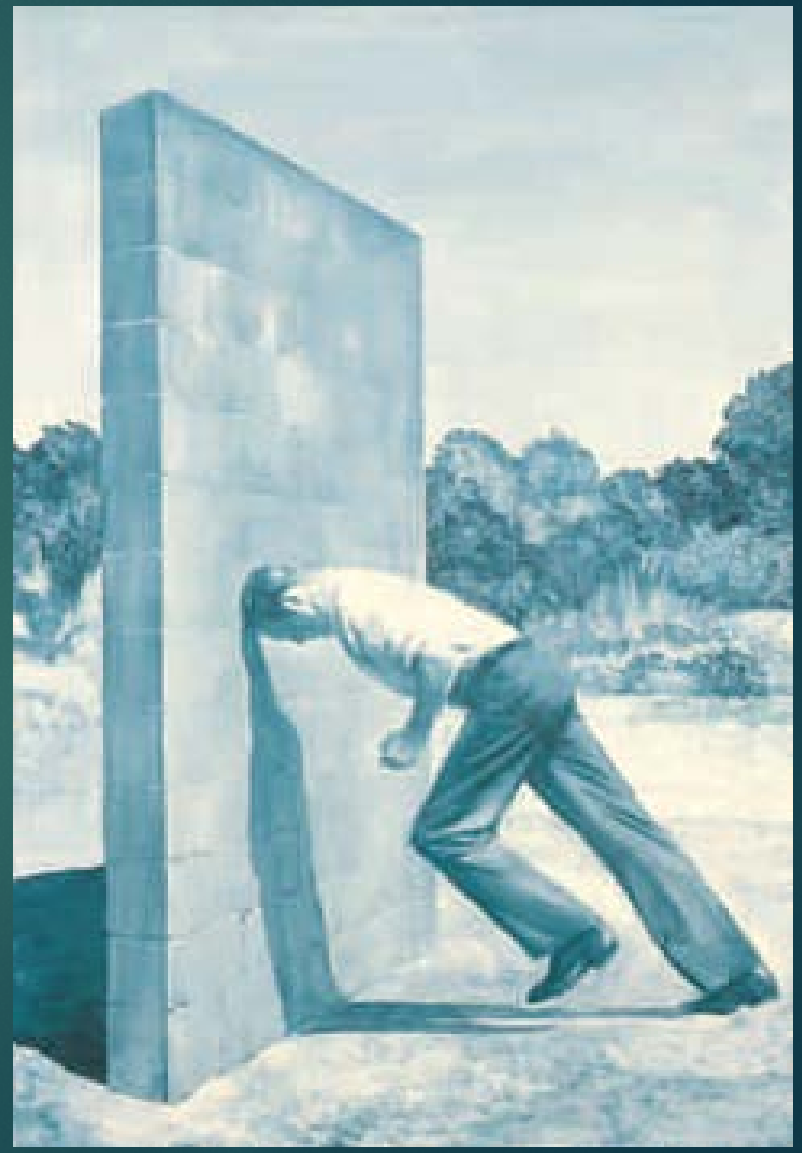
Creative Problem Solving



- Creative - there are **no predetermined** correct **answers** to the problems.
- can choose as wide or narrow a scope as he or she wishes.
- The **architect** or **graphic** and **industrial designer** is usually **given a problem**, often with **very specific options** and **clearly defined limitations**.

Form and Content Defined

- **Form** is the purely **visual aspect**, the manipulation of the various **elements and principles** of design.
- **Content** implies the **subject matter, story**, or i**nformation** that the artwork seeks to **communicate** to the viewer.
- **Content** is **what designer want to say**; **form** is **how they say it**.



Procedures

- Steps in the Creative Process
- ~~What Is Design Thinking?~~

THE DESIGN PROCESS: THE SEQUENTIAL STEPS

- Good design does not just happen; it is a **process** planned to yield products that **perform well** and are **aesthetically pleasing**.
- Good design results when designers, clients, consultants, and builders join in organized, creative problem solving.

