



# Introduction to Business Analysis

# Key topics:

- What is a Business analysis?
- Software development process
- Key terms in IT projects
- Software development methodologies
- Development team
- Requirements
- Types of requirements



# What is Business Analysis?



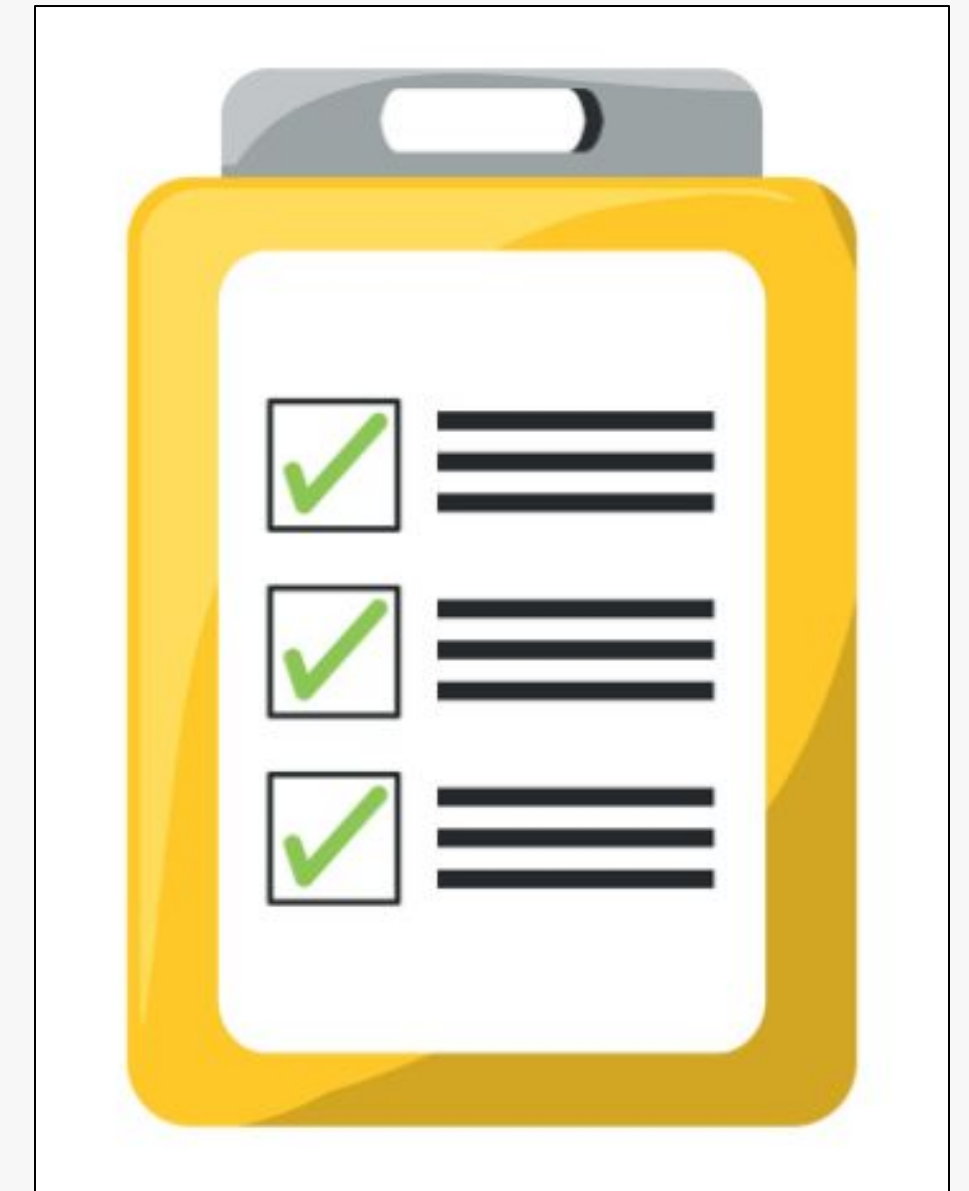
**Business analysis** is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders.

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# The result of an Effective Business Analysis



The result - a description of a good IT product that meets business and user needs.



# Who is a Business Analyst?



**A business analyst** is any person who performs business analysis tasks, no matter their job title or organizational role.

Business analysts are responsible for eliciting, analyzing, validating, and documenting business, organizational and/or operational requirements.

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# BA Tasks on a Project



## Business Analysis Planning

Enterprise  
Analysis

Requirements  
Elicitation

Requirements  
Analysis

Solution Quality  
Assessment

Requirements Management and Communications

# Software Development Process



1. Custom software
2. Commercial or Off-the-Shelf (COTS) software
3. SaaS

# Types of Software by Interaction Method



- Desktop
- Client-server
- Web services
- Mobile applications
- Specialized software

