

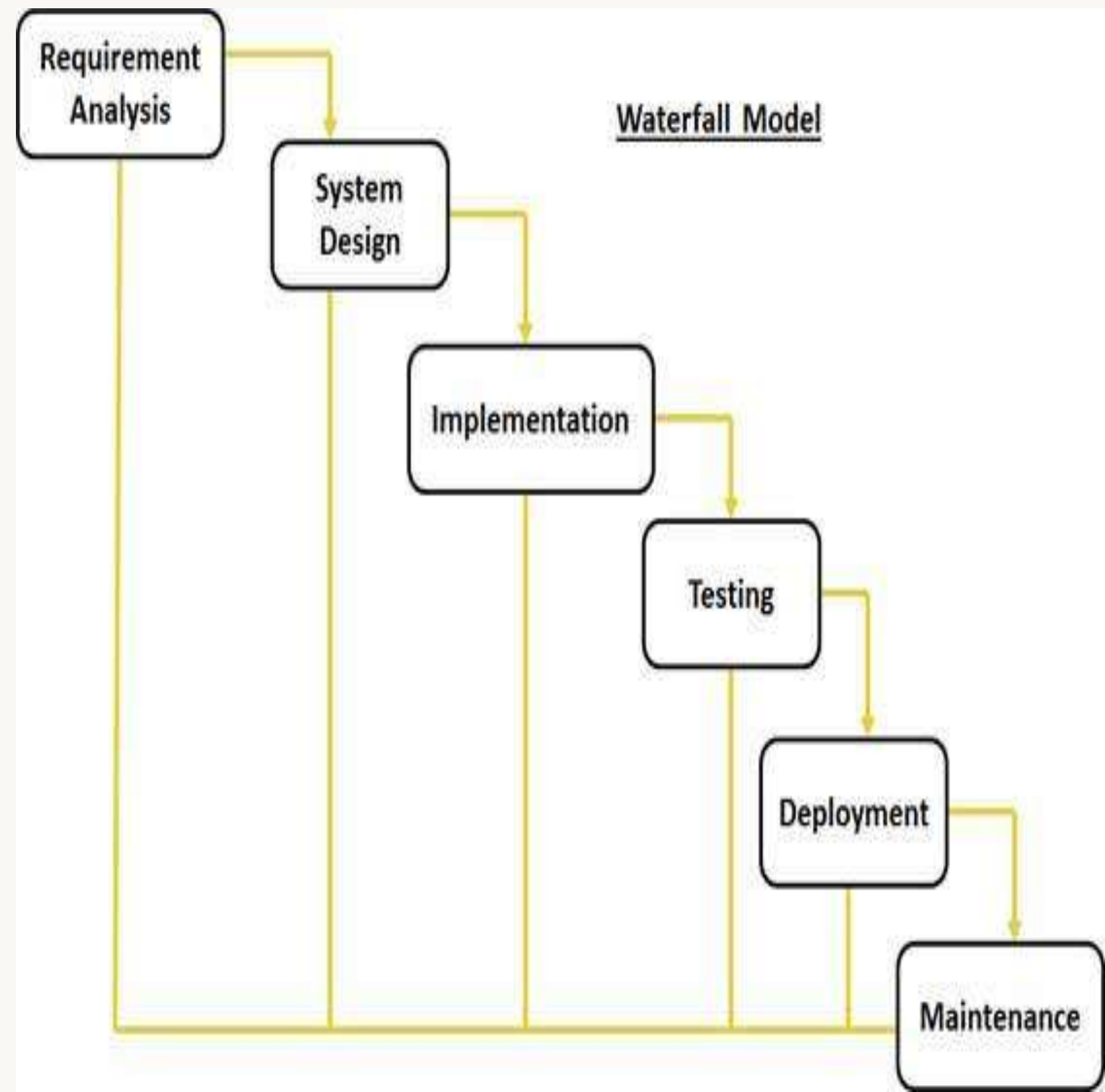
The Software