THE DESIGN PROCESS: THE SEQUENTIAL STEPS

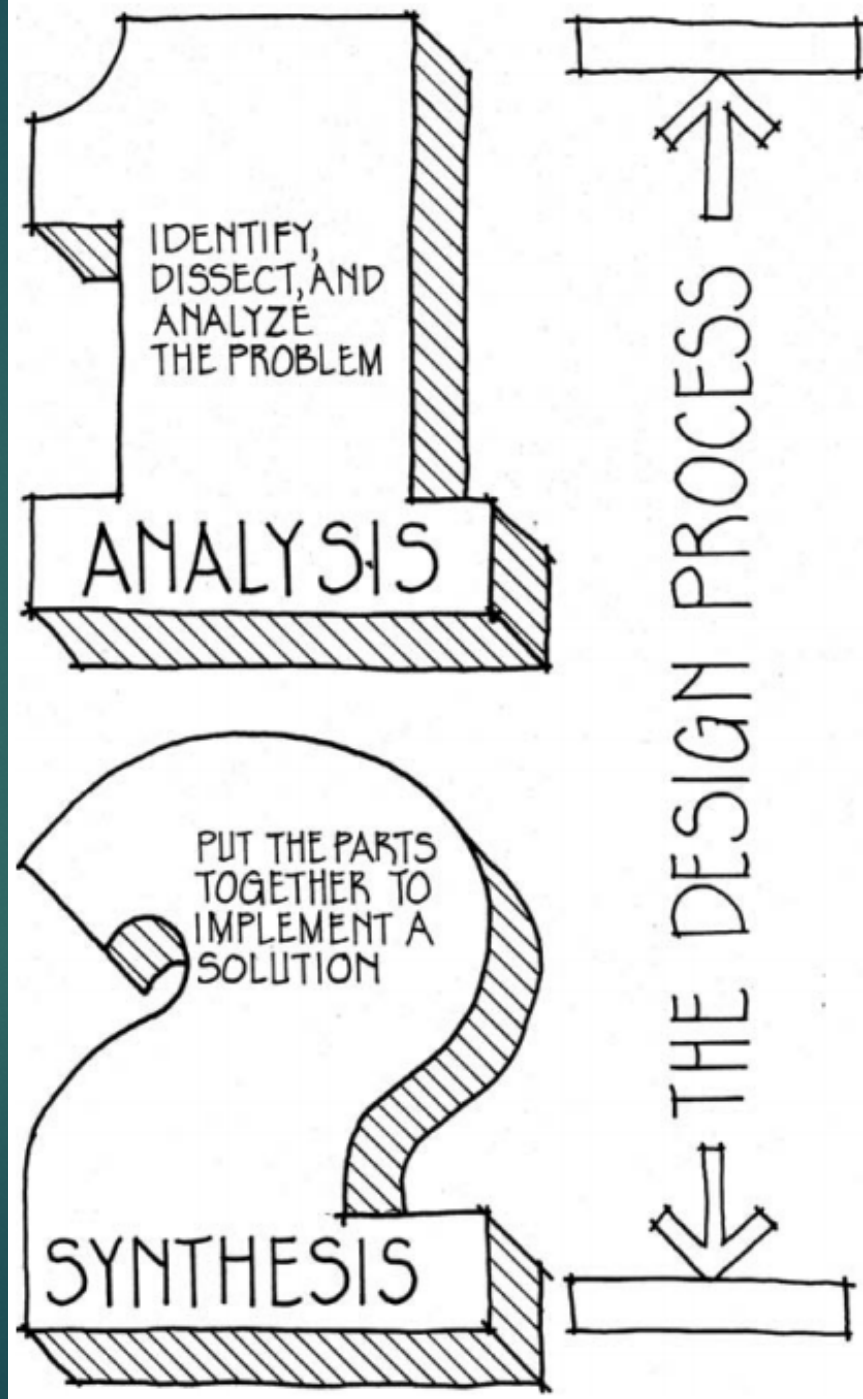
- Architecture is a professional field that must be **creative,** yet **solve problems** and produce solutions **to be implemented**.
- There are s**everal approaches** to designing or creative problem solving.
- The key word is **creative,** which implies that designers not only **solve problems** or make designs but create things where they did not **previously exist.**

THE DESIGN PROCESS: THE SEQUENTIAL STEPS

- Creativity can involve
  - **convergent thinking**, leading to a **direct solution**.
  - **divergent thinking**, which creates multiple options or point of view, leading to **unique solutions**.