# Key Terms in IT Projects



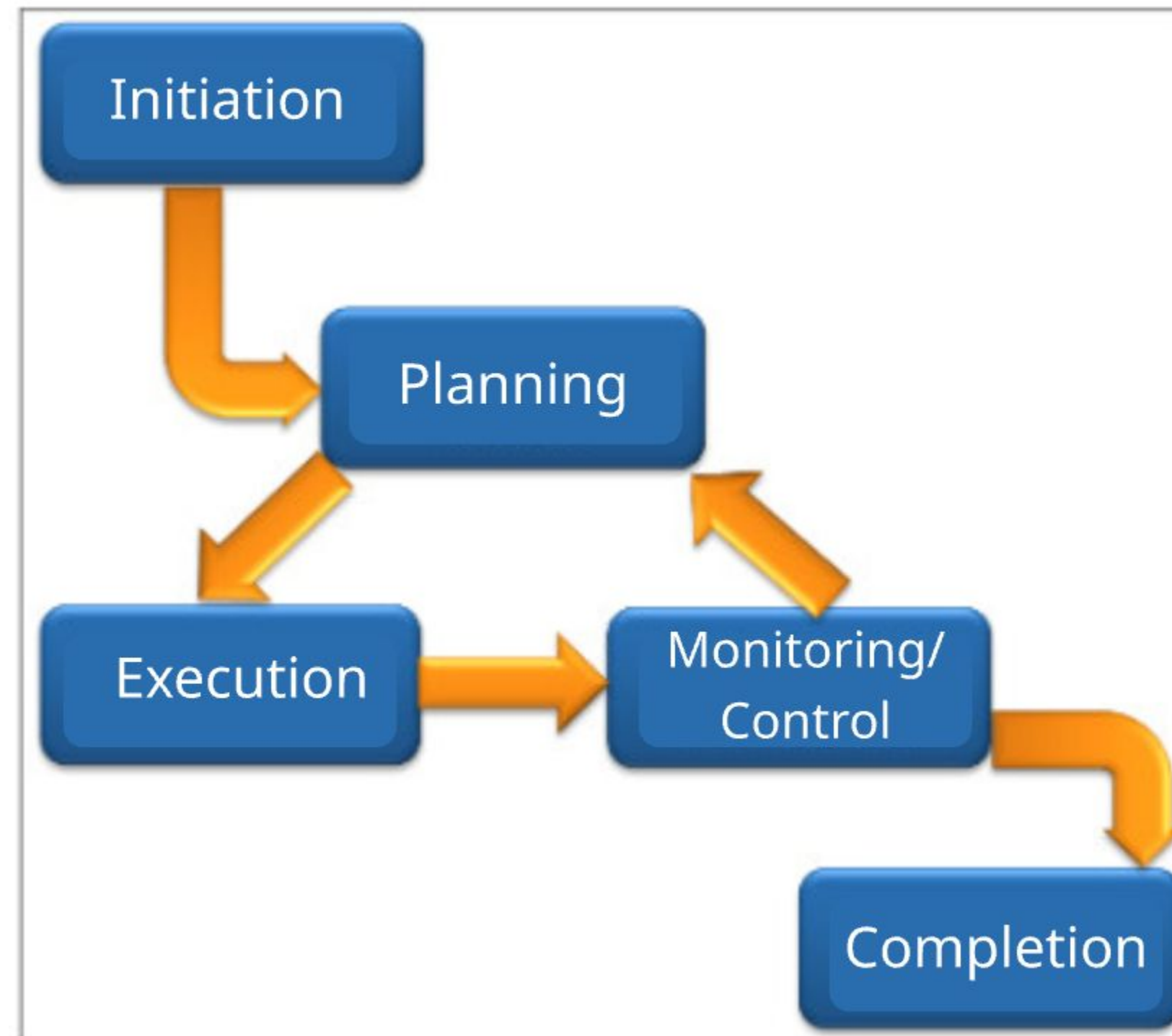
- **Project** is a separate enterprise with specific goals, often including requirements for time, cost, and quality of the results achieved.
- **Product** is the result of project activities (equal to a project at the beginning of development, but broader as it evolves).
- **Domain** is an area/field for which software is developed (broader than both the project and the product).
- **Solution** is a product that solves a customer's problem (may include multiple projects, but smaller than the domain)

