

# Software Process

Ran Liao

May 22, 2019

---

## Workflow

### 1. Requirements Workflow

Determine the client's needs.

The requirements artifacts must be totally comprehensible by the client. Therefore, the artifacts of the requirements workflow must therefore be expressed in a natural (human) language. However, all natural languages are imprecise.

### 2. Analysis Workflow

Analyze and refine the requirements.

The analysis artifacts must be precise, and complete enough for the designers.

### 3. Design Workflow

Refine the analysis workflow until the material is in a form that can be implemented by the programmers.

Many nonfunctional requirements need to be finalized at this time, including

- Choice of programming language
- Reuse issues
- Portability issues

### 4. Implementation Workflow

Implement the target software product in the selected implementation language.

### 5. Test Workflow

The test workflow is the responsibility of every developer and maintainer, and the quality assurance group.

,

## Phase

### 1. Inception Phase

Determine whether the proposed software product is economically viable.

### 2. Elaboration Phase

Refine the initial requirements.

### 3. Construction Phase

Produce the first operational-quality version of the software product. This is sometimes called the beta release.

### 4. Transition Phase

Ensure that the client's requirements have indeed been met.

## Unified Process

The Unified Process is an adaptable methodology and a modeling technique. Every step performed in the Unified Process falls into one of the five core workflows and also one of the four phases. Workflow represents the technical context of a step, whereas phase represents the business context of a step.

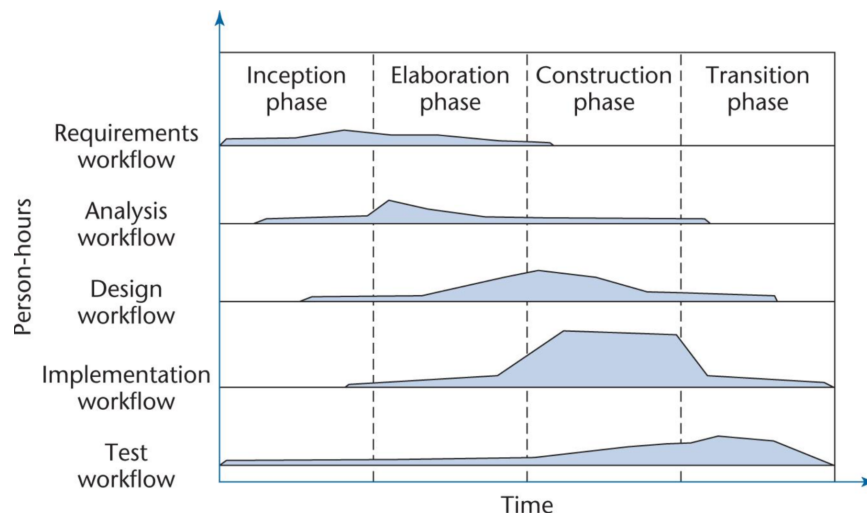


Figure 1: The Phases of the Unified Process