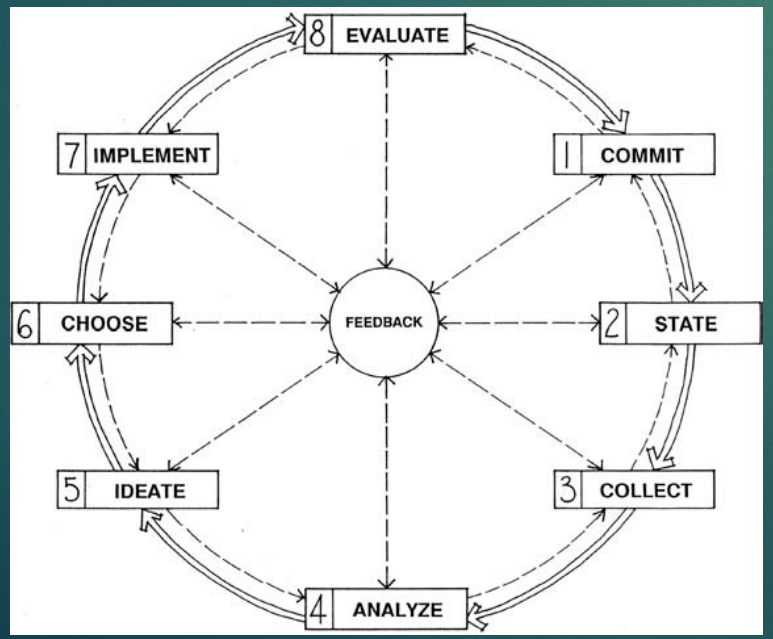
THE DESIGN PROCESS: THE SEQUENTIAL STEPS

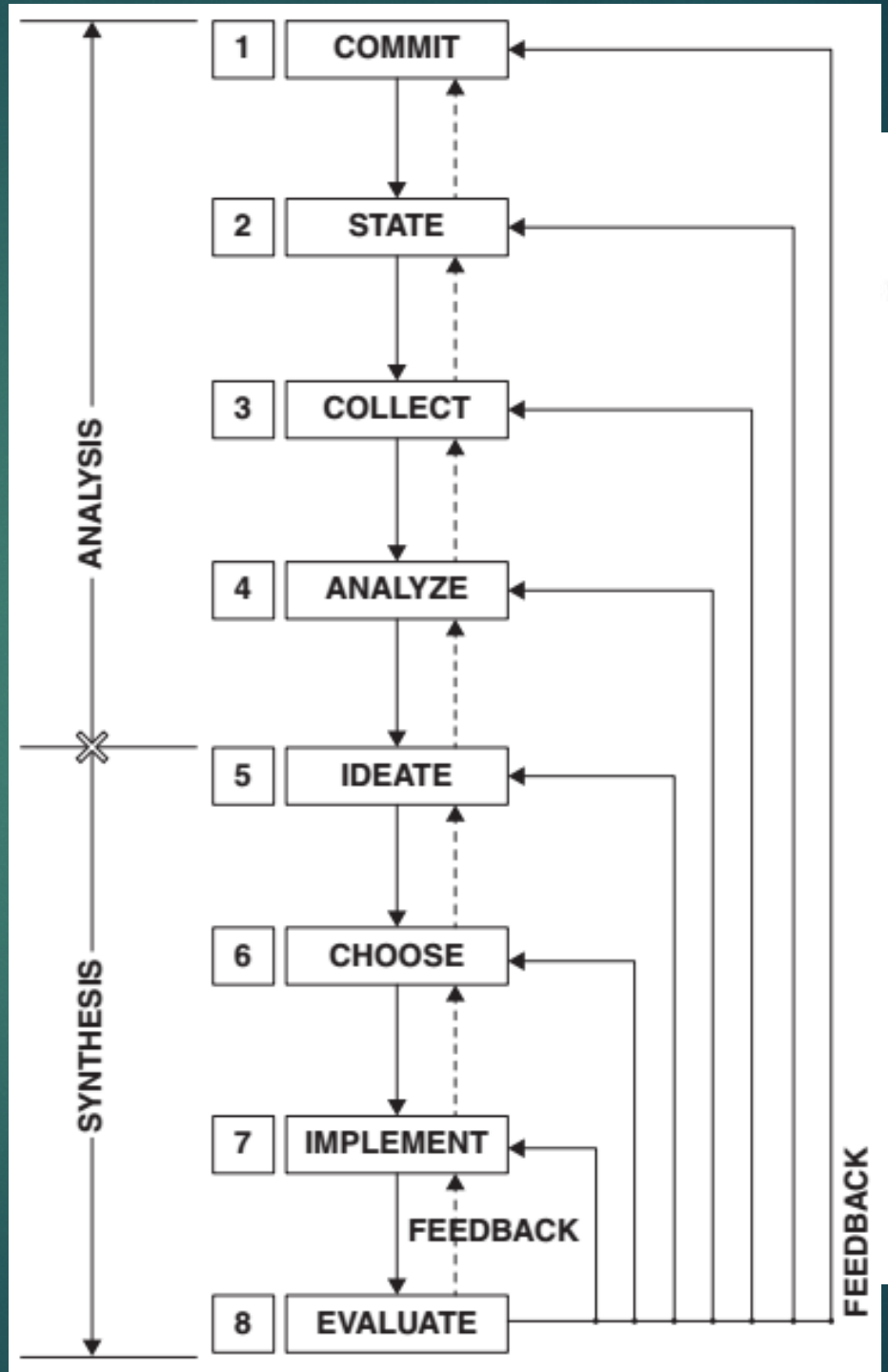
- Generally stated, a design process can be thought of as two phases.
  - **analysis phase:** the problem is identified, researched, dissected, and analyzed
  - **synthesis stage:** seeks to form ideas by creating something new or finding a solution to the problem.

