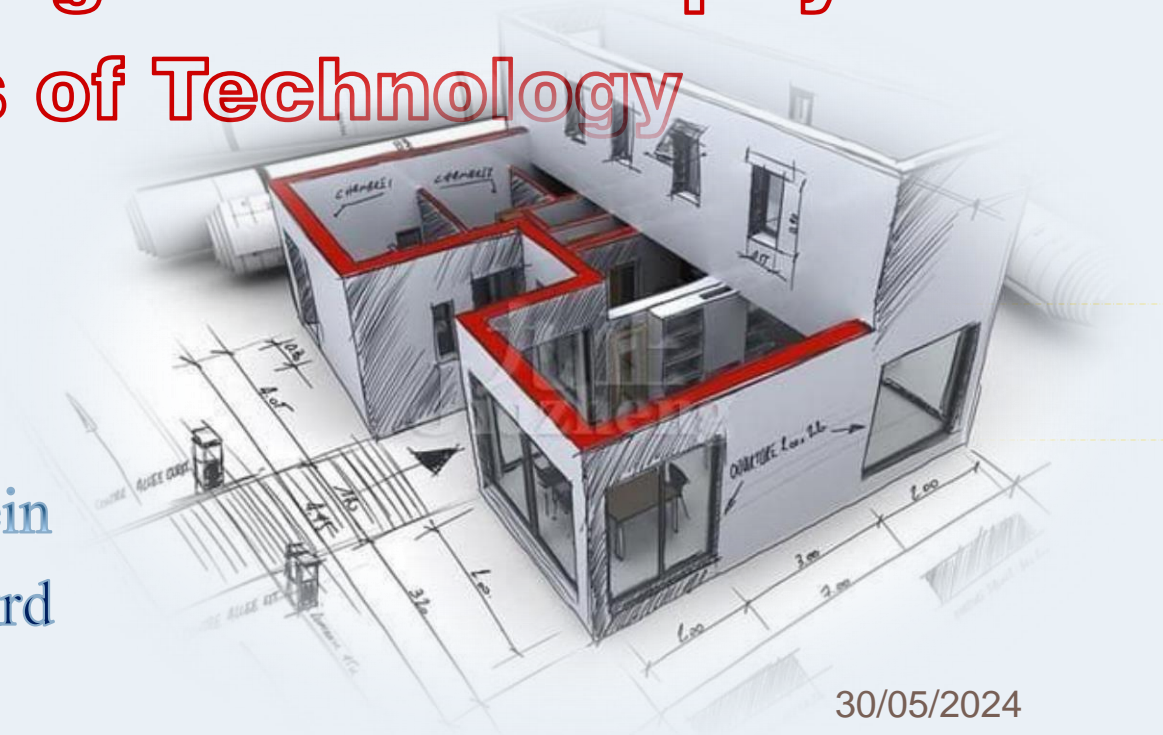




# Science, Technology, Engineering and Philosophy Notions of Technology

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**Philosophy** is a way of thinking about the world, the universe, and society. It works by asking very basic questions about the nature of human thought, the nature of the universe, and the connections between them. The ideas in philosophy are often general and abstract.

### **Benefits of Studying Philosophy**

- The ability to think logically.
- The ability to analyze and solve problems.
- The ability to assess proposed solutions.
- The ability to write and speak clearly, attending to details.

## What is philosophy of technology?

The **philosophy of technology** is a sub-field of **philosophy** that studies the nature of **technology** and its social effects.

**Philosophical** discussion of questions relating to **technology**.

The main **difference** of science and philosophy is in the way they work and treat knowledge.

2. **Science** is concerned with natural phenomena, while **philosophy** attempts to understand the nature of man, existence, and the **relationship that exists between the two concepts**. ... Meanwhile, **science** is only concerned with the latter.

# How is science related to philosophy?

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Here we will study the relationship between **philosophy** and **science**.

Literally the word '**science**' is derived from a Latin word 'Scientia' means knowledge.

Therefore, **science** is knowledge. ... **Science** aims at the formulation of general laws to explain events in nature.

## What is the meaning of science and technology?

**Science** includes the systematic study of the structure and behavior of the physical and natural world through observation and experiment.

**Technology is the application of scientific knowledge for practical purposes.**

# What is technology in simple words?

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Depending on when the word technology is used, technology is: ... A culture-forming activity (such as manufacturing technology, or space-travel technology).