Development Life Cycle



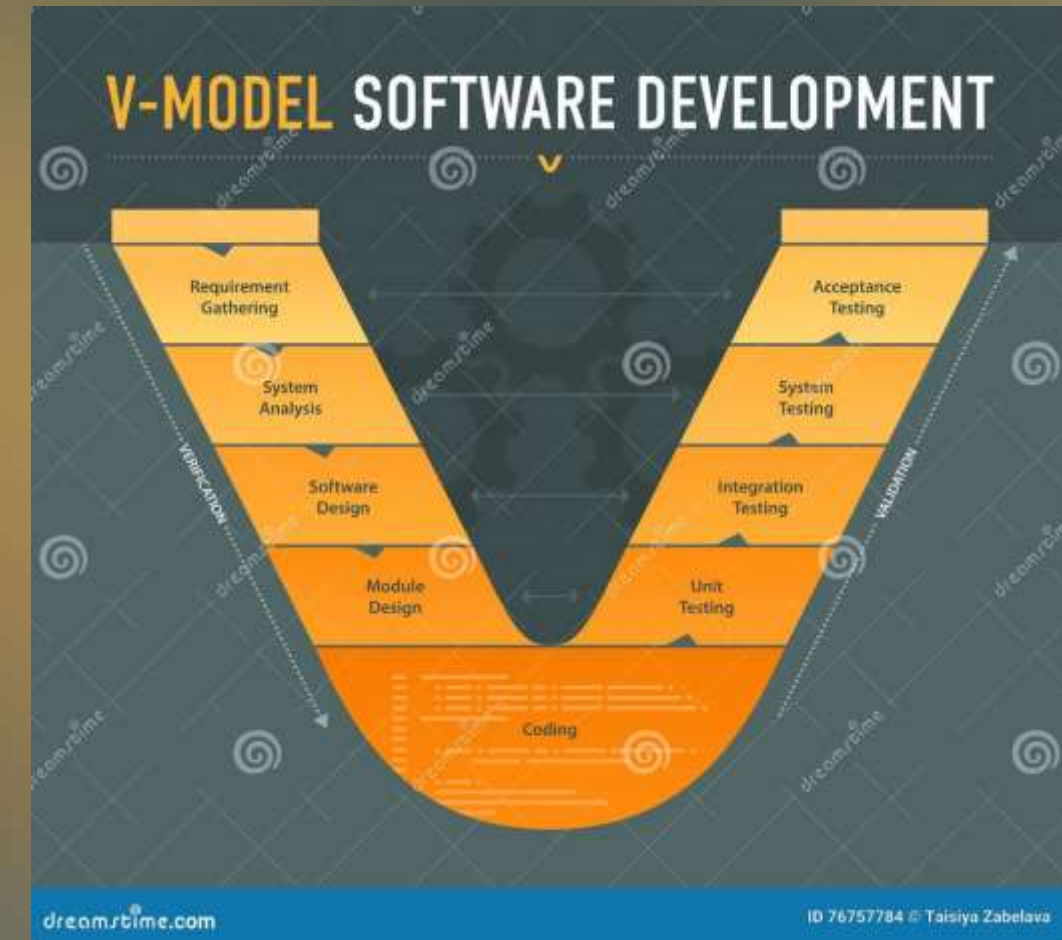