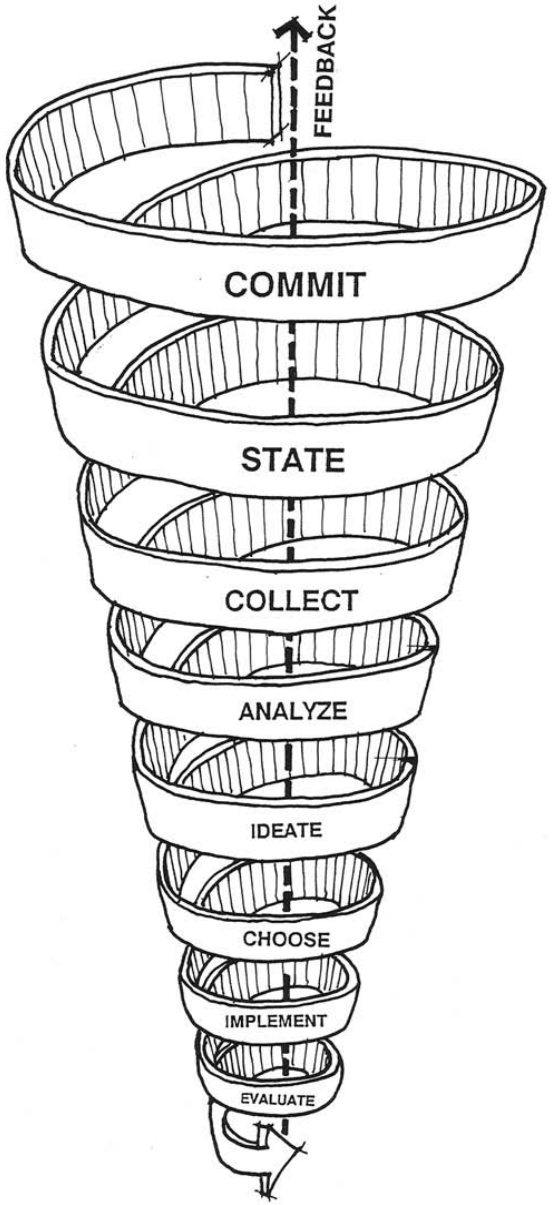


THE DESIGN PROCESS: THE SEQUENTIAL STEPS

- This simplistic two-phase design process can be further broken into eight specific steps,

