



# Chapter 2: The Concept of SDLC

*Presented by: Elahe Habibi*



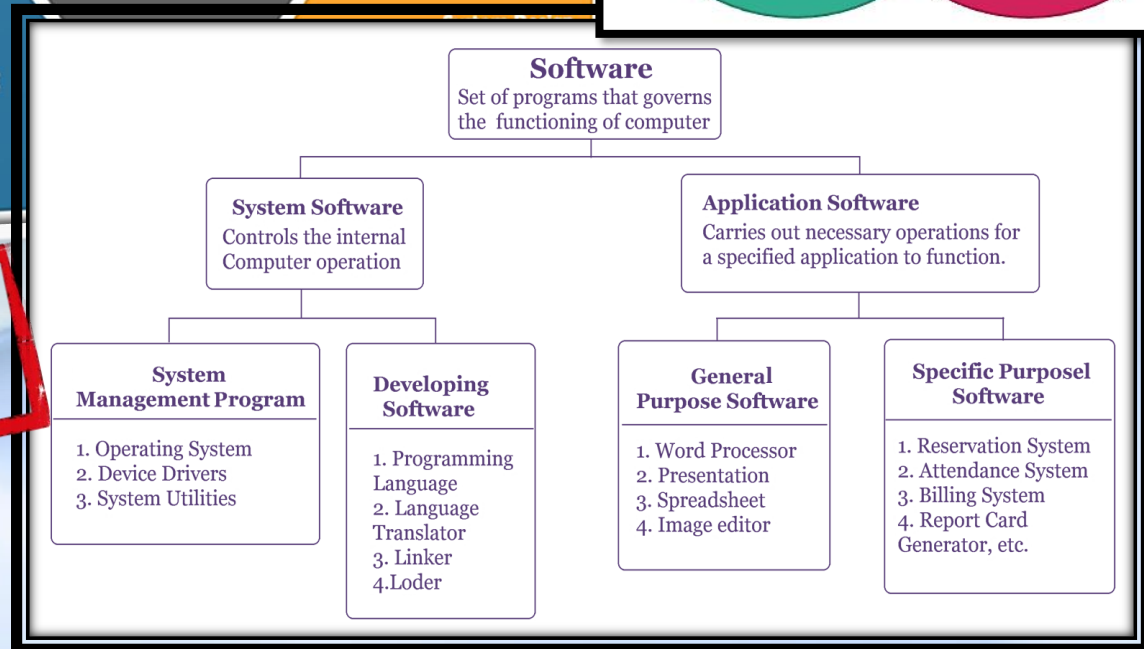
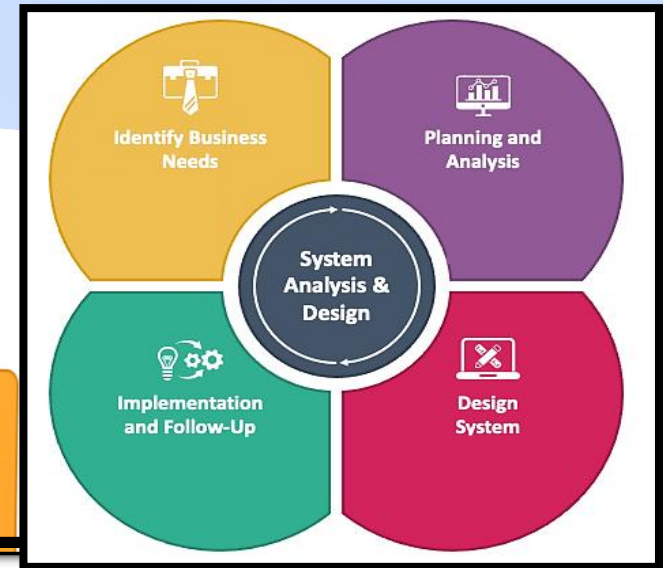
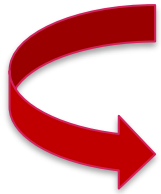
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# Review of Chapter1

What is SAD?