Using resources to solve a problem (such as knowledge, skills, processes, techniques, tools and raw materials).

**Technology** refers to **methods**, **systems**, and **devices** that are the result of scientific knowledge being used for practical purposes.

**Technology** is changing fast. They should be allowed to wait for cheaper technologies to be developed.

A **scientist** can discover a new star but he cannot make one. He would have to ask an **engineer** to do it for him.

Gordon L. Glegg

**Without Engineers,  
Science is just a  
philosophy.**

**Art is I;**

**Science is We.**

**Claude Bernard**

More science quotes at Today in Science History [todayinsci.com](http://todayinsci.com)

**Architecture begins where engineering ends.**

Walter Gropius

ilikearchitecture.

**The Sun does not realise how wonderful it is until after a room is made.**

Louis Kahn

ilikearchitecture.net

**“The sun never knew how great it was until it hit the side of a building.”**

-Louis Kahn-

**“If you want an easy life, don't be an architect.”**

Zaha Hadid

# II- Notions of Technology and Architecture

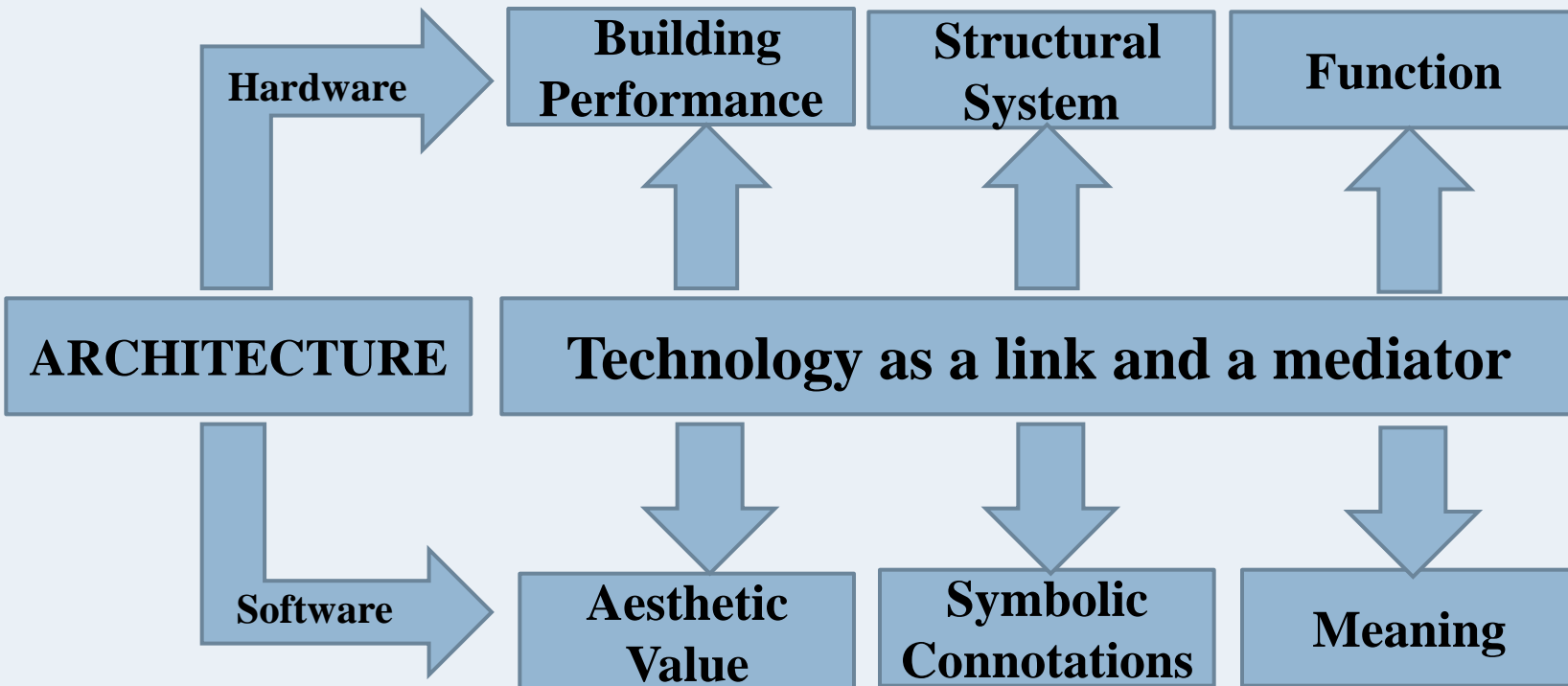
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## Technology in Architecture

- 1- It is necessary for the architect and help him to achieve modernity and to achieve and enhance the architectural identity.
- 2- Technology is exists in all ages so architecture is based on technology in the following aspects and correlations:
  - Performance of the building with aesthetic value.
  - Symbolic connotations with the structural system.
  - Meanings with function.