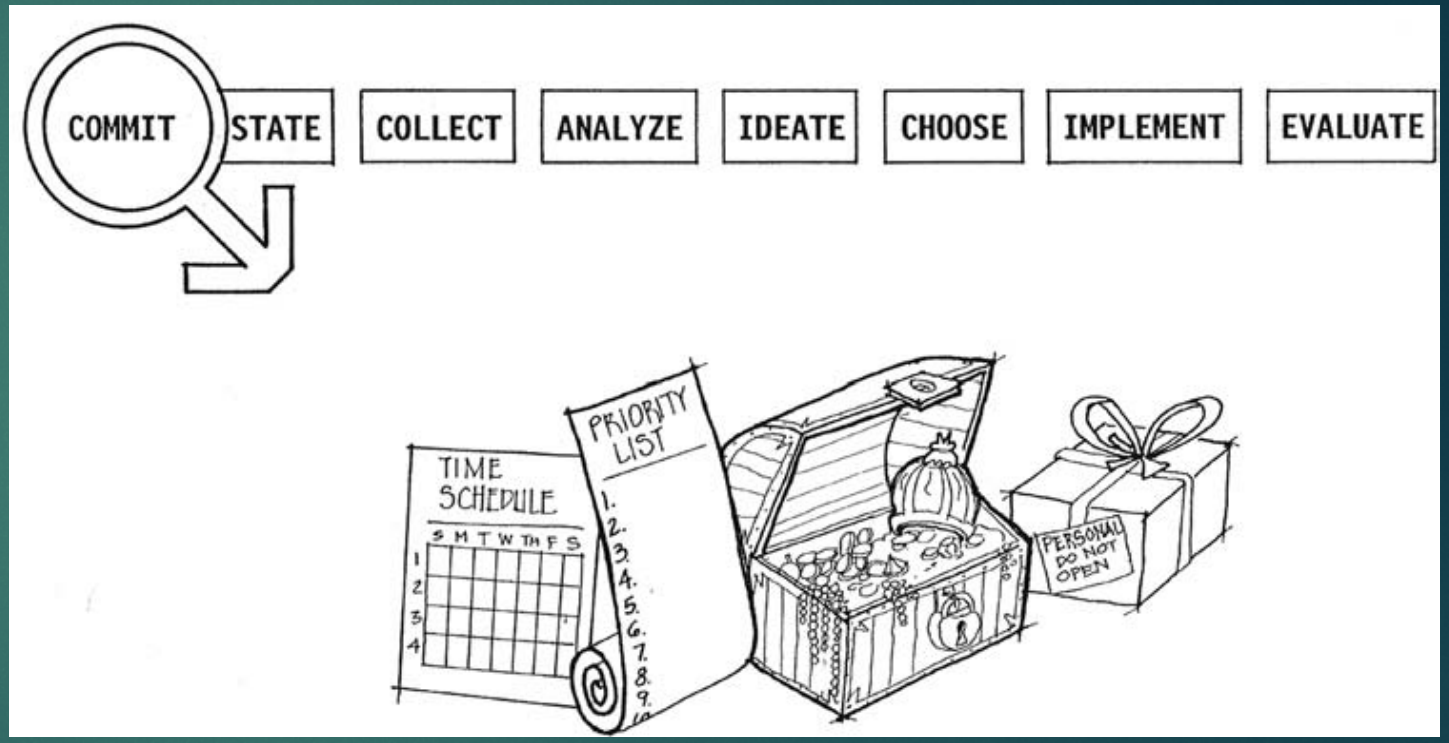