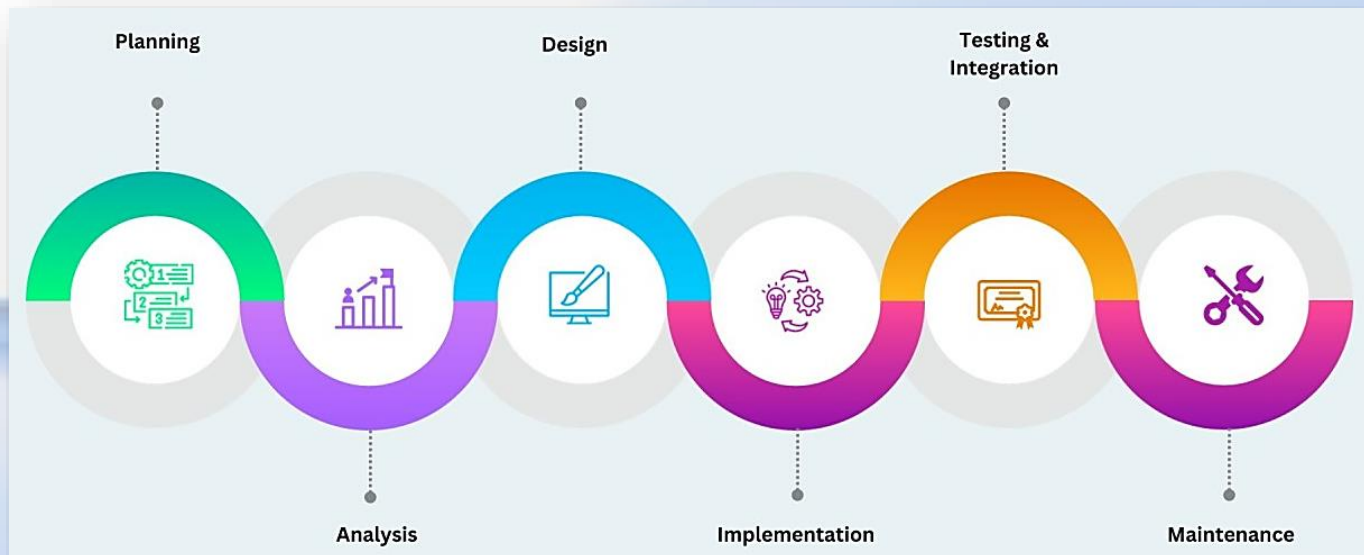




# Introduction To SDLC (1)

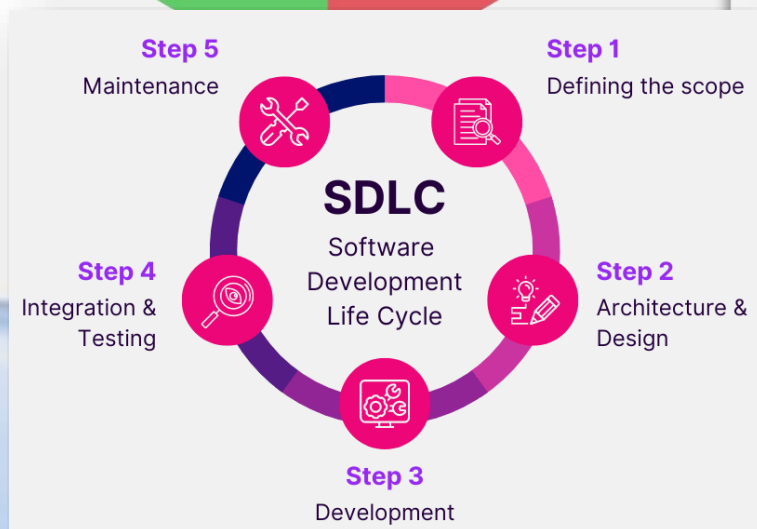
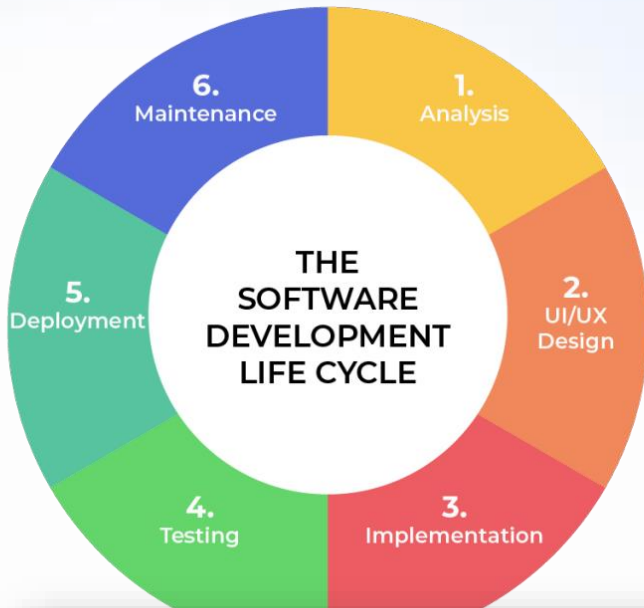
## The Software Development LifeCycle (SDLC)

- The software development lifecycle (SDLC) is the cost-effective and time-efficient **process** that