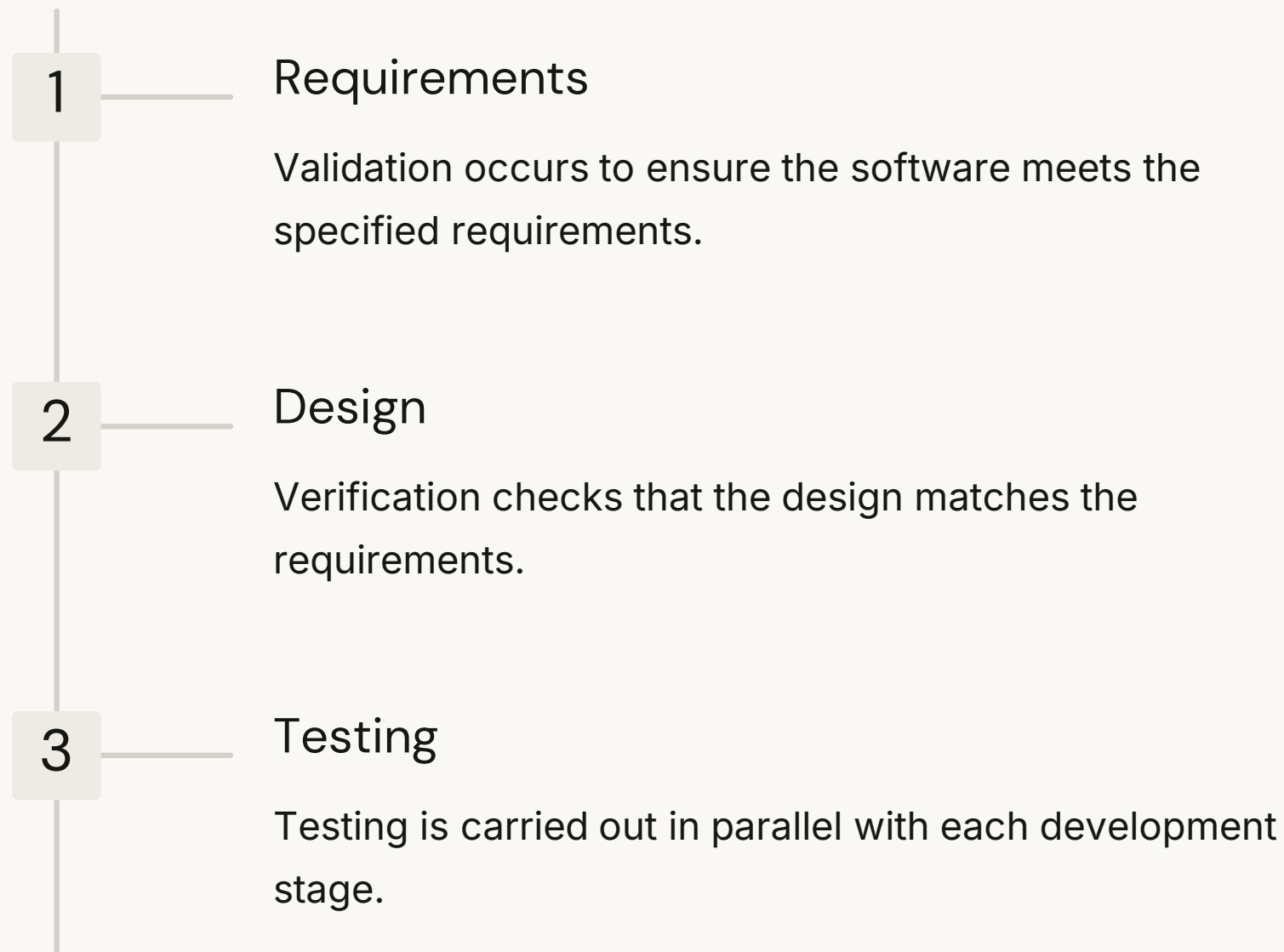
Waterfall Model