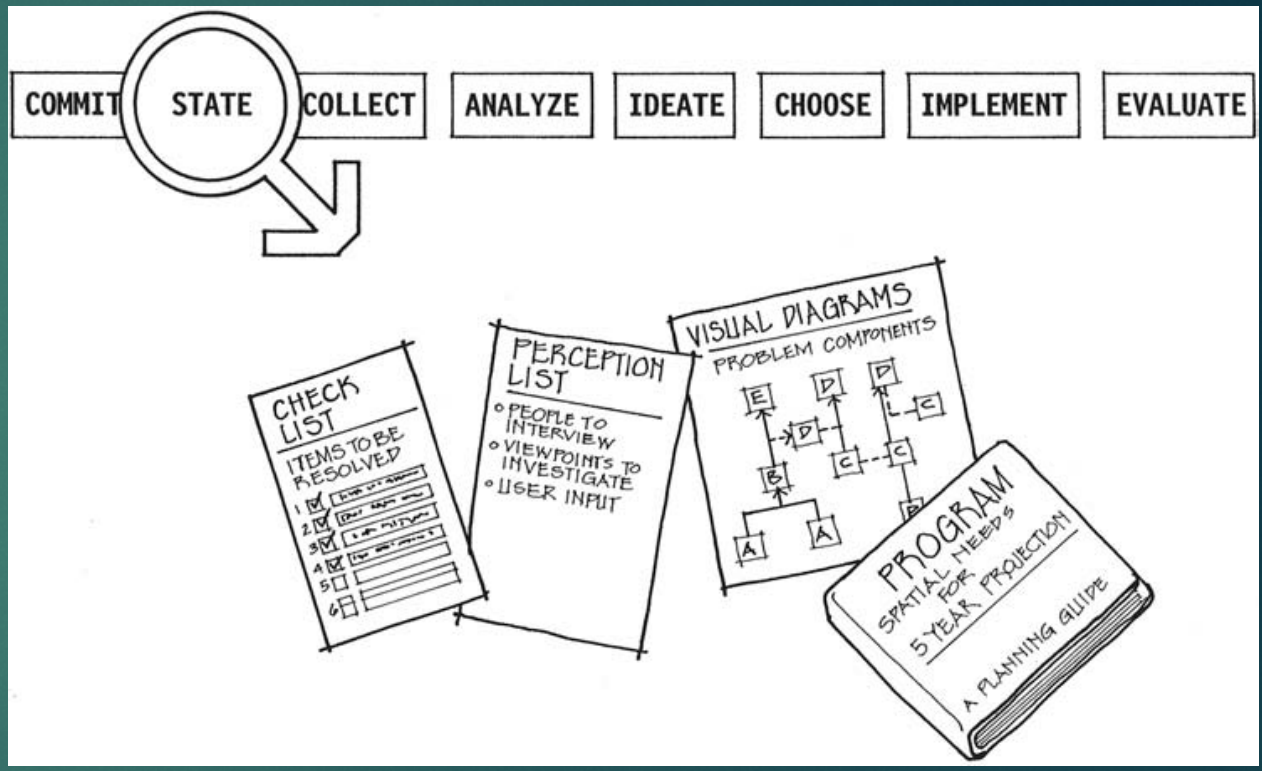
Commit (Accept the Problem)