development teams use to design and build *high-quality* software. The goal of SDLC is to minimize project risks through forward planning ***so that software meets customer expectations during production and beyond.***





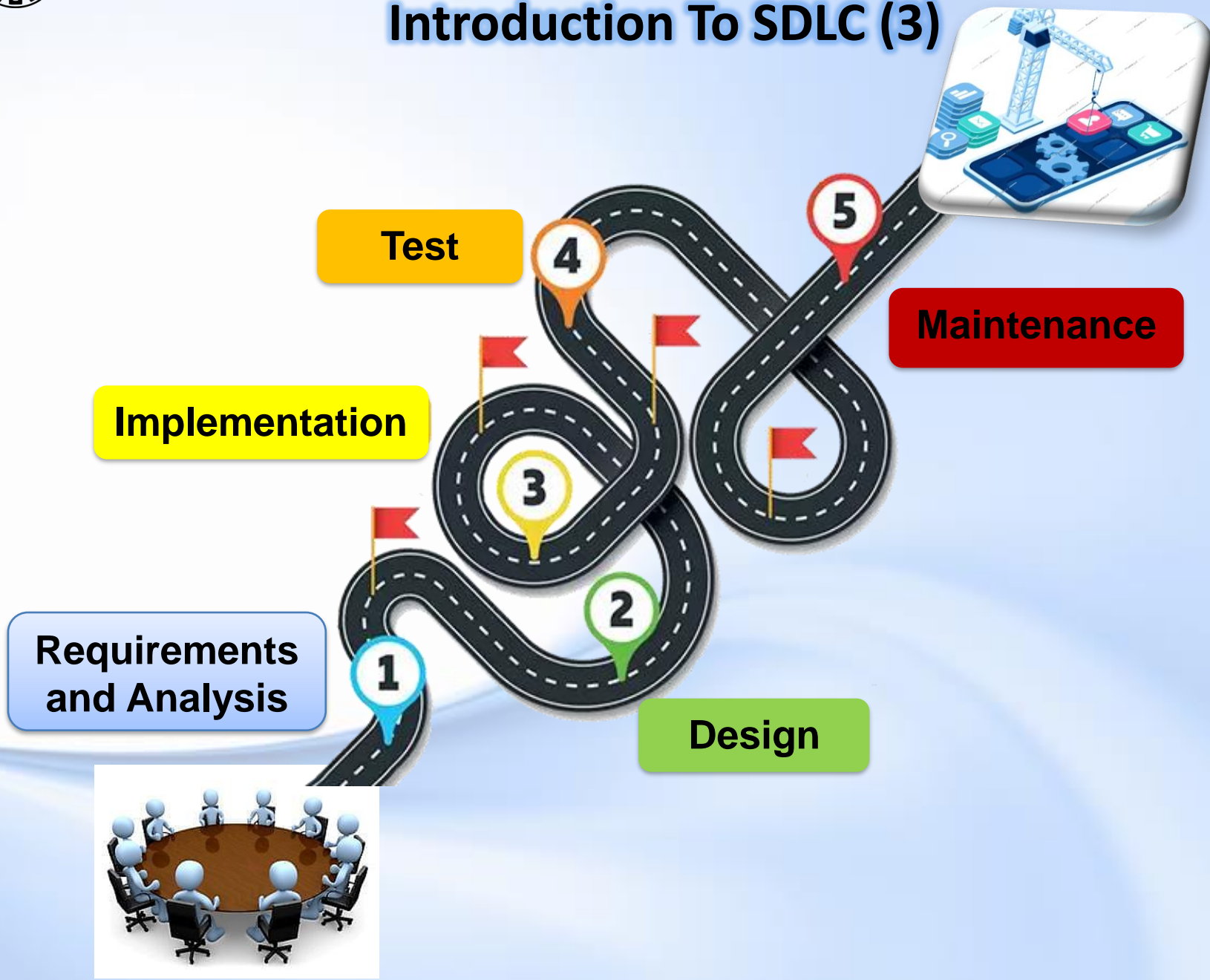
## Introduction To SDLC (2)