# Project Core Attributes



- Goal
- Scope
- Time
- Resources

# IT Project Lifecycle

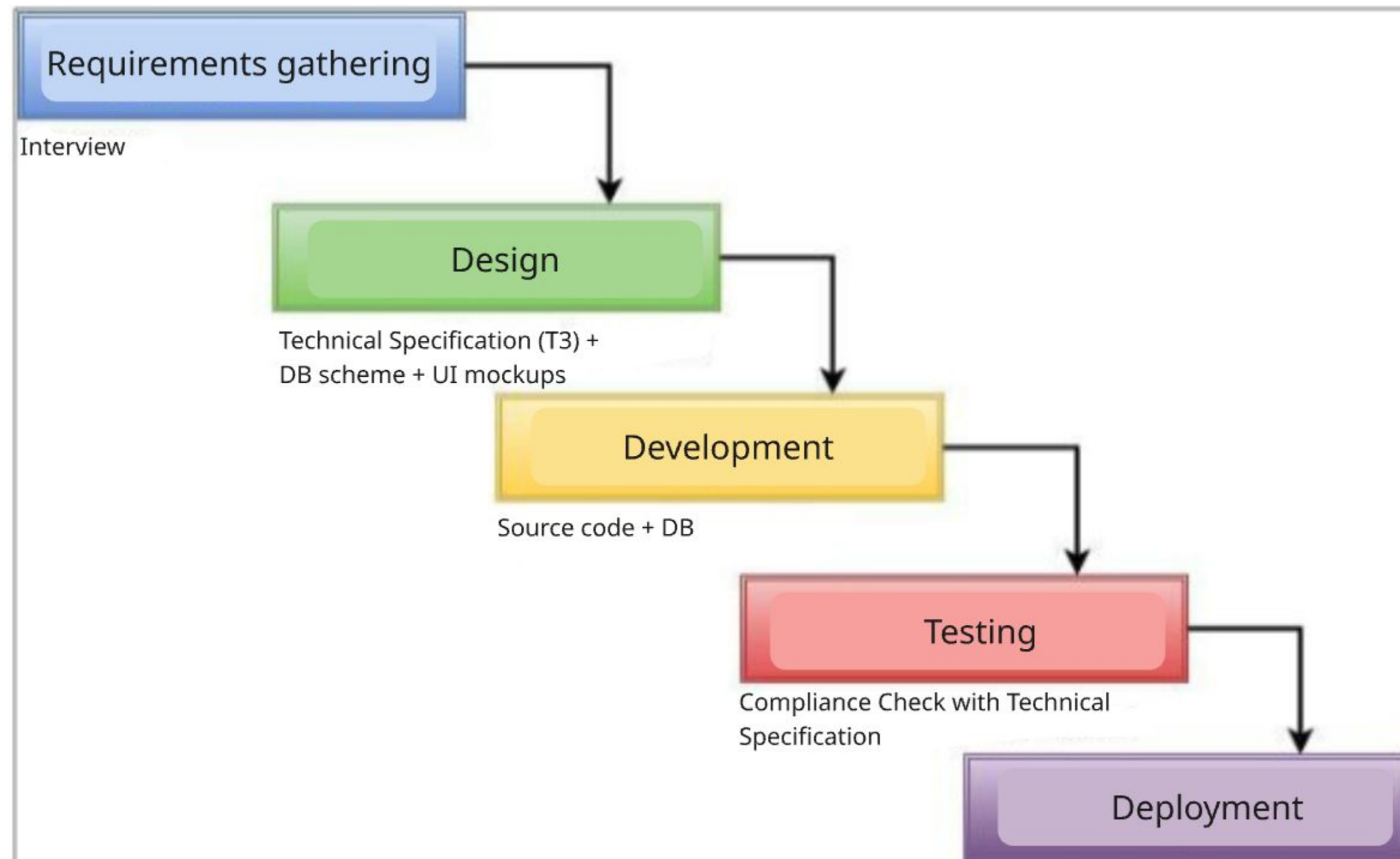


