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# Planning & Organization

# SDLC Methodologies

Over the years, new software development methodologies have emerged to improve quality and development efficiency during the software lifecycle:

- Waterfall
- V-Cycle
- Iterative and Incremental
- Agile

Design

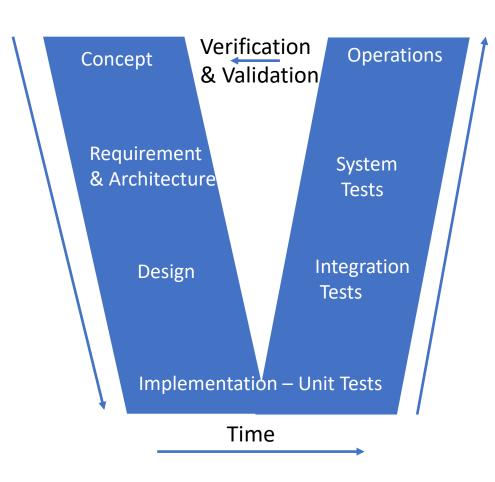
**Implementation** 

Verification

Maintenance

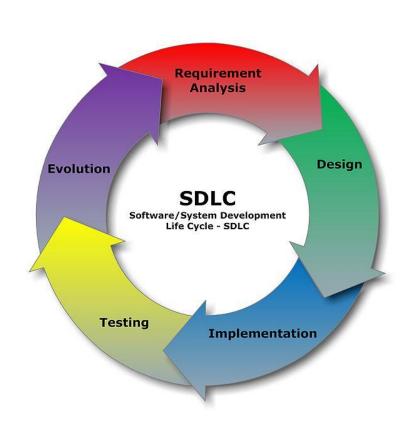
- Linear breakdown of activities
- Works well in highly structured and stable environment
- Simple to understand and to apply
- Software development is fast evolving

## V-Cycle



- Evolution of the waterfall model
- Each step of the right corresponds to the verification and validation of the one on the left

### Iterative and incremental



Develop a software through repeated cycles (iterative) and in small chunks (incremental)

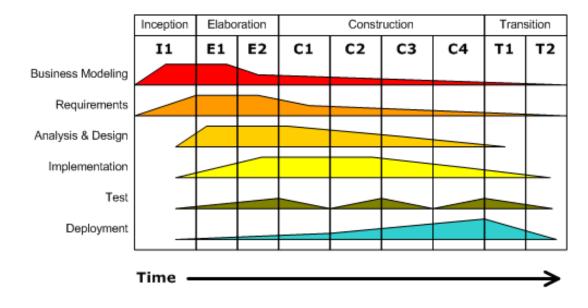
Customer is involved in each increment

Rational Unified Process is the most well known implementation.

#### Iterative and incremental

#### **Iterative Development**

Business value is delivered incrementally in time-boxed cross-discipline iterations.



RUP is all about prioritizing the most risky thing first.

Inception: shorter phase

Elaboration: address know risk factors

Construction: largest phase, development

Transition: get users' feedback