## Introduction To SDLC (3)





# SDLC Phases (1)



## Phase 1: Requirement gathering and analysis

**Purpose:** Create an overview of the project, determine requirements, and set the product groundwork.

**Key Personnel:** Business Analyst

**Output:** An SRS document that defines project goals and needs



## Phase 2: Feasibility study

**Purpose:** Evaluate whether the requirements analysis aligns with business goals and resources.

**Key Personnel:** Team leads and higher management

**Output:** An Expanded SRS document approved by a decision-maker



## Phase 3: Prototyping and Design

**Purpose:** Design the upcoming product (architecture, UI, features, security measures, etc.)

**Key Personnel:** Architects and senior developers

**Output:** A detailed DDS document that explains how to code the product.



## SDLC Phases (2)



### Phase 4: Development

**Purpose:** Translate the system design into source code and build the first version of the product.

**Key Personnel:** Developers

**Output:** Testable, fully functional software



### Phase 5: Testing

**Purpose:** Ensure the product has no bugs or exploits and it is in line with DDS expectations.

**Key Personnel:** All levels of testers

**Output:** A thoroughly tested version of the product



### Phase 4: Deployment

**Purpose:** Push the new product into production by gradually phasing it into use

**Key Personnel:** Deployment engineers

**Output:** The release of a fully functional and tested product



### Phase 5: Maintenance

**Purpose:** Keep the product safe and at optimal performance, plus occasionally add new features.

**Key Personnel:** Production support engineers, testers and developers

**Output:** A fully monitored product that is continuously seeing improvements

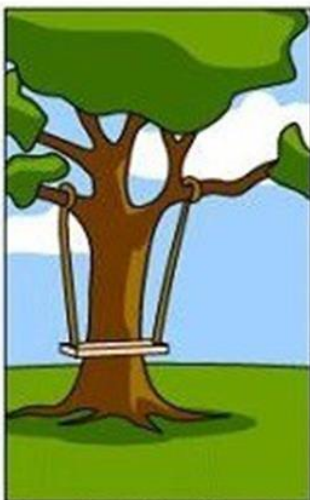




## SDLC Phases (3)



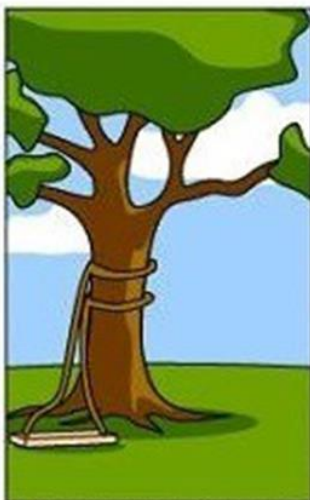
How the customer explained it



How the Project Leader understood it



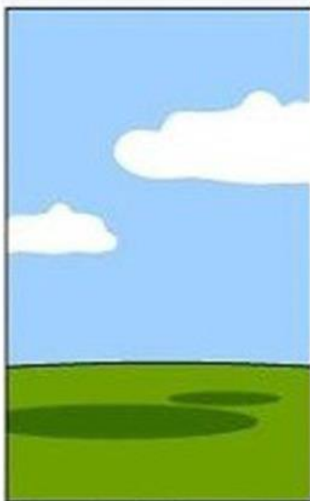
How the System Analyst designed it



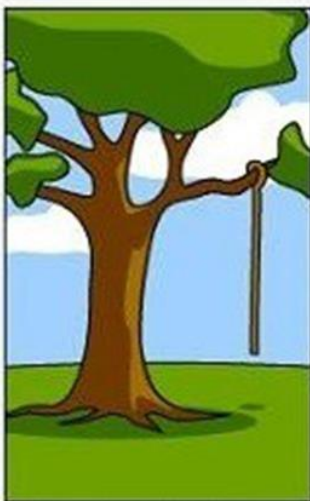
How the Programmer wrote it



How the Business Consultant described it



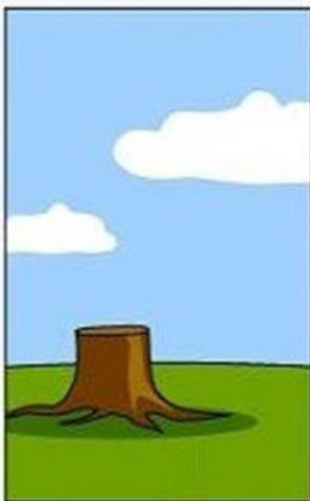
How the project was documented



What operations installed



How the customer was billed



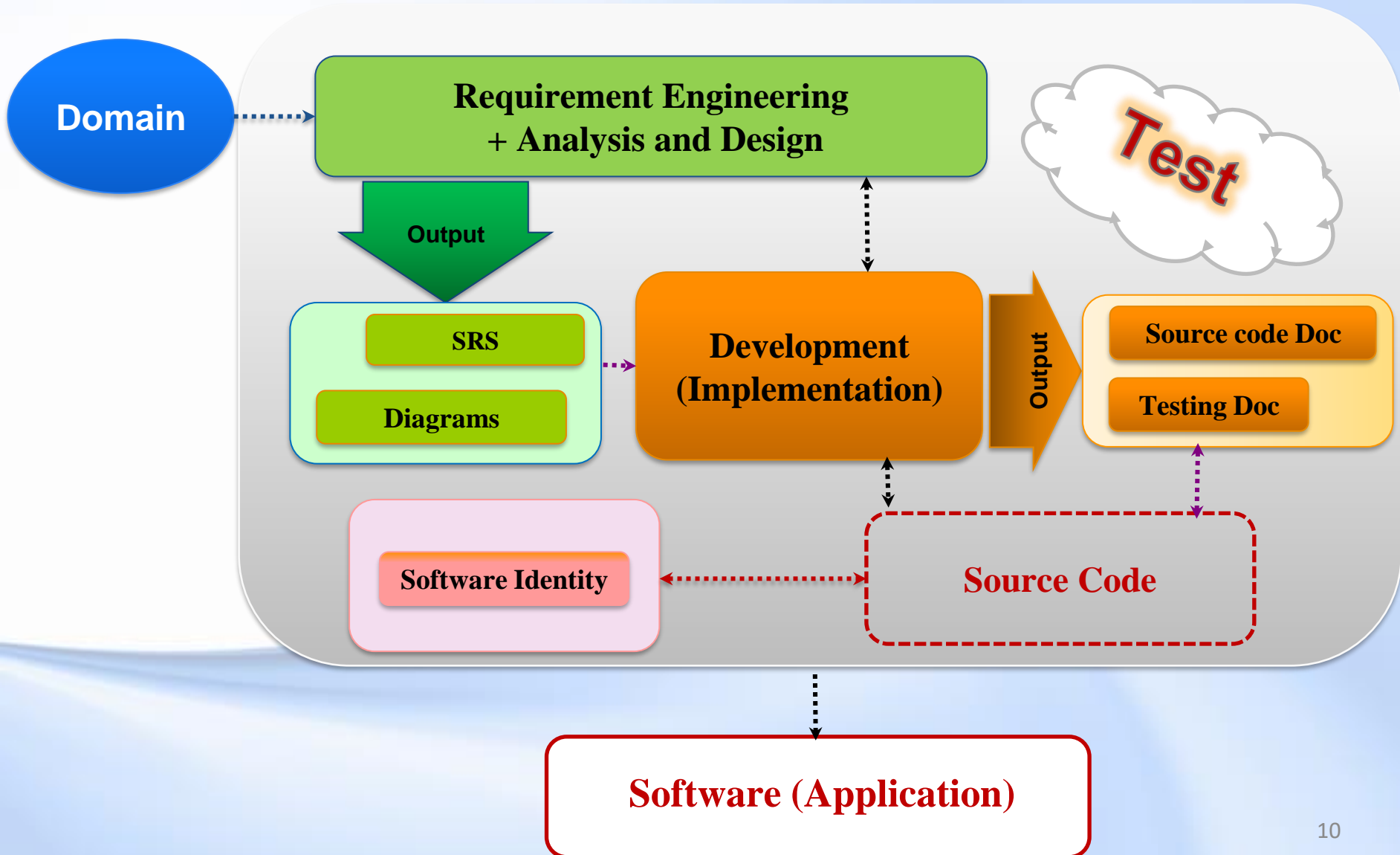
How it was supported



What the customer really needed

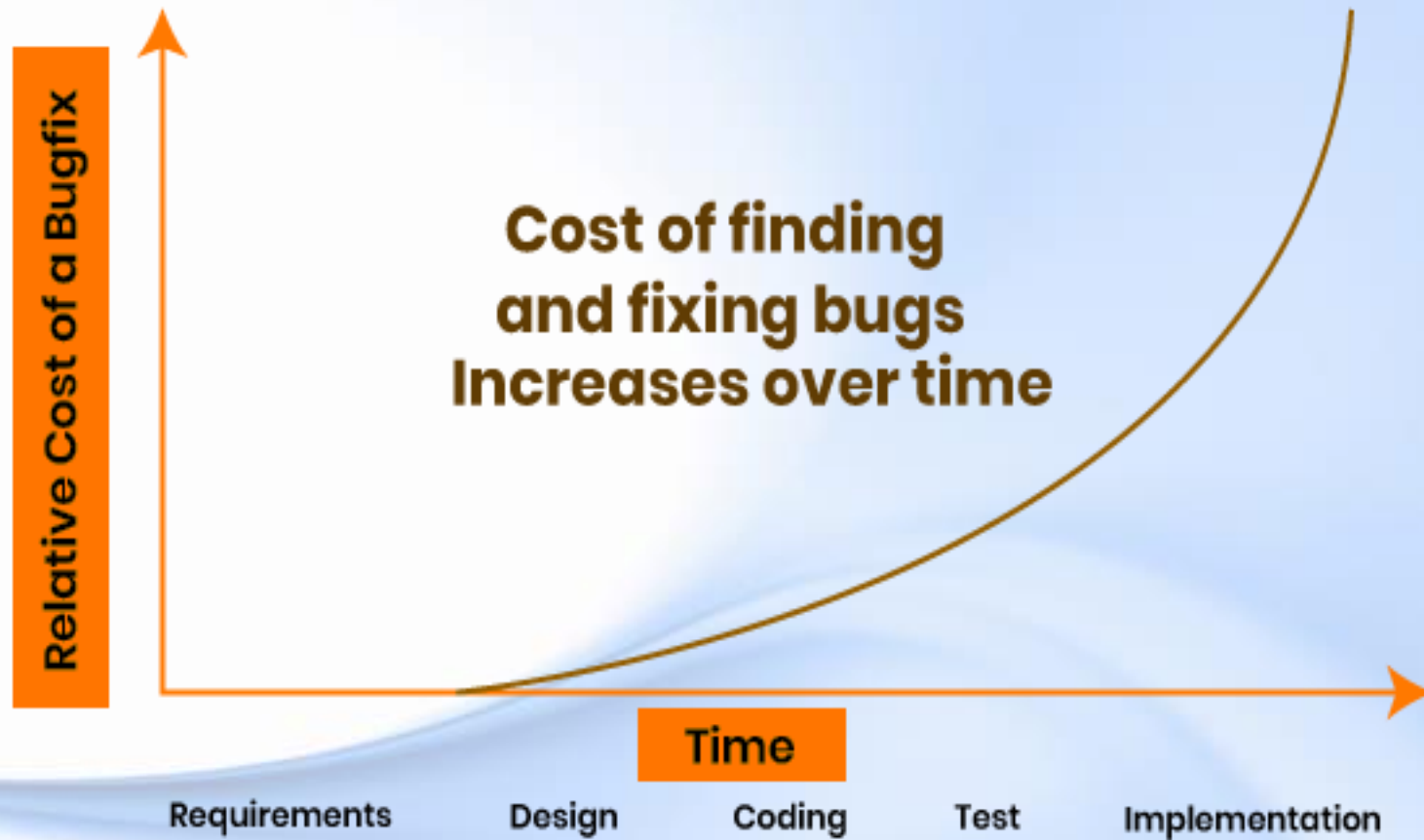


## SDLC Phases (4)





## Statistics (1)





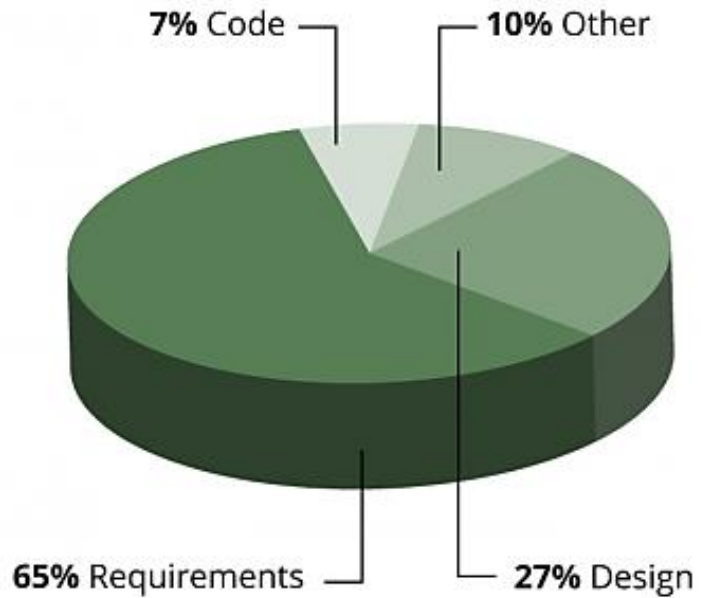
## Statistics (2)