# Project Management Methodologies

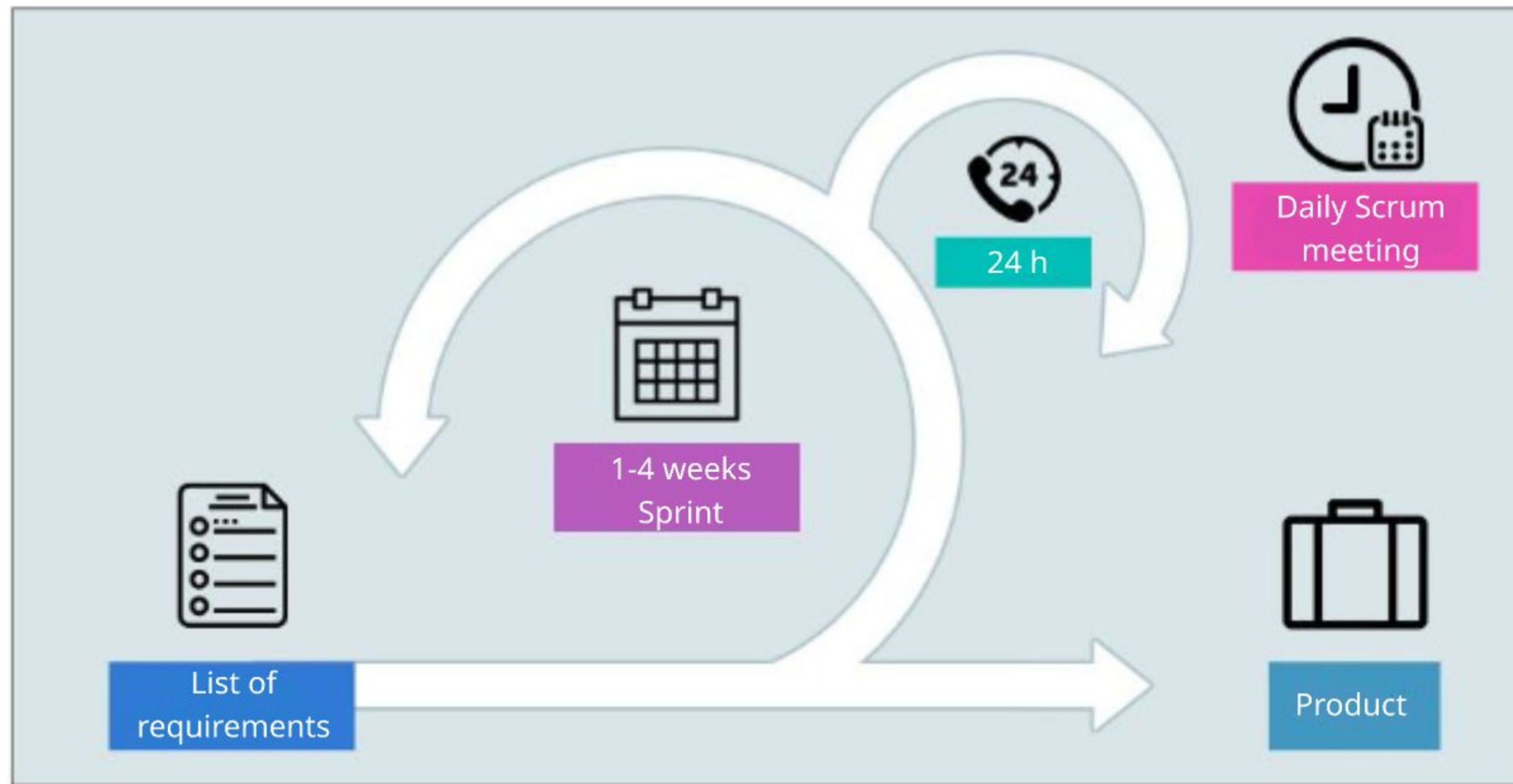


- Classical – plan-driven
- Adaptive – change-driven

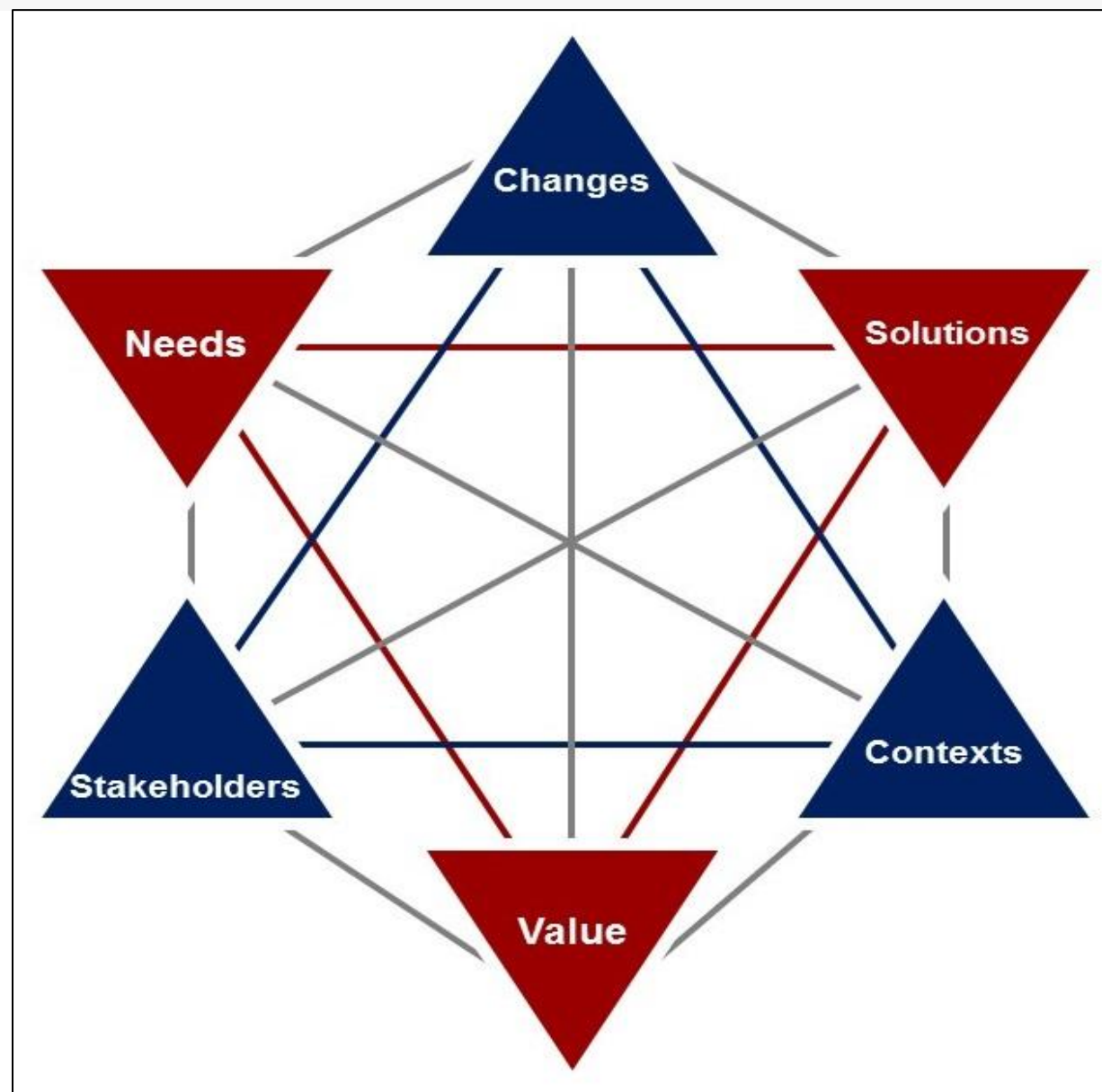