# Notions of Technology and Architecture

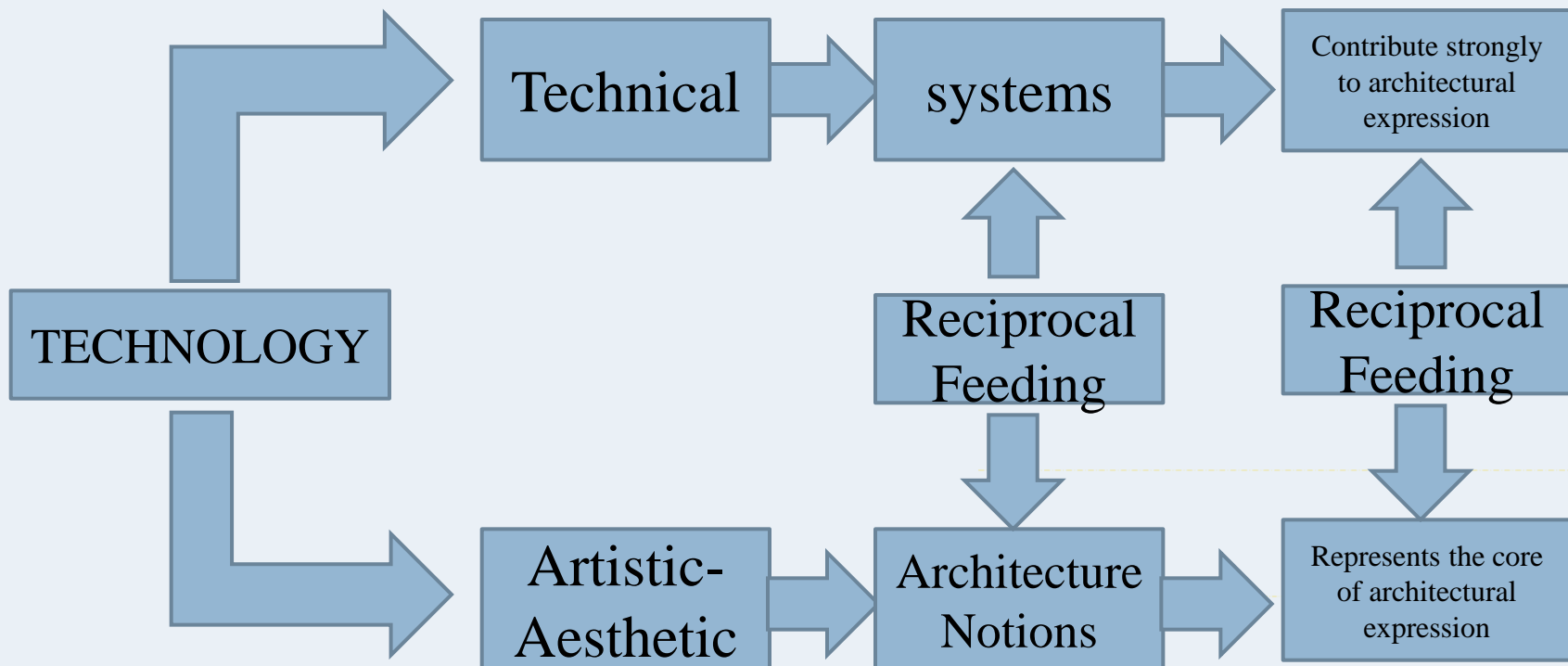
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### 3- Technology in architecture is twofold:

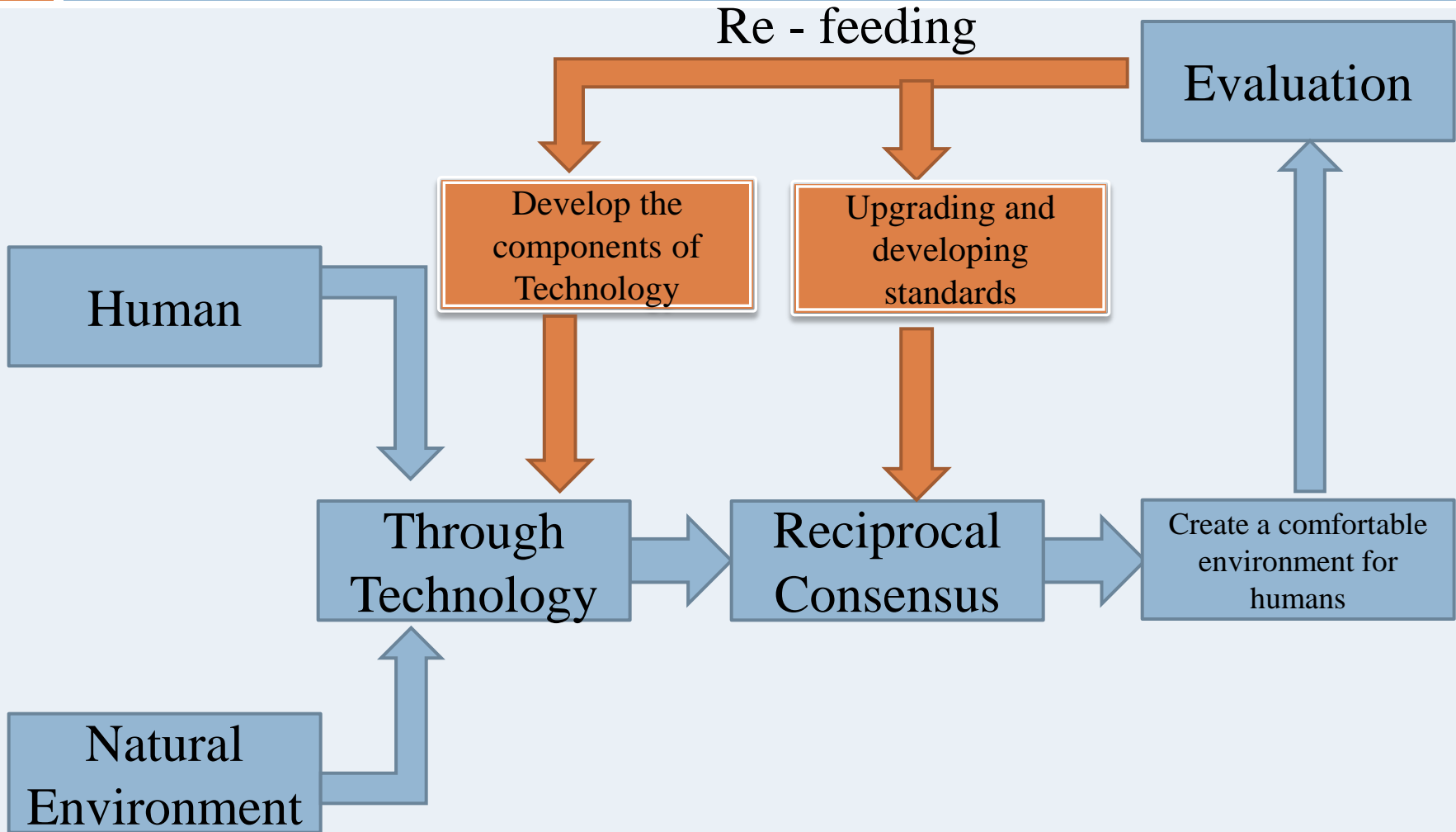
- The first one is **technical**, It includes **structure, service and construction systems**.
- The second one is **Artistic- Aesthetic**, It includes the **basic principles of architecture** of **composition, form** and **their concepts** such as **scale, balance, dominance** and **functional requirements**, etc.
- The **first** means **physical requirements** contribute strongly to **architectural expression**, the **second** represents the **core of architectural expression** perhaps relying on the first side.



**4-** It is necessary to find harmony between the human self, and its environment at the physical, psychological, and emotional levels, which creates a comfortable internal artificial environment for the human being within the external natural environment, who always seeks to complete the elements of himself through Creating the reality **(the environment)** to serve him and meet his needs.