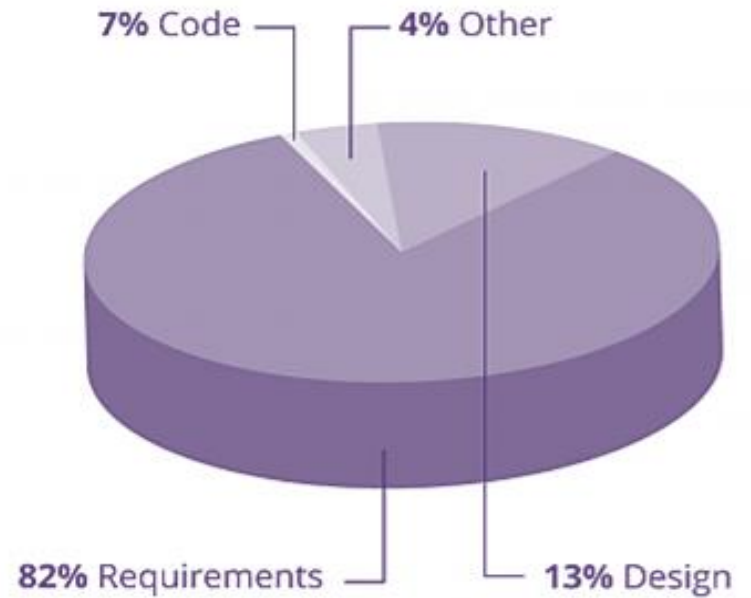


## Statistics (3)

● Distribution of Defects



● Distribution of Effort to Fix Defects

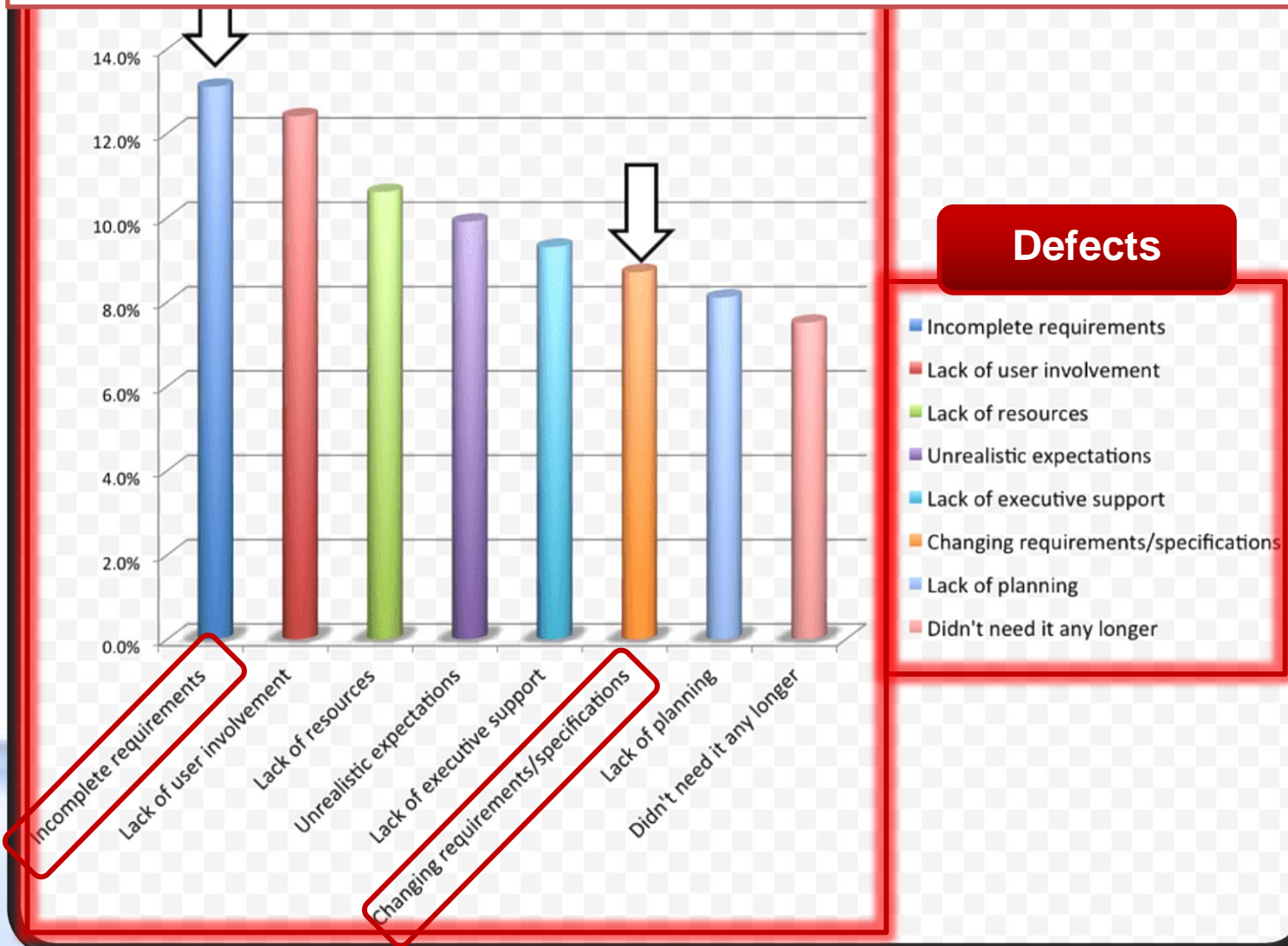






## Statistics (4)

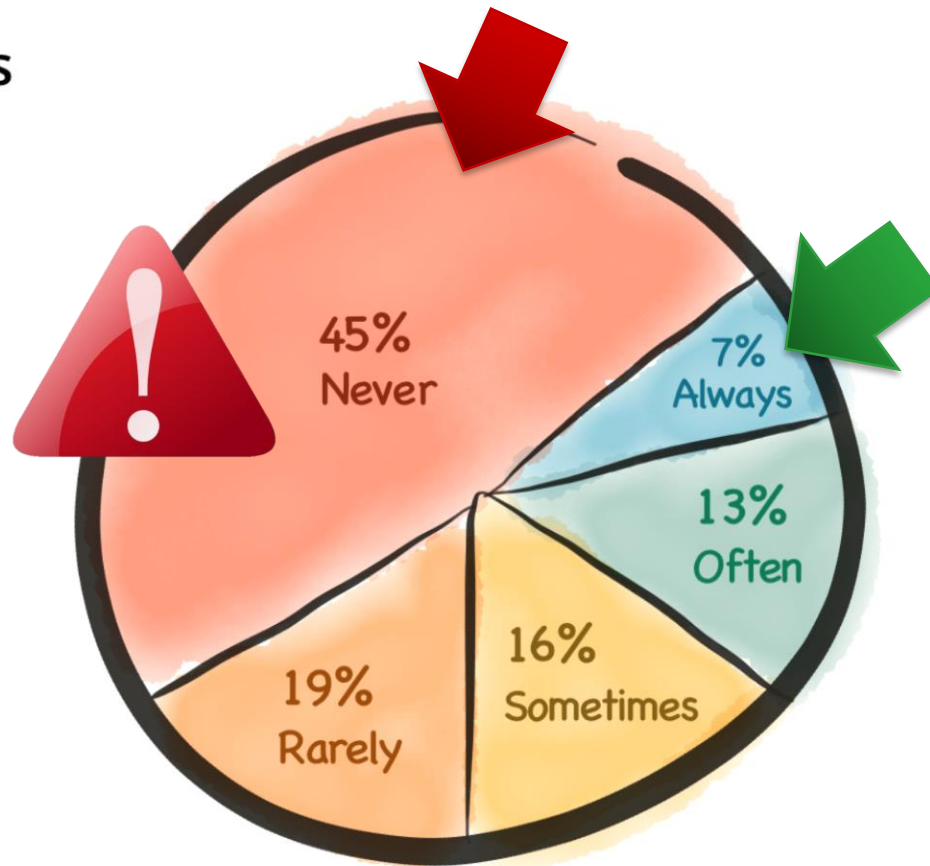
**Bad requirements are the reason behind 39% of project failures.**