# Waterfall Model



# Scrum



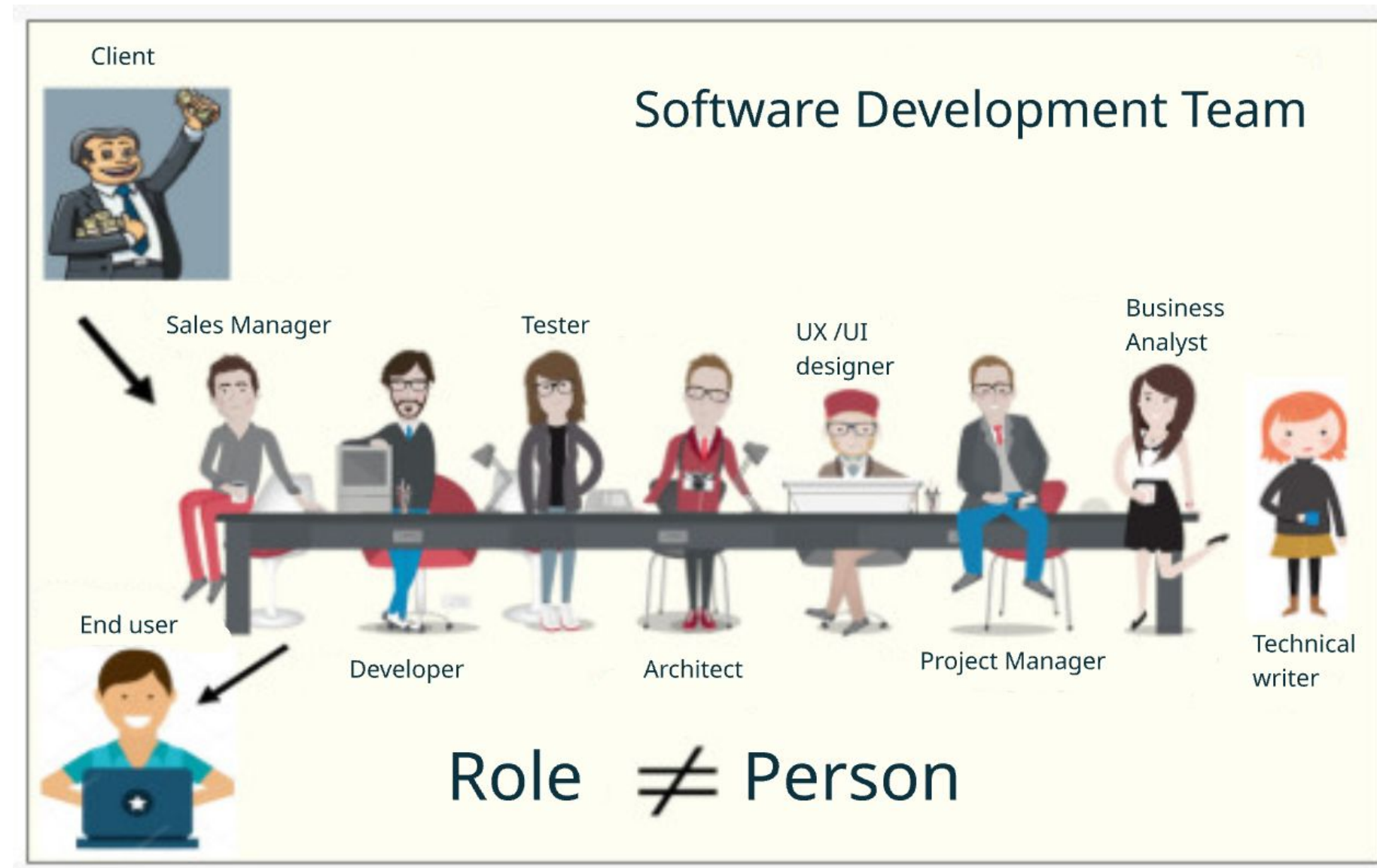
# Business Analysis Core Concept Model (BACCM)