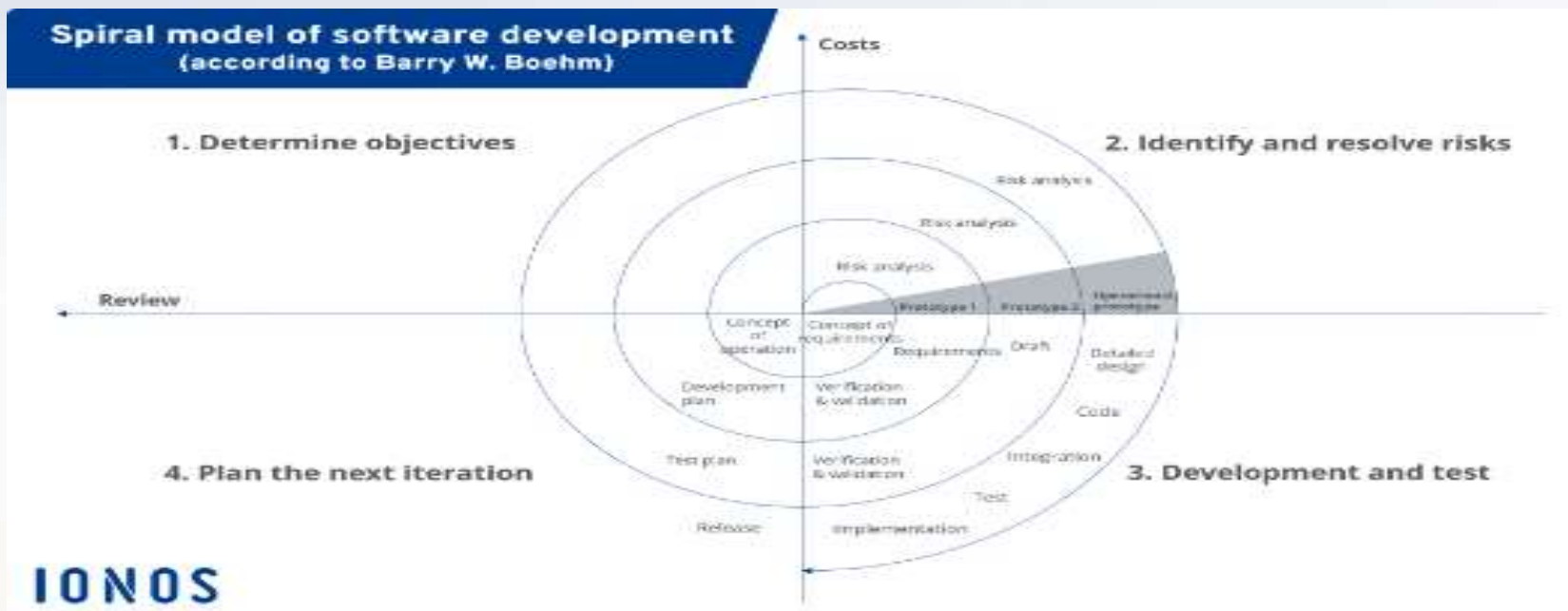
Linear Approach

The Waterfall model follows a sequential, linear process where each phase must be completed before moving to the next.



V-Model (Validation and Verification)





Spiral Model

1

Risk Assessment

The Spiral model focuses on identifying and addressing risks at each phase.

2

Iterative Development

Software is developed through an iterative process, allowing for continuous refinement.

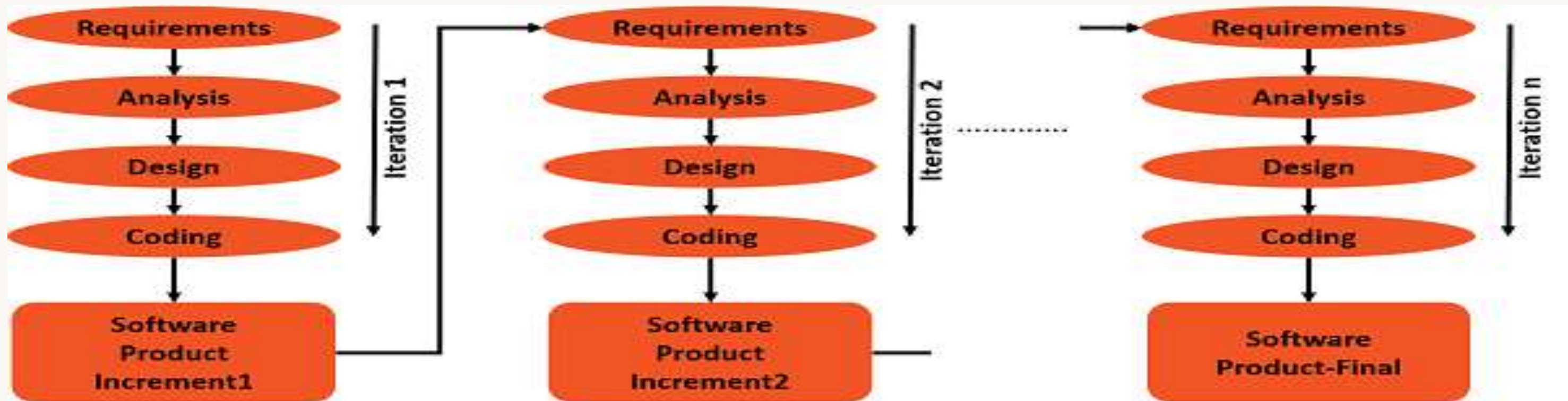
3

Risk-Driven Approach

The model emphasizes risk management, making it suitable for complex, high-risk projects.

Iterative Model

- In this Model, you can start with some of the software specifications and develop the first version of the software. After the first version if there is a need to change the software, then a new version of the software is created with a new iteration. Every release of the Iterative Model finishes in an exact and fixed period that is called iteration.



Challenges in SDLC

Changing Requirements

Unexpected shifts in customer or business requirements can disrupt progress, especially in rigid models.

Communication Gaps

Poor collaboration between teams can lead to misunderstandings or delays.

Security Concerns

Ensuring robust security mechanisms throughout the SDLC is critical but challenging.



From my perspective I think the Spiral Model stands out as one of the best approaches, especially for complex and large-scale projects