## Statistics (5)

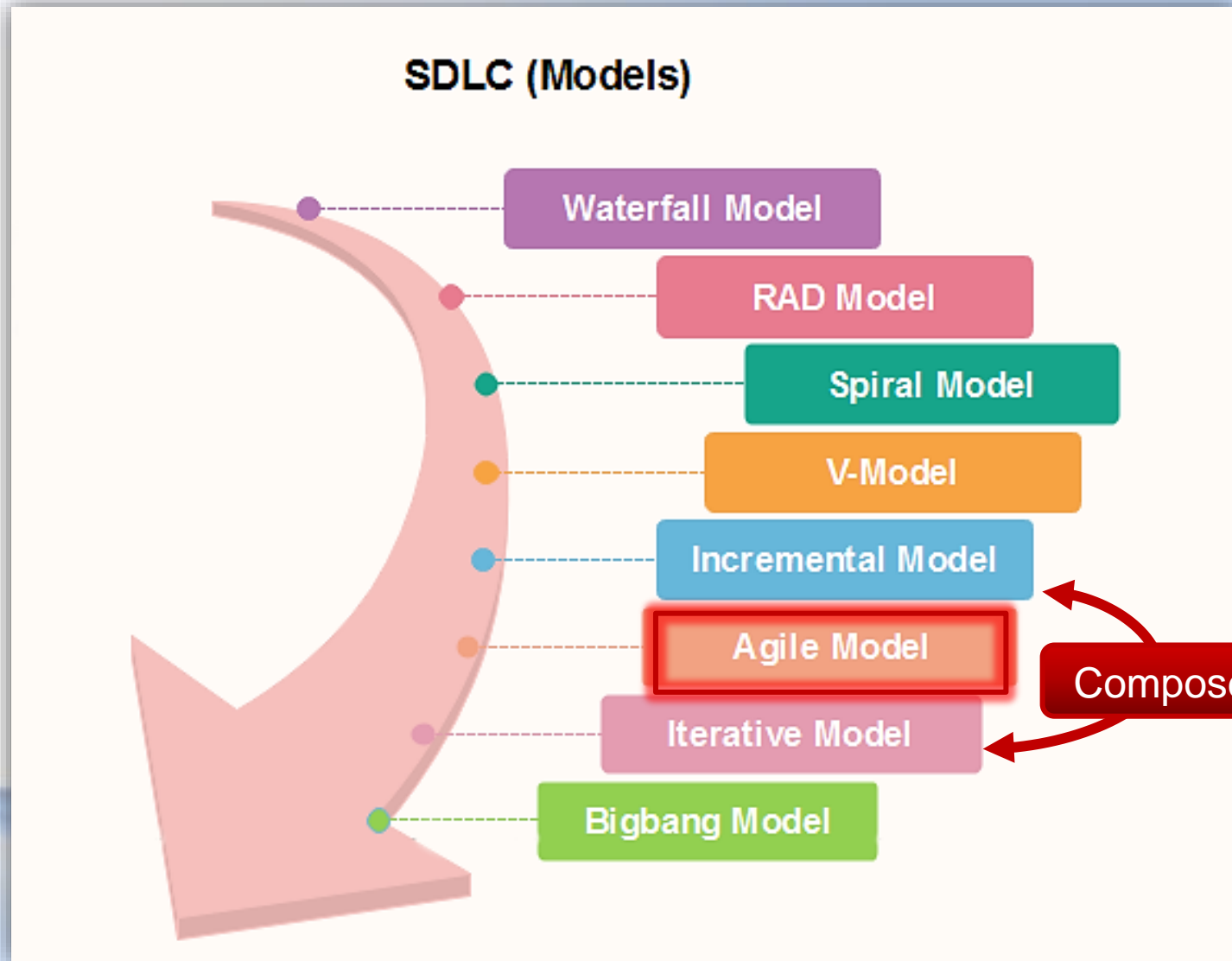
Usage of Features  
and Functions in  
Typical System.