## Business Analysis Core Concept Model (BACCM)

- What **changes** are we making?
- What **solutions** are we creating or evolving?
- In what **context** are we and the solution?
- What is **valuable** to stakeholders?
- Who are the **stakeholders**?
- What **needs** are we trying to meet?

# Project Team



# Key Business Analysis Terms



- **Business Analysis** – a body of knowledge and techniques that enable change within a company by identifying needs and recommending solutions.
- **Business Analysis Information** – a collection of outcomes, requirements, designs, solution options, solution boundaries, and change strategies.
- **Stakeholders** – all individuals who interact with the product or solution.
- **Plan** – a description of events, their dependencies, expected sequences, schedules, and outcomes.
- **Design** – a visual representation of the solution.
- **Company** – an autonomous group of people led by an individual or a board.
- **Organization** – an autonomous group where changes occur and solutions are implemented.
- **Requirement** – a practical expression of a need.

# What are Requirements?



1. Conditions or capabilities required by a stakeholder
2. Conditions or capabilities that must be met or be implemented in a solution
3. Documented conditions or capabilities from points 1 or 2



# What are Requirements?



IMPORTANT!

Requirements define **what** should be done, but not **how** to do it!

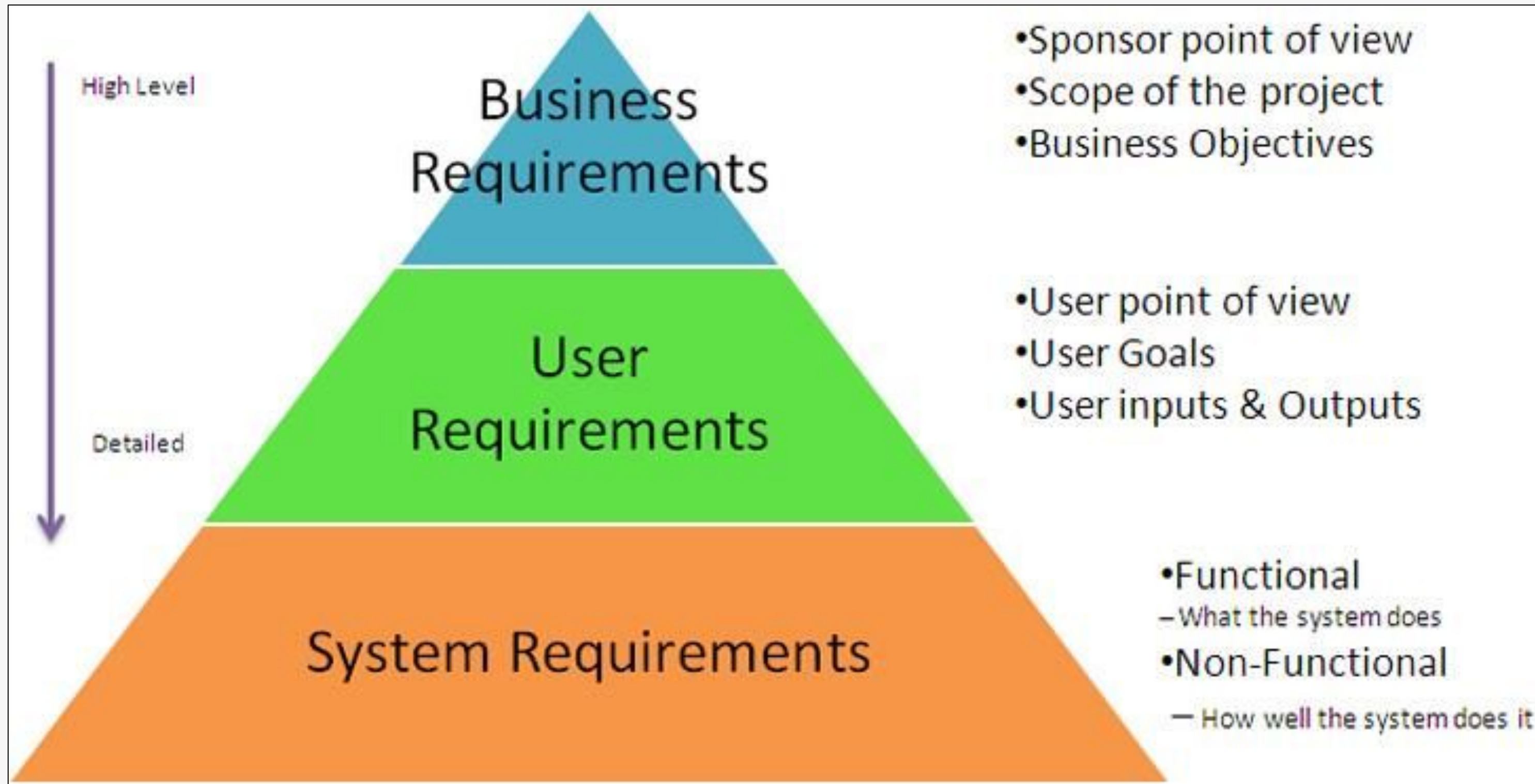


# Why Classify?



- **Classification** – a method of grouping observed or studied subjects based on shared characteristics.
- Having a classification system allows to use common templates for working with requirements within the same group (common sets of attributes, relationship rules, etc.).

# Requirements Classification (D. Leffingwell)



# Business Requirements



- High-level statements of goals, objectives, and needs
- Needs of the entire organization
- Financial and non-financial (e.g., customer satisfaction %)
- Define the purpose of the solution
- Metrics will be used to measure success in achieving these requirements

## **Examples:**

- Achieve sales of 1000 units or \$40,000 revenue in 6 months
- Comply with specific federal and state regulations



# User Requirements

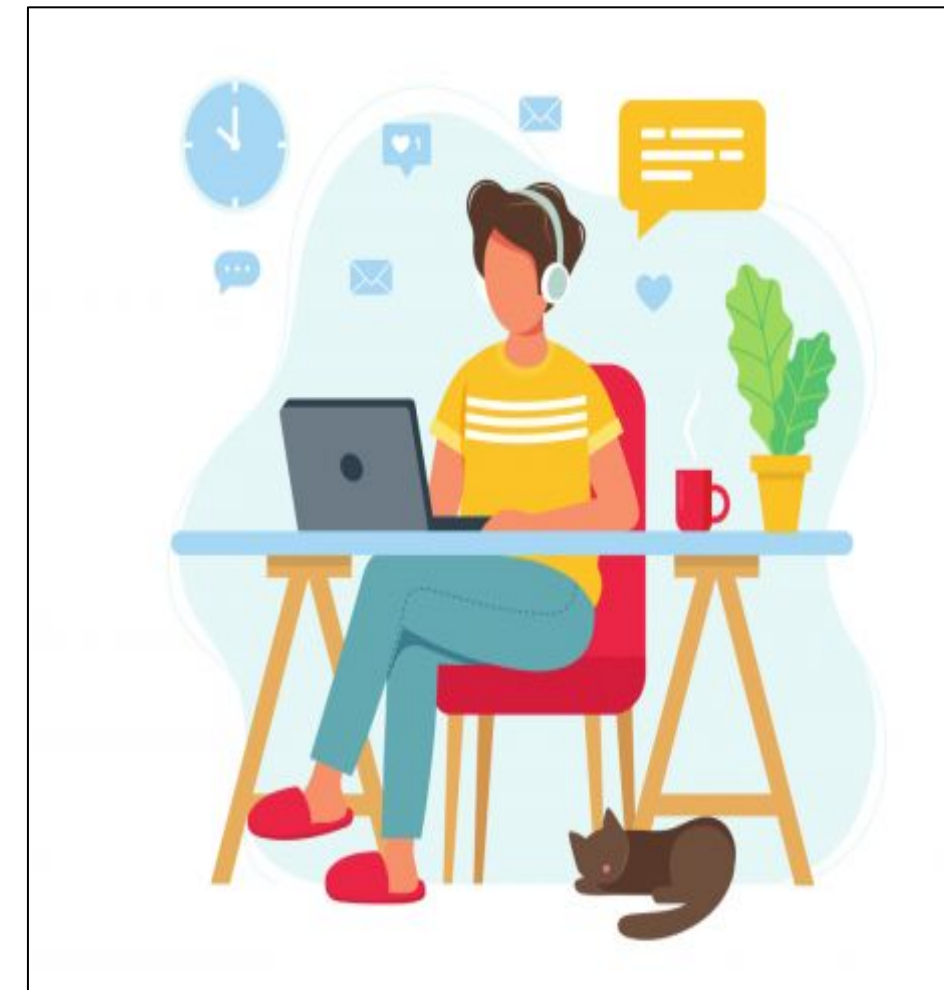


- Needs of a specific user / a stakeholder or a group (what tasks they need to do)
- How the user will interact with the product
- Based on user's input or based on requirements analysis