- **Recognizing** a design problem and **committing** to it



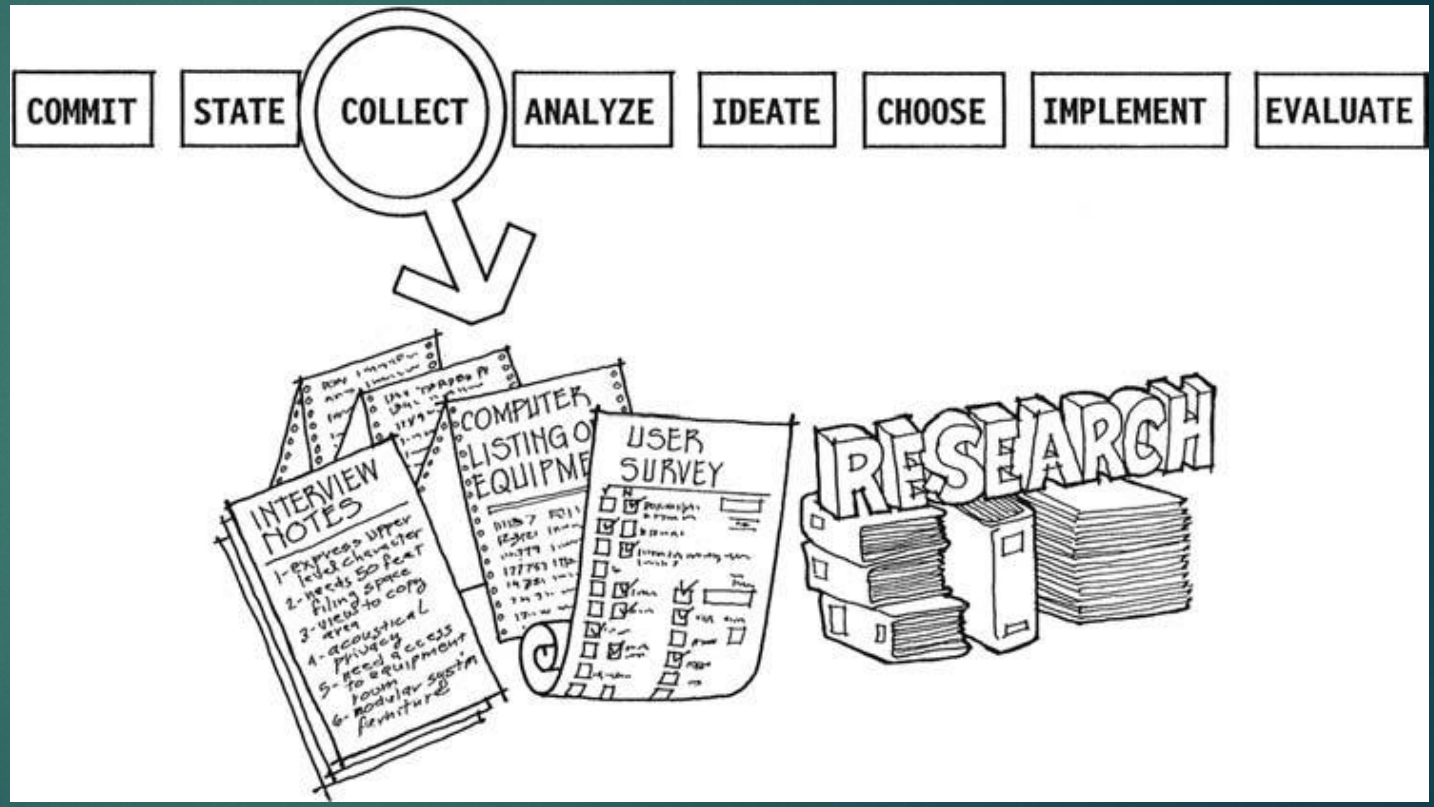
State (Define the Problem)

- involves establishing the **problem requirements, constraints, limitations, and assumptions** with which the designer is operating.
- state the **goals and objectives** to be resolved



Collect (Gather the Facts)

- **research, interviews, surveys,** etc. to gather information



Analyze

- **organize** gathered information into **related categories**
- **Techniques** for analyzing information can be implemented through the use of **conceptual sketches, matrices, pattern searching, and categorization.**

Ideate

- means **generating** as many **ideas** or **alternatives** for achieving project goals as possible.

Choose (Select the Best Option)

- chooses the most appropriate or “best” option by going back to see how the selected concept fits the client’s budget, needs, objectives, and desires.

Implement (Take Action)

- executing or taking action on the selected idea and giving it physical form
- communicates the idea through final drawings, plans, renderings, and other forms of presentation to the client.

Evaluate (Critically Review)

- reviews and makes critical assessment of what has been achieved to see if it does indeed solve the original problem.

LOOKING

SOURCES

- **we do not create** our design solutions in an **information vacuum.**
- We have the benefit of an abundance of **visual information** coming at us through various media, from books to television, websites, and films.

LOOKING

SOURCES: NATURE

- Observing nature reveals the **elegant adaptations of plants and animals** to their environment.
- The structures of nature, from beehives to birds' wings, offer models for efficient design and beautiful art.

LOOKING

SOURCES: NATURE

Source versus Subject

- The source is a stimulus for an image or idea.





LOOKING

SOURCES: ARTIFACTS, HISTORY AND CULTURE

- Studying art, architecture, craft, and design from all periods, regions, and cultures introduces you to a wealth of visual creations, better equipping you to discover your own solutions.

LOOKING

SOURCES: HISTORY AND CULTURE

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END

Questions?????