<https://www.statista.com/markets/418/topic/484/software/#overview>



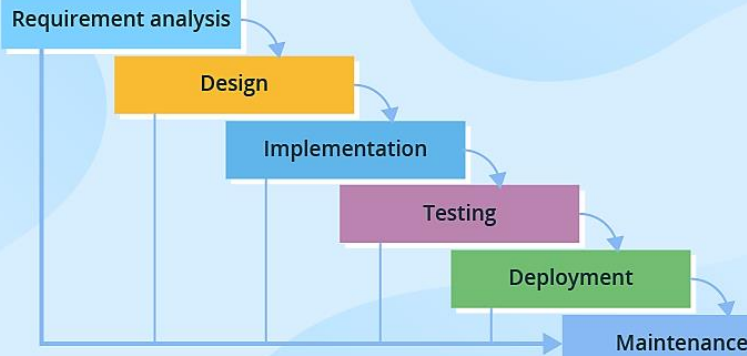
# Models of SDLC



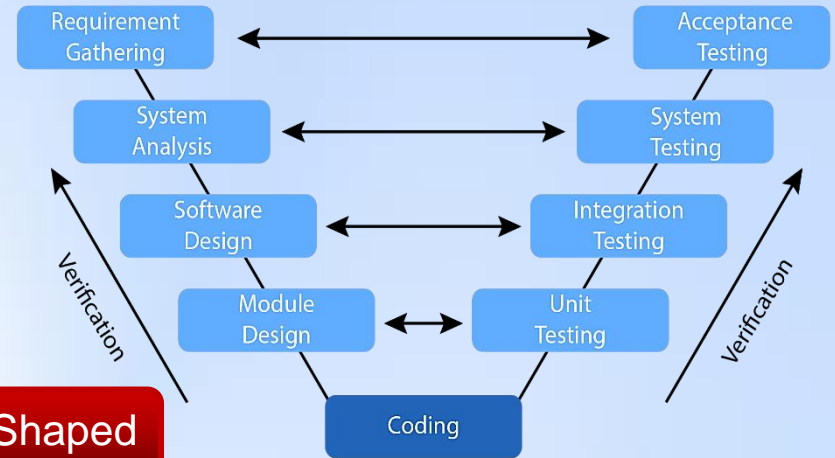


# Statistics (5)

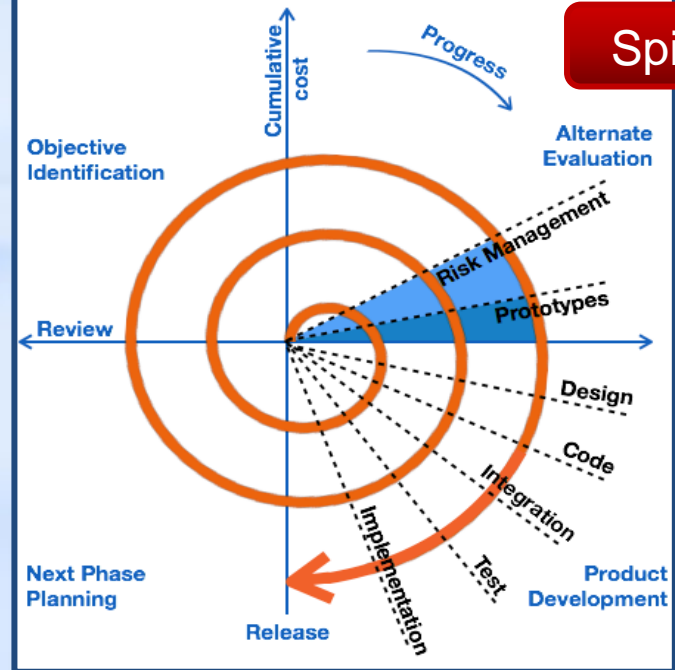
## Waterfall



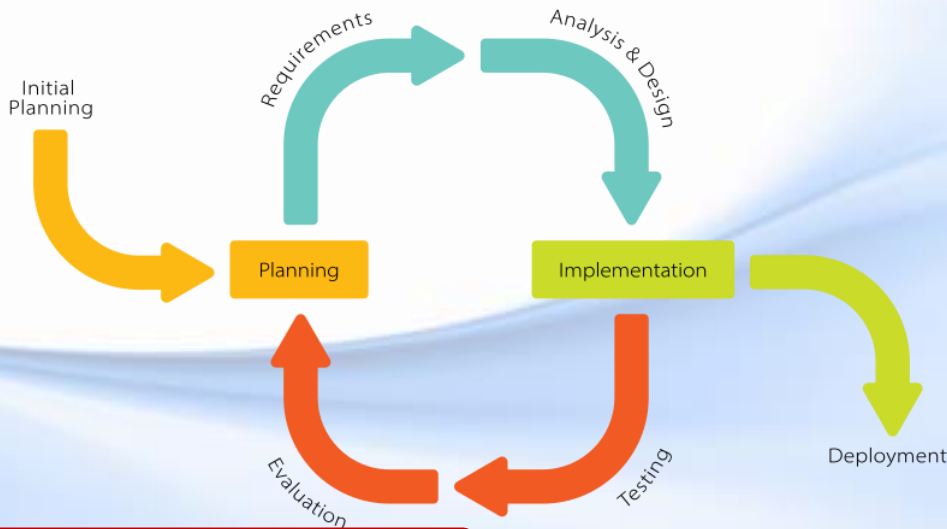
## V-Shaped



## Spiral



## Incremental/Iterative





**End of Session2**

**Any  
Question?!**





A spiral-bound notebook with a silver metal spiral binding is shown at an angle. The notebook is open to a white page that has the words "THANKS FOR YOUR ATTENTION" written in a large, bold, black, sans-serif font. The text is arranged in three lines: "THANKS FOR" on the first line, "YOUR" on the second line, and "ATTENTION" on the third line. The notebook is resting on a dark, textured wooden surface. The background of the entire image is a solid blue color with a subtle gradient and a soft shadow beneath the notebook.

**THANKS FOR  
YOUR  
ATTENTION**