***Examples:***

***Before printing, the printer status/condition needs to be checked***

***Operator needs to manage the queue of requests assigned to him/her***



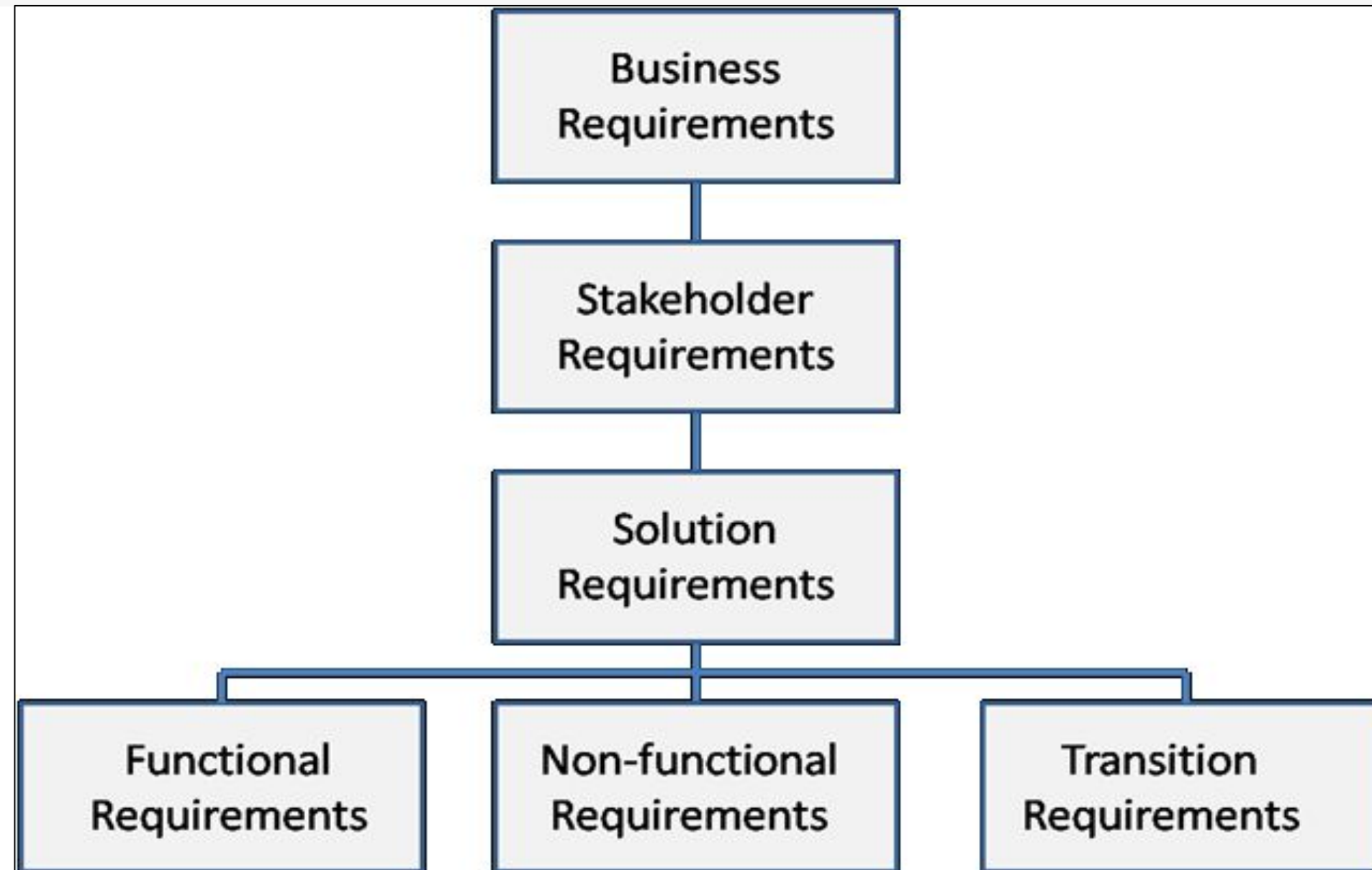
# System Requirements



- Solution characteristics that fulfill business and stakeholder requirements
- Derived from analysis
- Functional requirements:
  - Expected system behavior
  - Capabilities and operations available for execution
  - Actions or system responses
- Non-functional requirements: quality, conditions, business rules, constraints, interface requirements



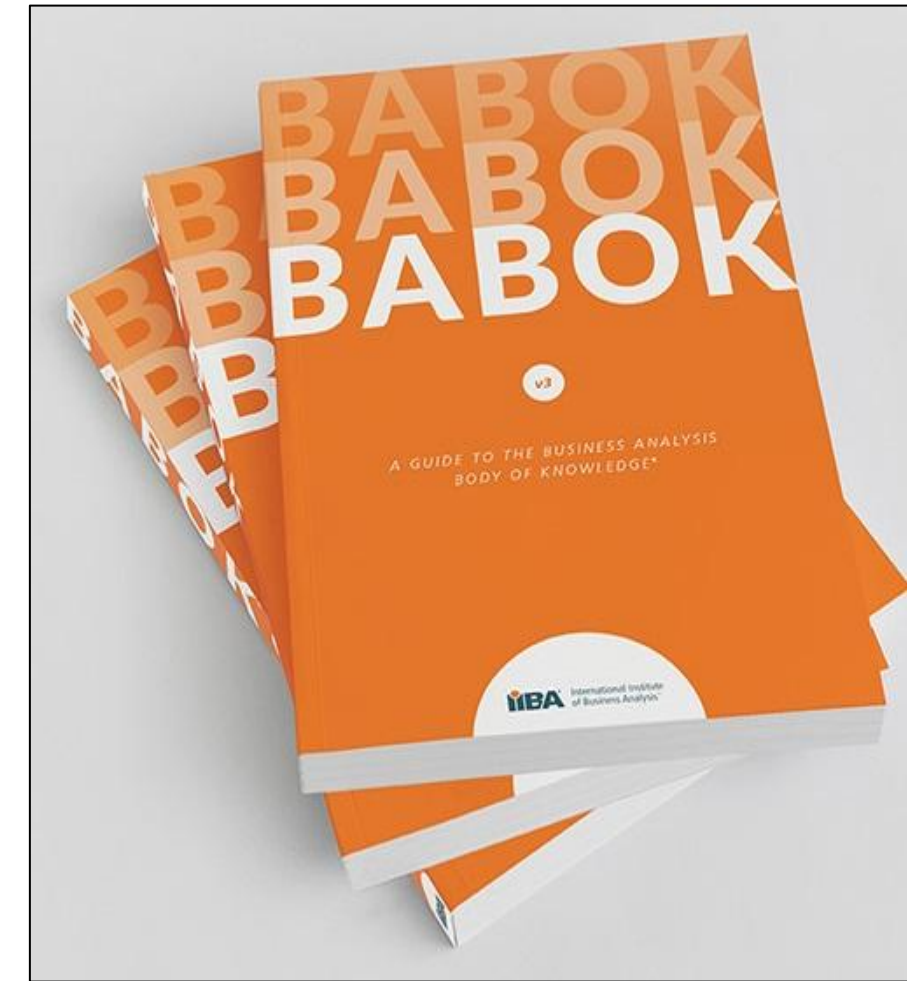
# Requirements Classification (BABOK)