# Human and the Natural Environment

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**5- Architecture** must keep up with the concurrent sciences and interact with their laws to preserve creativity by blending those sciences and laws with unlimited imagination.

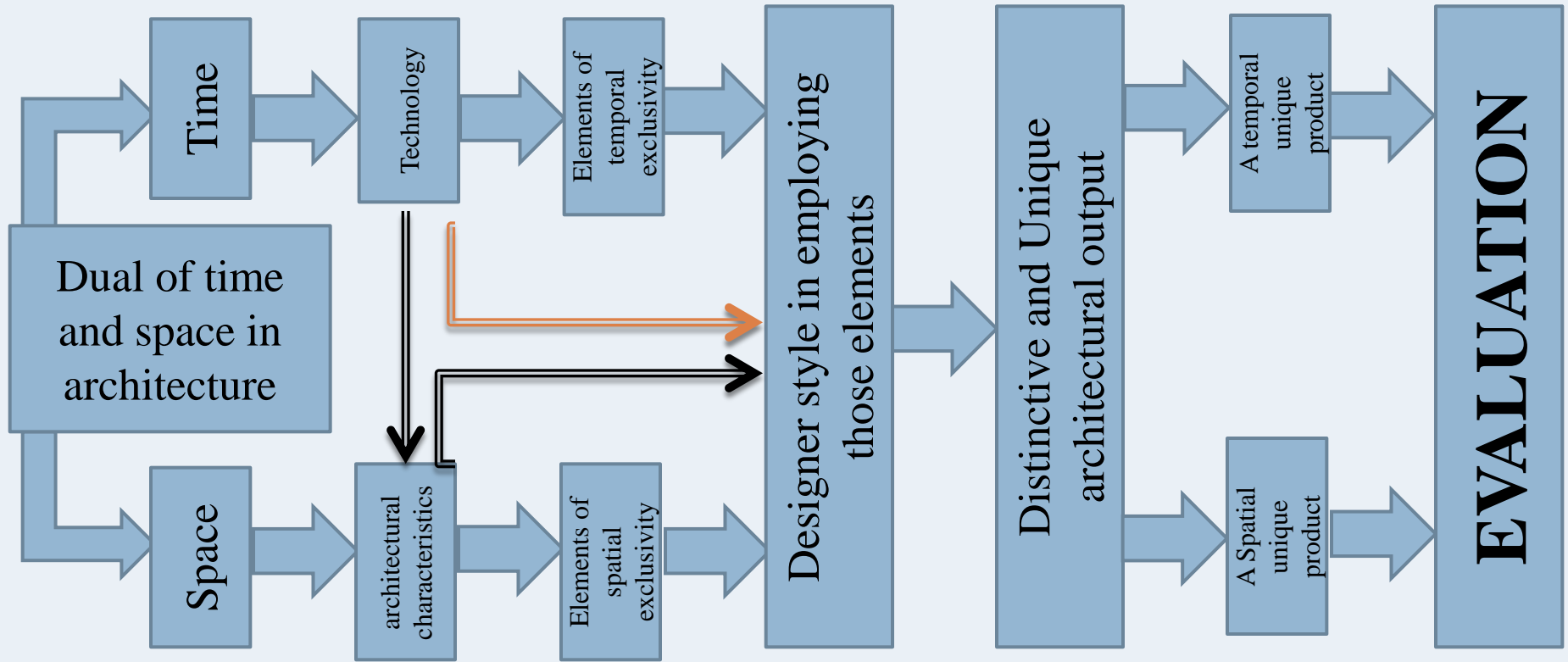
The intermediary between architecture and science is technology. (Why?)

Technology has enormous potential derived from those sciences, it gives the architectural designer great freedom to provide diverse and creative alternatives in design and implementation.

**6- Technology** in architecture is vital for the temporal identification of architecture, where spatial identity is defined by pure architectural characteristics, but also using technology as an intermediary.

The uniqueness of the style of the designer is appears by employing both technology and architectural characteristics in the design and construction output.

## Dual of time and space in architecture



## **7- The main two basic tasks of Technology in architecture.**

- Physical technology performance  
(Technical performance)
- Symbolic technology performance  
(Performance related to architectural characteristics)





THANKS

QUESTIONS ?