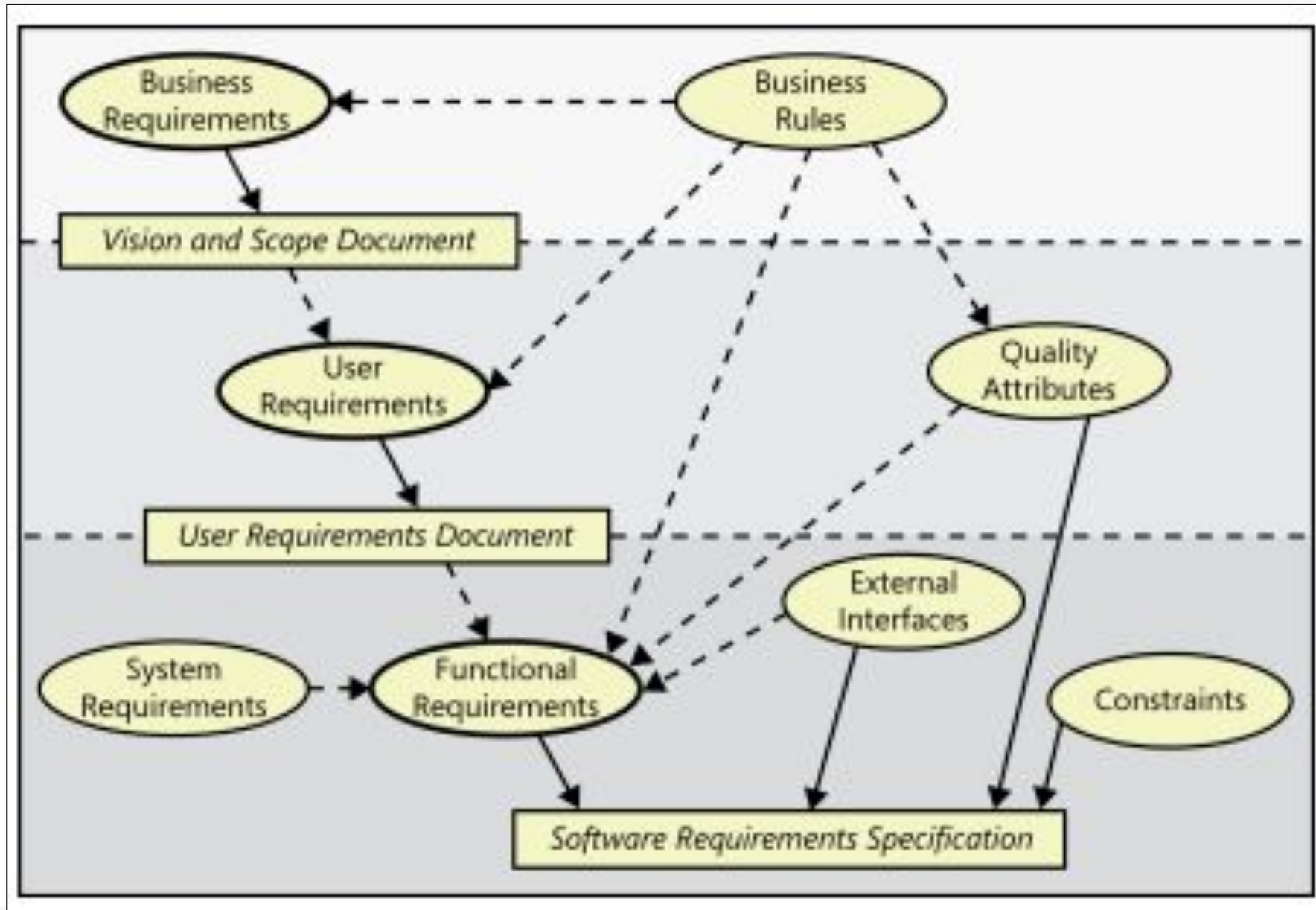
# Requirements Classification (BABOK)



- Business-requirements
- User/stakeholder requirements
- Solution requirements:
  - Functional Requirements
  - Non-functional Requirements
- Transition requirements - data transformation from existing systems, as well as other relevant changes necessary to achieve the desired future state.



# Requirements Classification (K. Wiegers)



Solid line = "stored in"

Dashed line = "source of" or "influences"

# Good vs. Bad Requirements



## **Business Requirements:**

**Bad:** The system must meet market demands

**Good:** The system must comply with GDPR and data retention policies in company X

## **User Requirements:**

**Bad:** I should be able to send different files in a message

**Good:** I can attach up to 10 audio, video and image files in the 3 most common formats to a message

## **System Requirements:**

**Bad NFR:** System must be fast

**Good NFR:** System response time must not exceed 0.5 sec

**Bad FR:** System must not accept passwords longer than 15 characters

**Good FR:** When user inputs password longer than 15 characters, system shows error message



# Questions?

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